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Filing date: **06/26/2020**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Proceeding	91233311
Party	Plaintiff Gilead Sciences, Inc.
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Submission	Testimony For Plaintiff
Filer's Name	Jon Jekel
Filer's email	tmdoctc@fr.com, jekel@fr.com
Signature	/Jon Jekel/
Date	06/26/2020
Attachments	Trial Testimony Declaration of Expert Bruce E. Stangle Ph.D.pdf(434476 bytes ) OTX 47 Compilation of Publicly Available Source Documents Regarding the Top 20 Pharmaceutical and Biotechnology Firms by Market Capitalization.pdf(5066745 bytes ) OTX 48 SEC Central Index Key Search website.pdf(221159 bytes ) OTX 49 Gilead 2017 Corporate Overview available on its website Gilead.com.pdf(519527 bytes ) OTX 50 Gilead Capital 2018 Letter to Investors.pdf(82667 bytes ) OTX 51 Biopharm Insight June 2019 Gilead Sciences Inc. Company Report Excerpt.pdf(850196 bytes ) OTX 52 Credit Suisse report on Gilead Sciences Inc.pdf(868528 bytes ) OTX 53 PiperJaffray Company Note on Gilead.pdf(1173248 bytes ) OTX 54 Article Referring To Gilead Acquisition Of Kite.pdf(188657 bytes ) OTX 55 Factiva article Activist Gilead Wants Seat at Landauer.pdf(195165 bytes ) OTX 56 PRNewsWire article Landauer Agrees to Appoint Jeffrey A. Strong to Board of Directors and Announces Agreement with Gilead Capital LP.pdf(233859 bytes ) OTX 57 Law360 Gilead Capital Blasts 825M Monotype Take Private Deal.pdf(142260 bytes ) OTX 58 Excerpt re Article on Investor Confusion.pdf(2012828 bytes ) OTX 59 May 2019 The Turnaround Letter Excerpt.pdf(257567 bytes ) OTX 60 BusinessWire circulation of Gilead and Galapagos Complete Closing of Their Transformative Research and Development Collaboration.pdf(234277 bytes ) OTX 61 Article 7 Things to Expect for Gilead Sciences in 2019.pdf(445804 bytes ) OTX 62 Seeking Alpha Article Gilead Goal 2018 Changing the Conversation.pdf(296297 bytes ) OTX 63 Gilead Capital 13G Filing GIL0347381.pdf(251563 bytes ) OTX 64 Gilead Capital 13D Filing GIL0347411.pdf(328990 bytes ) OTX 65 Gilead Capital 13D Filing GIL0347309.pdf(402904 bytes ) OTX 66 Gilead Capital 13D Filing GIL0347369.pdf(325194 bytes )

	<p>OTX 67 Email exchange with translator working for NittaGelatin.pdf(82676 bytes )</p> <p>OTX 68 From NittaGelatin website describing products.pdf(156280 bytes )</p> <p>OTX 69 Gilead Capital December 2017 Tear Sheet.pdf(82680 bytes )</p> <p>OTX 70 Advisory Alerts On Landauer Inc. and Gilead Capital LP Wrongly Coded To Gilead Sciences.pdf(110924 bytes )</p> <p>OTX 71 Excerpt of Central Charts Company Overview.pdf(789706 bytes )</p> <p>OTX 72 October 1960 Weitz publication A Study of Trade Name Confusion Journal of Marketing.pdf(386091 bytes )</p> <p>OTX 73 Levine article Sometimes the Algos Buy the Wrong Stock And sometimes investors get rewarded.pdf(199160 bytes )</p>
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

Filed on May 24, 2016

Published in the *Official Gazette* on November 8, 2016

GILEAD SCIENCES, INC.,

Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**

Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF EXPERT BRUCE E. STANGLE, PH.D.**

I, Bruce E. Stangle, Ph.D., declare as follows:

1. I am an economist specializing in the fields of finance and industrial organization. I am a co-founder of Analysis Group, Inc. (“Analysis Group”), one of the largest international economics consulting firms in the world. Over my 40 year career, I have provided economic and financial consulting advice in a number of industries, including healthcare.

**Relevant Experience and Qualifications**

2. I have been a practicing economist for the last 40 years. I have a Ph.D. in Applied Economics from the Sloan School of Management at the Massachusetts Institute of Technology.

3. Prior to Analysis Group, from 1978 to 1980, I worked as a senior economist for Arthur D. Little, a management consulting firm. I co-founded Analysis Group in 1981. I served

as the Chief Executive Officer of Analysis Group from 1981 to 2004 and then as Chairman until 2016. I am a member of the American Economic Association.

4. I specialize in providing economic and financial advice. I have advised companies in the healthcare, medical device, biotech, and pharmaceutical industries (which I will collectively refer to in this declaration as the “healthcare-related industry”; I will refer to companies in the healthcare-related industry as “healthcare-related companies”) on a variety of economic and financial issues, including equity investments and acquisitions. I have testified as an economic expert in several litigations involving pharmaceutical companies, including Cephalon, Ranbaxy, Mylan, AbbVie, GlaxoSmithKline, and Teva Pharmaceuticals.

5. I have extensive investment experience. I am an active angel investor, providing early seed money for start-ups and emerging companies. As an angel investor, I have invested in several healthcare-related companies, some of which have been acquired by larger pharmaceutical firms and other healthcare-related companies. I have analyzed many investment opportunities and have been an angel investor in more than 50 companies, many of which were in the healthcare-related industry. For example, I was an investor in SmartCells, Inc., a biotech company working on new insulin technology for diabetes. It was acquired by Merck—one of the largest pharmaceutical companies in the world—in 2010. Another company in which I was not an angel investor, but purchased shares in after its IPO was Cubist Pharmaceuticals. Cubist was engaged in research and development for antibiotics, and in 2014, it also was acquired by Merck. I was also an angel investor in Siamab Therapeutics, Inc., which develops novel cancer therapies and entered into a strategic agreement with a large, commercial-stage biopharmaceutical company in August 2019. Further, I am an investor in the publicly traded stock of CRISPR Therapeutics, which has a collaboration agreement with Vertex Pharmaceuticals regarding investigational

therapies for sickle-cell anemia, among other things. I have also been an early angel investor in a number of other healthcare-related companies, including MoMelan and iCardiac Technologies, both of which were acquired by larger healthcare-related companies.

6. In addition, I am an investor in a venture capital fund called Great Point Partners, an investment firm that focuses on helping and investing in growing healthcare businesses, both private and public, including small and emerging companies seeking capital investments from large pharmaceutical companies.

7. I also have extensive professional experience as a board member and investment committee member. I currently serve on the Board of Directors of Wellington Trust Company, NA, a money management firm. Until recently, I was also an outside director of a mutual fund family, The Marsico Investment Fund.

#### **Assignment**

8. I was retained by Gilead Sciences, Inc. (“Gilead”) to serve as an industry expert in this proceeding. I have been asked to analyze the investment practices of companies in the healthcare-related industry including how large-cap companies in this industry set up financial investment arms that use the unique part of the parent’s name (e.g., Novartis and Novartis Venture Fund), and opine on whether there is a pattern in the naming of those investment arms, and how the naming of Gilead Capital LP (“Gilead Capital”) relates to that naming convention. I was also asked to evaluate whether there is an overlap in Gilead’s and Gilead Capital’s (collectively, “the Parties”) services related to capital investments such that any overlap, combined with the overlap in their names, would be expected to confuse investors. I also looked to see if there were any instances of mistaken association between the Parties that are consistent with and expected in light of my opinions.

9. In formulating my opinions, I relied on my experience as an economist and investor. My opinions are based on my professional training, background and experience, my personal observations, and on the documents referenced in this declaration. I have attached true and correct copies of the documents (or excerpts when the documents are lengthy) referenced in this declaration. The documents I reference are typical of the materials that I review as an investor and economist and are of the type reasonably relied upon by other investors and economists.

**It is Common For Large Healthcare-Related Companies To Invest In Smaller Healthcare-Related Companies, Typically through an Investment Arm That Shares Its Parent's Name**

10. Based on my work and experience, I know that large healthcare-related companies, like Merck, Novartis, Johnson & Johnson (“J&J”), and Gilead are active investors. These companies and their peers invest in start-ups and emerging healthcare-related companies that show promising research and development results, or that own innovative technology. Typical investments include taking an equity stake in the smaller company and an active role to support and benefit that company by, for example, providing resources to support the research and development activities of the smaller company and assisting with clinical trials or regulatory affairs.

11. Based on my work and experience, I also know that many of Gilead’s peer pharmaceutical firms have investment “arms” whose primary objective is to invest in healthcare-related companies and ventures. Many of these investment arms bear the name of their parent. For example, before I was retained on this matter, I was aware of Novartis’s investment arm, Novartis Venture Fund, which is an active investor in the healthcare-related industry. I also knew of J&J’s investment arm, Johnson & Johnson Innovations.

12. For my assignment, I created a table from a collection of publicly available source documents, copies of which are attached to my declaration as **OTX 47**. That table, provided below,

shows the top 20 pharmaceutical and biotechnology firms by market capitalization<sup>1</sup> and identified as a “peer” of or “comparable” to Gilead by Thomson One, Zacks, or CFRA, or in an article detailing the top corporate venture funds among pharmaceutical and biotechnology companies. See **OTX 47**. Thomson One, Zacks, and CFRA provide economic, corporate, and market analyses for investors and economists. All of the companies included in the table below invest in the manner I describe above, to varying degrees. A dash in the “Investment Arm” column indicates only that the company does not have an investment arm organized formally as a separate entity.

No.	Company	Market Cap (billion USD)	Investment Arm	Description
1	Johnson & Johnson	340.4	Johnson and Johnson Innovation	active investment arm
2	Roche Holding AG	235.5	Roche Venture Fund	active investment arm
3	Merck & Co., Inc.	220.6	MRL Ventures Fund	active investment arm
4	Novartis Inc.	205.5	Novartis Venture Fund	active investment arm
5	Pfizer Inc.	201.1	Pfizer Ventures	active investment arm
6	Novo Nordisk A/S	125.2	Novo Ventures/Novo Seeds	two active investment arms
7	Amgen, Inc.	124.4	Amgen Ventures	active investment arm
8	AstraZeneca PLC	116.5	MedImmune Ventures	active investment arm
9	Sanofi S.A.	112.9	Sanofi Ventures	active investment arm
10	Eli Lilly & Co.	110.7	Lilly Ventures/Lilly Asia Ventures	two spun off investment arms
11	GlaxoSmithKline plc	105.1	SR One	active investment arm
12	AbbVie, Inc.	99.1	AbbVie Ventures	active investment arm
13	Gilead Sciences, Inc.	81.4	—————	N/A
14	Bristol-Myers Squibb Company	79.2	—————	N/A
15	CSL Limited*	71.9	—————	N/A
16	Celgene Corporation	69.0	—————	N/A
17	Takeda Pharmaceutical Company Limited	55.2	Takeda Ventures	active investment arm
18	Merck KGaA*	47.4	M Ventures	active investment arm
19	Illumina, Inc.	46.2	Illumina Ventures	active investment arm
20	Vertex Pharmaceuticals Incorporated	45.8	—————	N/A

<sup>1</sup> Market capitalization was based on information collected in September 2019 and, where applicable, i.e., (\*), was converted to U.S. dollars using the exchange rate of the date the data was collected.

13. As I know from my work and experience, and as confirmed by this table, it is my opinion that it is common for large healthcare-related companies to invest in smaller companies. When those large healthcare-related companies set up an investment arm to handle those investments, it is common for those investment arms to use the same unique name as their parent (e.g., Novartis and Novartis Venture Fund) that is typically followed by an investment-related term like “Venture(s),” “Fund,” or something similar.

**Gilead Capital Shares the Only Unique Part of Its Name with Gilead Sciences, and Follows the Naming Convention Commonly Used By Investment Arms of Other Healthcare-Related Companies**

14. From simply looking at the marks at issue, Gilead and Gilead Capital share the most meaningful part of their names, i.e., GILEAD, as indicated by its uniqueness and common use as shorthand for the name of each firm. I discuss this further below.

15. As part of my assignment, I searched the U.S. Securities and Exchange Commission (“SEC”) Central Index Key database for “GILEAD” and found that it lists only five companies total (only three of which are active) that include “Gilead” in their company names. All the active companies are associated with Gilead or Gilead Capital. By contrast, my search uncovered thousands of companies that include the terms “Capital” (which is an investment-related term like “Venture” or “Fund”) or “Sciences” in their company names, as noted in the table below:

**Uniqueness of Words in Company Names**

Word	Number of Companies
Gilead	5
Capital	Thousands
Sciences	Hundreds
Investing	77
Leadership	25

A copy of my search results from the SEC's Central Index Key Search website for companies that include "Gilead" in their name is attached as **OTX 48**.<sup>2</sup>

16. Unsurprisingly given the uniqueness of the term, I have seen instances where both companies refer to themselves only as "Gilead" without "Sciences" or "Capital." For example, Gilead refers to itself as "Gilead" throughout its 2018 Year in Review, attached to Mr. Dickinson's declaration as **OTX 12** (at e.g., GIL0349261, GIL0349274), and on Gilead's 2017 Corporate Overview available on its website Gilead.com, attached as **OTX 49** (at e.g., GIL0349313, GIL0349319). Similarly, Gilead Capital also refers to itself only as "Gilead," for example, in its 2018 letter to investors, an excerpt of which is attached as **OTX 50** (at e.g., GILEADCAPITAL002404-2405).

17. Investment analysts from major investment banks and other firms do the same, as seen, for example, in excerpts of analyst reports attached as **OTX 51** (at e.g., GIL0347630, GIL0347636, GIL0347653), **OTX 52** (at e.g., GIL0347504, GIL0347507), and **OTX 53** (at e.g., GIL0347432, GIL347440). The Parties are both referred to only as "Gilead" in other media, as can be seen in examples of articles attached as **OTX 54** (at e.g., GIL0347357-59), **OTX 55** (at e.g., GIL0004195-97), **OTX 56** (at e.g., GIL0347347-48), and **OTX 57** (at e.g., GIL0348804). And Gilead Capital has acknowledged that third parties have referred to it only as "Gilead." **NOR No. 5, OTX 111** (at RFA No. 35).

18. Social scientists have studied the potential for confused association between entities with similar names. For example, an article by Balashov and Nikiforov attempts to quantify confusion in trading that results from companies having similar names and/or ticker symbols. The authors analyzed 254 pairs of companies that share some "meaningful" part of their names and/or

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<sup>2</sup> I also searched for "Investing" and "Leadership," as I understand that those words are included in the Gilead Capital marks.

have a similar ticker symbol and found that investor confusion—investors mistaking one company for another while making an investment resulting in “co-movement” of those companies’ stocks—is not merely anecdotal but systematic, occurring in up to 25% of the pairs studied. **OTX 58** (at e.g., GIL0368814-815, GIL0368836).

19. I too am personally aware of investor confusion in connection with stock trades based on similar company names and/or ticker symbols. For example, with respect to (1) CRISPR Therapeutics (ticker: CRSP), a company focused on gene-based medicines and Casper Sleep (ticker: CSPR), a mattress company, and (2) Zoom Technologies (ticker: ZOOM) and Zoom Video (ticker: ZM), I have seen these similarly-named stocks rise and fall together when there is news about only one of the companies.

20. It is my opinion that the name Gilead Capital follows the common naming convention used by investment arms of large healthcare-related companies, described above, because it is composed of “Gilead” followed by “Capital.” Given the prevalence of this naming practice by Gilead’s peers, and because both companies are referred to solely as “Gilead,” it would be reasonable for investors to expect there is an affiliation between Gilead and Gilead Capital.

#### **Gilead and Gilead Capital Engage in Overlapping Business Activities**

21. Because of my work and experience, and as a result of my assignment in this matter, I know that both Parties invest in the healthcare-related industry. I also know that Gilead has had a long history of investing in healthcare-related companies, has acquired a number of companies, and has made a number of equity investments in biopharma companies, including ten in 2018 alone. **OTX 12** at GIL0349274.

22. Based on my work and experience, I know that Gilead is well known among investors and others in the investment community for making investments. Gilead’s public filings with the SEC identify and summarize many of its acquisitions, collaborations, partnerships, and



strategic investments. For instance, Gilead’s 2018 Year in Review (*see* Dickinson Decl., **OTX 12** at GIL0349274) notes that “[c]ollaborations and acquisitions are an important part of Gilead’s growth strategy. During 2018, Gilead executed 15 partnerships, licensing, and M&A deals, and completed 10 equity investments in biopharma companies.” Other media exemplified in **OTX 59** (at GIL0347491) also acknowledge Gilead’s investments in companies in the healthcare-related industry.

23. As just one example, Gilead entered into a strategic collaborative arrangement with Galapagos NV, which discovers and develops small molecule medicines. It later made an additional strategic investment in Galapagos by increasing its equity stake in the company. These investments were reported by Gilead in its SEC filings and picked up and reported by the media when Gilead announced the news. *See, e.g.*, **OTX 60**.

24. Unsurprisingly, media articles that are targeted to investors use the words “Gilead” and “capital” in the same sentence when discussing Gilead’s investment in Galapagos, as well as Gilead’s acquisition and capital deployment strategy. This use is exemplified in two investment-related articles attached to my declaration as **OTX 61** (at e.g., GIL0347426) and **OTX 62** (at e.g., GIL0347355).

25. Gilead Capital has also made and considered investments in companies in the healthcare-related industry. Gilead Capital acquired a 7.6% share in Computer Programs and Systems, Inc. (“CPSI”), a provider of healthcare information technology (“IT”) solutions for rural and community hospitals and post-acute care facilities, as reported in Gilead Capital’s October 17, 2017 SEC filing and February 27, 2019 SEC filing, attached to my declaration as **OTX 63** (at e.g., GIL0347381-82, GIL0347389) and **OTX 64** (at e.g., GIL0347411-13, GIL0347423), respectively. As of April 2018, CPSI was Gilead Capital’s second-largest

investment, as noted in Gilead Capital's Letter to Investors. **OTX 50** at GILEADCAPITAL002405.

26. Gilead Capital also acquired a 5.5% share in Landauer, Inc., a company that provides radiation safety products and services to hospitals, health care systems, medical clinics, and dental and veterinary centers. Gilead Capital reported this acquisition in its November 21, 2016 SEC filing, attached as **OTX 65** (at e.g., GIL0347309-11, GIL0347320), and in its September 7, 2017 SEC filing, attached as **OTX 66** (at e.g., GIL0347369-71, GIL0347380).

27. Gilead Capital's documents, namely an email exchange with a Gilead Capital employee, indicate that the firm also explored a potential opportunity with Nitta-Gelatin's collagen business, which services the pharmaceutical industry. An excerpt of this email exchange between Gilead Capital and a translator working with Gilead Capital is attached to my declaration as **OTX 67** (at e.g., GILEADCAPITAL002370-71). Nitta-Gelatin's webpage describing its products and applications is also attached to my declaration as **OTX 68**. A December 2017 "Tear Sheet" produced by Gilead Capital in this matter, attached as **OTX 69** (at e.g., GILEADCAPITAL002298), also indicates that Gilead Capital's portfolio includes investments in the "Healthcare IT" sector.

28. Both Gilead and Gilead Capital actively engage in capital markets transactions. They both have invested in companies in the healthcare-related industry. It is my opinion, therefore, that their services overlap. It is my further opinion that Gilead's active acquisition and investment strategy, combined with Gilead Capital's exploration of and investments in healthcare-related companies—and the possibility that it may further invest in the same in the future—serve to increase what is already an overlap in business activities and audiences between the Parties.

**There Is Evidence of Mistaken Associations between Gilead and Gilead Capital That Is Unsurprising and Expected**

29. Because Gilead and Gilead Capital use similar names and engage in overlapping investment services, it is no surprise that the investment community has mistakenly associated them. I saw newswire alerts during my work on this matter showing that Gilead Capital was mistakenly associated with, or mistakenly assumed to be, Gilead Sciences. For example, on December 19, 2016, Thomson Reuters, a leading media company, issued a newswire alert to inform readers that it had mistakenly coded news concerning Gilead Capital’s investment in the healthcare-related company Landauer as news related to Gilead. A snip from that newswire alert is reproduced below, and the entire alert is also attached to my declaration as **OTX 70**.

**ADVISORY-Alerts on Landauer Inc and Gilead Capital LP wrongly coded to Gilead Sciences**

54 words  
19 December 2016  
23:51 GMT  
[Reuters News](#)  
LBA  
English  
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Dec 19 (Reuters) - Alerts on [Landauer Inc](#) commenting on [Gilead Capital LP](#)'s nomination of directors was wrongly coded to [Gilead Sciences Inc](#), an unrelated company. For the correct alerts, click (Reporting by Ismail Shakil in Bengaluru)

30. Two and half years later, Central Charts, a social network and information portal for investors and investment professionals, included an August 2019 news article about Gilead Capital on the “Gilead Sciences, Inc. overview” page, and published news about Gilead Capital under the GILEAD name and Gilead’s “Shield and Leaf” logo that was intermingled with news about Gilead. A snip from that alert is reproduced below, and the excerpted news alert is attached to my declaration as **OTX 71**.



[Gilead Capital Sends Open Letter To Board Of Monotype Imaging Holdings Opposing Sale To HGGC](#) 08/20/2019 - 09:00 • [PR Newswire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

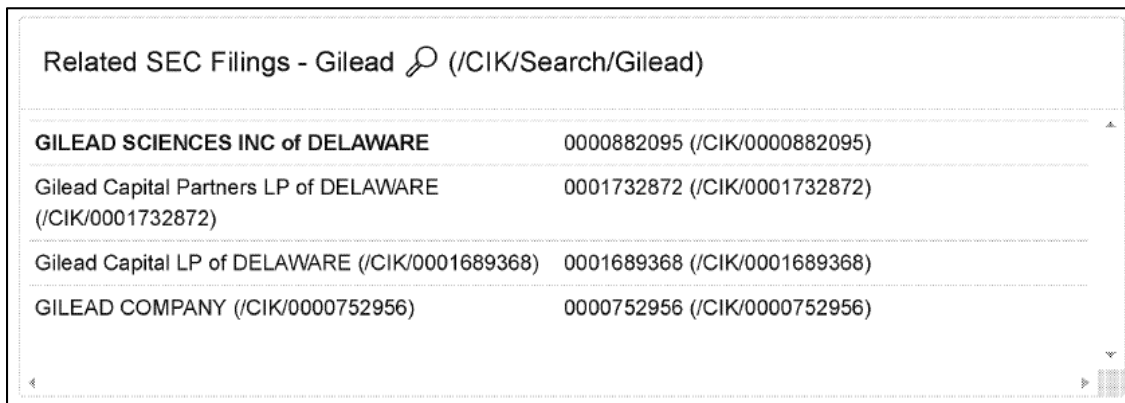
Gilead Capital Sends Open Letter To Board Of Monotype Imaging Holdings Opposing Sale To HGGC Believes sales price is inadequate and Company is worth at least \$30/share Calls upon Board to inform shareholders about the fairness of the deal and the Company's recent earnings beat ahead of go-shop expiration PR Newswire NEW YORK, Aug. 20, 2019 NEW YORK , Aug. 20, 2019 /PRNewswire/ -- Gilead Capital LP ("Gilead Capital"), a long-term shareholder of Monotype Imaging Holdings Inc. (NASDAQ: TYPE)...

Thank you Chart

08/06/2019 - 08:05 [GILEAD SCIENCES INC.](#), 66.52 USD +0.24% > News

[Business Wire](#) published a news.

31. Additionally, the SEC’s online database presents certain search results for “Gilead” that suggest that the SEC filings of Gilead and Gilead Capital are related. Investors who search the SEC website for “Gilead” see in their search results that “Related SEC Filings” for “Gilead” include both Gilead Sciences and Gilead Capital. A snip from my search results is reproduced below, and the search results from the SEC’s website are attached to my declaration as **OTX 48**.



Related SEC Filings - Gilead (/CIK/Search/Gilead)

GILEAD SCIENCES INC of DELAWARE	0000882095 (/CIK/0000882095)
Gilead Capital Partners LP of DELAWARE (/CIK/0001732872)	0001732872 (/CIK/0001732872)
Gilead Capital LP of DELAWARE (/CIK/0001689368)	0001689368 (/CIK/0001689368)
GILEAD COMPANY (/CIK/0000752956)	0000752956 (/CIK/0000752956)

32. And in March 2017, a translator named Manako Ihaya who was working with Gilead Capital on a potential investment in a healthcare-related company wrote in an email to a Gilead Capital partner, Anatoly Bykhovsky, that she “assumed” the investment firm was “associated” with Gilead. **OTX 67** at GILEADCAPITAL002368.

33. It is my opinion that—given the overlap in the Parties’ names and investment activities—it is unsurprising and to be expected that people have conflated and confused Gilead and Gilead Capital. As I note above, I have seen confusion among investors when company names and ticker symbols overlap and this confusion has been documented in peer-reviewed journal

articles. **OTX 58.** Moreover, citations from the academic literature and popular press also show that confusion is not limited to naïve investors. Sophisticated consumers and investors are also susceptible to confusion like other consumers and investors. **OTX 72** (at e.g., GIL0349473). The popular press also documents examples of computerized news aggregators such as Google Finance and algorithmic traders confusing similarly named companies. **OTX 73.**

### **Summary of Observations and Opinions**

34. Gilead and Gilead Capital share the same unique portion of their names.

35. Gilead and Gilead Capital both engage in the same types of investment activities.

They have both invested in public companies in the healthcare-related industry.

36. Investing activity and services are prevalent among pharmaceutical firms and across the healthcare-related industry. It is common for big pharmaceutical firms to invest and set up separate investment arms that bear the same unique portion of their name followed by an investment-related term to manage their investments, and Gilead Capital's name follows this naming convention. Indeed, sources that are the kind typically read by investors have misreported that Gilead and Gilead Capital are the same or related.

37. In my opinion, when the above is taken together, there is a real potential for investors, including careful investors, to be confused by Gilead Capital's name, and to mistakenly assume an association or connection between Gilead and Gilead Capital where one does not exist.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on this 24<sup>th</sup> day of June, 2020 at Belmont, Massachusetts in the United States of America.

  
\_\_\_\_\_  
Bruce Stangle, PhD

## INDEX OF EXHIBITS

Ex.	Summary of Exhibit
OTX 47	Compilation of Publicly Available Source Documents Regarding the Top 20 Pharmaceutical and Biotechnology Firms by Market Capitalization
OTX 48	SEC's Central Index Key Search website
OTX 49	Gilead's 2017 Corporate Overview available on its website Gilead.com
OTX 50	Gilead Capital's 2018 Letter to Investors
OTX 51	Biopharm Insight, June 2019 Gilead Sciences, Inc. Company Report (excerpt)
OTX 52	Credit Suisse 2019-05-20 report on Gilead Sciences, Inc. (excerpt)
OTX 53	PiperJaffray 2019-04-29 Company Note on Gilead [Sciences, Inc.]
OTX 54	Article Referring To "Gilead's" Acquisition Of Kite
OTX 55	Factiva article "Activist Gilead Wants Seat at Landauer"
OTX 56	PRNewsWire 2017-01-11 article "Landauer Agrees to Appoint Jeffrey A. Strong to Board of Directors and Announces Agreement with Gilead Capital LP"
OTX 57	Law360 - Gilead [Gilead Capital] Blasts \$825M Monotype Take-Private Deal
OTX 58	Excerpts from Balashov and Nikiforov, "How much do investors trade because of name/ticker confusion?", available online 20 June 2019 <i>Journal of Financial Markets</i>
OTX 59	May 2019 The Turnaround Letter (excerpt)
OTX 60	BusinessWire circulation of "Gilead and Galapagos Complete Closing of Their Transformative Research and Development Collaboration"
OTX 61	2019-04-15 article "7 Things to Expect for Gilead Sciences in 2019"
OTX 62	Seeking Alpha 2017-01-13 article "Gilead Goal 2018 – Changing the Conversation"
OTX 63	Gilead Capital's October 17, 2017 SEC filing
OTX 64	Gilead Capital's February 27, 2019 SEC filing
OTX 65	Gilead Capital's November 21, 2016 SEC filing
OTX 66	Gilead Capital's September 7, 2017 SEC filing
OTX 67	Email exchange with translator working for Nitta-Gelatin (excerpt)

<b>Ex.</b>	<b>Summary of Exhibit</b>
OTX 68	From Nitta-Gelatin website, describing products
OTX 69	Gilead Capital's December 2017 Tear Sheet
OTX 70	Advisory-Alerts On Landauer Inc. and Gilead Capital LP Wrongly Coded To Gilead Sciences, Inc.
OTX 71	CentralCharts - Gilead Sciences Inc. Overview
OTX 72	October 1960, Weitz publication "A Study of Trade Name Confusion," <i>Journal of Marketing</i>
OTX 73	2019-02-15 Levine article "Sometimes the Algos Buy the Wrong Stock: And sometimes investors get rewarded"



**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on June 25, 2020, a true and complete copy of the foregoing document was forwarded via electronic mail and electronic transmission addressed to the following counsel of record for Applicant Gilead Capital LP:

Kanchana Wangkeo Leung  
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*/s/Michael A. Amon* \_\_\_\_\_

Michael A. Amon

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

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GILEAD SCIENCES, INC.,

Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 47**



(<https://www.genengnews.com/gen-news-highlights/top-20-corporate-venture-funds/>) - June 17, 2013  
 content/uploads/2018/10/June17\_2013\_34753915\_HandlingMoney\_VentureFunds\_II9417186268.jpg)

Alex Philippidis Senior News Editor Genetic Engineering & Biotechnology News

Working for a startup or an adventurous biotech or biopharma firm with a lot of great ideas? Meet your new best friends.

Following is our list of 20 venture funds established by 16 top pharmaceutical and biotechnology companies based on revenue. The funds are ranked by total size, except for funds that disclose resources by the total size of annual award, which are ranked separately. Funds that do not disclose either total size or total annual giving are unranked.

Corporate venture funds are listed with their name; resources; current portfolio (mostly companies, though some funds invest in other funds); figure or range of investment per company, with ranges for initial investments where provided; investment preferences; and year established. Data for the list originated with the websites of the funds, with the findings emailed to corporate spokespeople for verification and, more often than not, updating with current figures on portfolio companies and investment ranges. In some cases, results vary with earlier-published figures or information.

The data appears to show a "sweet spot" for corporate venture funds of between \$100 million and \$250 million; ten of the 20 funds listed had total resources in that range.

The list does not include funds formed jointly by corporate venture funds and venture capital firms, mostly to develop early-stage companies and their therapeutics. A sufficient number of such funds have been created to warrant a possible separate list—especially in recent months, as biopharmas have scrambled to cut internal R&D costs. Also not included in the list is the former Biogen Idec New Venture Fund, which the company shut down in 2011, along with a startup incubator, in a shift of resources to internal R&D projects, as GEN reported at the time (<https://www.genengnews.com/gen-news-highlights/biogen-idec-explains-company-39-s-move-away-from-venture-funding/81246282/>).

#### #20. SR One (GlaxoSmithKline)<sup>1</sup>

**Resources:** \$30 million to \$50 million in five or six companies a year; more than \$680 million invested since 1985

**Current portfolio:** 31 private and public companies

**Amount of investment:** Ranges from thousands to millions<sup>1</sup>

**Investment preferences:** Innovative technologies across therapeutic areas

**Year established:** 1985

#### #19. Pfizer Venture Investments

**Resources:** Annual budget of \$50 million for private investments.

**Current portfolio:** Number of companies unavailable<sup>2</sup>

**Amount of investment:** Up to \$10 million per round in selected companies in any stage of development, with a strong focus on growth stage opportunities.

**Investment Preferences:** A broad array of healthcare related areas, including therapeutics, platform technologies, diagnostics, drug delivery, pharmaceutical services, healthcare IT, and other technologies impacting drug discovery and development.

**Year established:** 2004

#### #18. Novo Ventures

**Resources:** Up to \$140 million invested annually. Current invested cost of the Novo Ventures' portfolio is \$470 million.

**Current portfolio:** 40 companies

**Amount of investment:** Investments typically range from an initial \$5 million to \$30 million per transaction, with capacity to make follow-on investments. May invest at any stage of development: Seed capital, venture capital, IPOs, and public companies

**Investment preferences:** Companies that specialize in development of new drugs, new procedures for diagnosis and control of diseases, development of medical devices and instruments, and industrial biotechnology. Fund seeks promising life science companies—private and public—whose products or research address medical, scientific or environmental needs

**Year established:** 2000

#### #17. Novartis Korea Venture Fund

**Resources:** Commitment of \$20 million over five years

**Current portfolio:** Three companies

**Amount of investment:** Ranges from \$1 million to \$3 million

**Investment preferences:** Novel therapeutics and platforms for human and animal health, with a focus on diseases prevalent in Asia

**Year established:** 2008

#### #16. Merck Serono Entrepreneur Partnership Program (Merck KGaA)

**Resources:** €30 million (**\$39.6 million**) fund created following the decision to close Merck Serono's Geneva site, in order to limit the impact on local employment. "Additional projects are in the process of being evaluated and will be announced in the course of 2013," Merck Serono said January 23<sup>3,4</sup>

**Current portfolio:** Six companies as of May 15, all spun off by Geneva-based Merck Serono contractors or employees

**Amount of investment:** Figure or range unavailable

**Investment preferences:** Support for creation of spinoff companies

**Year established:** 2012

#### #15. Strategic Investment Group (Shire)

**Resources:** \$50 million in initial capital funding

**Current portfolio:** Number of companies unavailable<sup>2</sup>

**Amount of investment:** Typical initial investment of \$2 million to \$5 million per company per round.

**Investment preferences:** A broad range of therapeutic areas of interest including, but not limited to allergy, central nervous system (CNS) and neuropsychiatry, gastrointestinal, hematology, and orphan genetic diseases. SIG also pursues investments in "white space" technology, areas outside the traditional bounds of its existing businesses. SIG co-invests as part of a syndicate usually consisting of a mix of venture capital partners and other corporate strategic investors. The typical investment target is a private company pursuing Series A/B/C financing.

**Year established:** 2011

#### #14. Takeda Ventures (TVI; formerly Takeda Research Investment)

**Resources:** \$54 million under management; evergreen fund structure

**Current portfolio:** 13 companies

**Amount of investment:** Up to \$5 million per financing event; Seed stage to mid-stage financings

**Investment preferences:** Up to a 15% equity interest as co-investors, where lead investors would include venture capital firms, private equity funds, angels, or institutional investors. Presently concentrating on drugs and biotherapeutics to treat cancer, metabolic disorders (obesity, diabetes, and dyslipidemias), cardiovascular disorders, chronic inflammatory and immune disorders (particularly for gastrointestinal and bone and joint diseases) and diseases for the central nervous system (specifically Alzheimer's disease and schizophrenia). Additional areas of strategic importance are regenerative medicines, RNA and DNA modulation, novel vaccines technologies, and innovative protein and peptide biotherapeutics. TVI does not invest in anti-infective diseases, medical devices, or diagnostics platforms

**Year established:** 2001; name changed in 2011

#### #11. (tie) Sanofi-Genzyme BioVentures (formerly Genzyme Ventures)

**Resources:** \$100 million strategic corporate venture capital fund

**Current portfolio:** Nine companies since 2007

**Amount of investment:** \$5 million maximum in a company per round, \$15 million maximum over its lifetime.

**Investment preferences:** Direct investment in early-stage innovative life science companies that demonstrate promise to deliver breakthrough products that may be future Sanofi pipeline candidates. Fund seeks investments that align with Sanofi's current and future areas of business interest. Sanofi cites as areas of focus animal health, cardiovascular disease, degenerative diseases, diabetes, immune-mediated diseases, infectious diseases, multiple sclerosis, oncology, ophthalmology, rare diseases, and vaccines, while Genzyme specializes in rare diseases and neuroimmunological disorders such as multiple sclerosis

**Year established:** 2001 (as Genzyme Ventures)

**#11. (tie) MP Healthcare Venture Management (MPH; Mitsubishi Tanabe Pharma Group)**

**Resources:** \$100 million. Firm is a jointly-owned subsidiary of Mitsubishi Tanabe Pharma Corp. and Mitsubishi Chemical Holdings Corp.

**Current portfolio:** Eight companies

**Amount of investment:** \$5 million per company.

**Investment preferences:** Seed to late-stage life sciences companies based principally in North America and Europe, usually as part of an investment syndicate with other leading VC firms. MPH invests in companies developing novel therapeutics (small molecule and biotherapeutics), technology platforms, diagnostics, and vaccines. MPH is interested in novel drugs and diagnostics in various disease areas, including cardiovascular, immunology, and inflammation, metabolic disease, nephrology, neuroscience, and stroke

**Year established:** 2006

**#11. (tie) Lilly Asian Ventures**

**Resources:** \$100 million

**Current portfolio:** 11 companies

**Amount of investment:** \$5 million to \$15 million per company

**Investment preferences:** Companies with potential to be top-ranked in its category in China, whether a drugmaker or pharmaceutical service provider, and potential to conduct business outside China

**Year established:** 2008

**#9. (tie) MS Ventures (Merck KGaA)**

**Resources:** €100 million (\$132.1 million), announced May 16; fund launched with €40 million (\$52.9 million)<sup>5</sup>

**Current portfolio:** 12 companies

**Amount of investment:** Figure or range per company unavailable<sup>2</sup>

**Investment preferences:** Primarily early-stage investments in companies that develop products and/ or technologies that could benefit patients in therapeutic areas relevant to Merck Serono. Company's core therapeutic areas include Autoimmune & Inflammatory diseases, endocrinology, fertility, neurodegenerative diseases, oncology, and rheumatology.

Also manages €10 million (\$13.2 million) investment to provide seed funding, plus access to Merck Serono's Inter-Lab Research and Development Center in Yavne, Israel, for Israeli startups with potential for developing innovations with future application in the company's areas of focus. The first startup has moved to Inter-Lab: "The goal is to have at least six startups working to transform the ideas of Israeli scientists into new medications or technologies by 2018." according to a May 15 report in company online publication "M: The Explorer Magazine ([http://magazine.merckgroup.com/en/Life\\_and\\_Responsibility/Merck\\_Serono\\_Israel/BioIncubator1.html](http://magazine.merckgroup.com/en/Life_and_Responsibility/Merck_Serono_Israel/BioIncubator1.html))."

**Year established:** 2009

#### #9. (tie) Boehringer Ingelheim Ventures

**Resources:** €100 million (\$132.1 million)<sup>3</sup>

**Current portfolio:** Eight companies and one fund-in-fund investment

**Amount of investment:** Opening investments of up to €2 million (\$2.6 million) per venture at the early stage, with subsequent staged investments intended to align with each venture's progress, up to a total of €10 million (\$13.2 million) to €15 million (\$19.8 million) per venture over the life of a company

**Investment preferences:** Significant enhancements in patient care through innovative and pioneering science including (but not limited to) addressing underexplored targets and indications, T-cell and other next-generation vaccines, next-generation NBEs such as cancer immunotherapeutics, regenerative medicine, and new platforms for identifying targets and biomarkers

**Year established:** 2010

#### #5. (tie) Novartis Option Fund

**Resources:** Initial fund of \$200 million toward seed innovative startup companies during their earliest stages

**Current portfolio:** Nine companies

**Amount of investment:** \$20 million to \$25 million over the life of a company. The initial equity investment can be coupled with an option to a specific therapeutic program giving early validation for the startup company's technology

**Investment preferences:** Early-stage, high-risk areas enabling the development of novel programs and technologies

**Year established:** 2007

#### #5. (tie) Lilly Ventures

**Resources:** \$200 million under management

**Current portfolio:** 15 companies

**Amount of investment:** \$5 million to \$15 million per company

**Investment preferences:** Biotech companies that leverage proprietary drug discovery or development technologies to build a multi-product pipeline; companies focused on the convergence of devices with pharmaceuticals or diagnostics; North American and European regions

**Year established:** 2001

#### #5. (tie) Baxter Ventures

**Resources:** \$200 million

**Current portfolio:** Seven investments, most being direct investment in companies, with the rest being investments in life sciences venture funds

**Amount of investment:** A typical equity investment is \$1 million to \$5 million initial investment, with a potential of investing up to \$10 million over the life of the company

**Investment preferences:** Companies with innovative technologies, products, and therapies with the potential to improve patient care globally and maximize value for investors and entrepreneurs; Focus areas include therapeutic areas complementary to those of Baxter's existing Medical Products and BioScience businesses, as well as cutting-edge technologies and therapies outside of Baxter's current product portfolio that have sustainable long-term growth potential.

**Year established:** 2011

#### #5. (tie) Amgen Ventures

**Resources:** \$200 million in two funds: Amgen Ventures I, a \$100 million fund founded 2004; and Amgen Ventures II, a \$100 million fund founded 2012

**Current portfolio:** 13 companies—12 in Amgen Ventures I; one in Amgen Ventures II

**Amount of investment:** Typically \$3 million to 5 million per company per round, and may invest up to \$15 million over the life of the company.

**Investment preferences:** Early-stage to early clinical companies developing human therapeutics. While the fund's focus is primarily in areas of current therapeutic interest to Amgen—which include oncology, inflammation, hematology/nephrology, metabolic disorders, neuroscience and cardiovascular—the fund also seeks novel modalities with potential to address targets in both current and emerging therapeutic areas of interest. We will also review companies developing drug delivery and monitoring devices. Currently seeking investments in North America, Europe, and the U.K.

**Year established:** 2004

#### #4. Merck Research Ventures Fund (Merck & Co.)<sup>6</sup>

**Resources:** \$250 million evergreen fund. First phase was to establish a network of fund-to-fund investments. Majority of activity going forward will be direct minority equity investments in biotech companies, including formation of new startups

**Current portfolio:** No direct investments in companies; limited partner investments in five venture capital funds as of April 2013, including an undisclosed sum in the \$270 million fourth fund of Flagship Ventures, and the establishment, with Lumira Capital, of the Merck-Lumira



**Bioscience Fund in Canada**

**Amount of investment:** Flexible, but target \$3 million to \$7 million during first round, with follow-on investment up to 5-15% ownership

**Investment preferences:** New ventures that apply scientific breakthroughs to the development of new drugs (small molecules, biologics, vaccines) in areas of unmet medical need

**Year established:** 2011

**#3. MedImmune Ventures (AstraZeneca)**

**Resources:** \$400 million under management in an evergreen fund

**Current portfolio:** 15 companies

**Amount of investment:** \$15 million to \$25 million over the life of an investment

**Investment preferences:** Private companies that develop small and large molecules, vaccines, pharmaceutical technologies and platforms, with early to late stage products and technologies, in early (e.g. seed) to late (e.g. mezzanine) rounds of financing. Geographic scope includes North America, Western Europe, Israel and Australia. The fund also seek investments in medical device, diagnostic, imaging and healthcare IT companies pertaining to the discovery, development and commercialization of pharmaceutical products. Therapeutic scope includes cardiology, gastroenterology, neuroscience, oncology, pulmonology, infectious disease, inflammation and metabolism

**Year established:** 2002

**#2. Roche Venture Fund**

**Resources:** Evergreen fund of CHF 500 million (\$534.2 million), of which about 40% is currently invested<sup>3</sup>

**Current portfolio:** About 30 companies in 10 countries across Europe, North America and the Pacific region

**Amount of investment:** Initial investment of CHF 1 million (about \$1.1 million) to CHF 5 million (\$5.3 million)<sup>3</sup>

**Investment preferences:** Companies with innovative new technologies, medicines or diagnostics, in areas of interest, including oncology, central nervous system; inflammation; metabolic diseases; virology; in vitro diagnostics; diabetes care; molecular diagnostics; and innovative research technologies. Also, Series B companies, though the Fund has invested earlier with a syndicate. For therapeutic biotechs, Fund is "willing to invest in companies that are still 18-24 months away from the clinic."<sup>7</sup>

**Year established:** 2002

**#1. Novartis Venture Fund**

**Resources:** More than \$600 million under management via evergreen fund re-investing returns generated

**Current portfolio:** Approximately 60 companies

**Amount of investment:** Up to \$30 million per company over its life; minimum can be as little as \$100,000

**Investment preferences:** Novel therapeutics and platforms for human and animal health; diagnostics or drug delivery systems. "We look for unmet need and clinical impact, novel proprietary science and understanding of mechanism, management, and board experience and capital efficiency in the program."<sup>8</sup>

**Year established:** 1996

#### Honorable Mentions

The following funds did not make the cut simply because we weren't able to ascertain how big they are. Still, don't write off these guys as skinflints:

#### AbbVie Biotech Ventures Inc. (ABVI; formerly Abbott Biotech Ventures)

**Resources:** Size of current fund unavailable<sup>2</sup>

**Current portfolio:** Number of companies unavailable<sup>2</sup>

**Amount of investment:** Ranges from several hundred thousand dollars up to several million, depending on the opportunity and development stage. ABVI says it will always remain a minority investor.

**Investment preferences:** Companies with programs ranging from preclinical to early proof-of-concept are of highest interest. ABVI invests in technologies that are strategic to AbbVie such as neuroscience, immunology, virology, and oncology, as well as emerging or more opportunistic areas of innovation that have the potential to complement AbbVie's existing portfolio or to expand AbbVie's future business reach.

**Year established:** 2013

#### Astellas Venture Management (AVM)

**Resources:** Combined size of funds unavailable<sup>9</sup>

**Current portfolio:** 19 companies—14 funded via Astellas Venture Fund I, managed since 2005; three via Astellas Venture Capital since 2000; and two via Fujisawa Investments for Entrepreneurship (FITE) funds I and II, managed since 1999 and 2001, respectively

**Amount of investment:** Figure or range unavailable

**Investment preferences:** Privately owned biotechnology companies focused on discovering and developing human therapeutics. AVM seeks companies with potential to become Astellas Pharma's collaboration partners in R&D, in disease fields aligned with Astellas' priority therapeutic categories of diabetes complications and other metabolic diseases, immunology and infectious diseases, neuroscience, oncology, and urology

**Year established:** 1999

#### Johnson & Johnson Development Corp. (JJDC)

**Resources:** Size of fund undisclosed

**Current portfolio:** Undisclosed number of companies<sup>10</sup>

**Amount of investment:** Undisclosed<sup>10</sup>

**Investment preferences:** Pharmaceuticals and biotechnologies “that create synergistic solutions in” treating and curing chronic and life-threatening diseases, with clinically validated solutions across pharmaceuticals, regenerative medicine, gene therapies, and tissue and organ engineering. Also, medical device and diagnostic “solutions that have significant addressable markets” through early detection, prevention, and remediation of disease and are supported with validated data and research.<sup>11</sup>

**Year established:** 1973

**Novo Growth Equity (Novo A/S)**

**Resources:** Current figure not disclosed<sup>12</sup>

**Current portfolio:** Five companies

**Amount of investment:** Depends on company; amount can total “several” billion DKK per company<sup>13</sup>

**Investment preferences:** Late-stage funding for well-established life science companies with positive cash flow, strongly positioned products and attractive prospects.

**Year established:** 2009

## Notes:

<sup>1</sup> SR One appears to be allowing for smaller investments compared with 2011, when a fund partner told GEN that initial investment was in the \$4 million to \$10 million range, with follow-on financings that could potentially raise the total investment to between \$20 million and \$25 million. See: <https://www.genengnews.com/insight-and-intelligence/biopharma-venture-funds-are-stepping-up-where-vc-firms-are-stepping-out/77899453/> (<https://www.genengnews.com/insight-and-intelligence/biopharma-venture-funds-are-stepping-up-where-vc-firms-are-stepping-out/77899453/>)

<sup>2</sup> Fund did not respond to GEN email queries seeking verification of information published on its website and/or additional information.

<sup>3</sup> Figures converted to U.S. dollars via XE ([www.xe.com](http://www.xe.com)) on June 7, 2013

<sup>4</sup> See "Merck Serono Announces the Creation of Ondaco, the Fifth Company Stemming From Its Entrepreneur Partnership Program," released January 23, and available here: <http://www.prnewswire.co.uk/news-releases/merck-serono-announces-the-creation-of-ondaco-the-fifth-company-stemming-from-its-entrepreneur-partnership-program-188007581.html> (<http://www.prnewswire.co.uk/news-releases/merck-serono-announces-the-creation-of-ondaco-the-fifth-company-stemming-from-its-entrepreneur-partnership-program-188007581.html>)

<sup>5</sup> Figures converted to U.S. dollars via XE ([www.xe.com](http://www.xe.com)) on June 7, 2013. The May 16 announcement can be seen here:

[http://news.merck.de/N/0/1A9A54BFA50CDC77C1257B6D002842EF/\\$File/MSVentures\\_eng.pdf](http://news.merck.de/N/0/1A9A54BFA50CDC77C1257B6D002842EF/$File/MSVentures_eng.pdf) ([http://news.merck.de/N/0/1A9A54BFA50CDC77C1257B6D002842EF/\\$File/MSVentures\\_eng.pdf](http://news.merck.de/N/0/1A9A54BFA50CDC77C1257B6D002842EF/$File/MSVentures_eng.pdf))

<sup>6</sup> MRVF is separate from Merck's Global Health Innovation, also a \$250 million fund but focused on developing companies in two categories outside of Merck's core pharmaceuticals, vaccines, consumer products, and animal health businesses—health solutions and services, and health information technology

<sup>7</sup> Fund did not respond to GEN email queries seeking confirmation. Information comes from Roche Venture Fund website, <http://www.venturefund.roche.com/Investment-Criteria.html> (<http://www.venturefund.roche.com/Investment-Criteria.html>)

<sup>8</sup> Reinhard Ambros, global head of the Novartis Venture Funds, 2012 Annual Report, p. 6; confirmed June 10 via interview

<http://www.venturefund.novartis.com/assets/files/VentureFundReport2012.pdf> (<http://www.venturefund.novartis.com/assets/files/VentureFundReport2012.pdf>)

<sup>9</sup> Fund did not respond to GEN email queries seeking confirmation and/or additional information. According to a list published online last year in The Hitchhiker's Guide to Venture Capital, a blog by Andrew Romans within the website of the Founders Club, AVM had a total \$160 million as of 2011. See: <http://www.founders-club.com/blog/entry/list-of-the-most-active-vcs-in-healthcare-and-life-science-biotech-part-1-of-6.html> (<http://www.founders-club.com/blog/entry/list-of-the-most-active-vcs-in-healthcare-and-life-science-biotech-part-1-of-6.html>). An undated description on Viamet's website pegs the combined size of the four funds as totaling "approximately \$100 million." See <http://www.viamet.com/investors.asp> (<http://www.viamet.com/investors.asp>)

<sup>10</sup> In recent weeks, JJDC led \$14 million Series B venture round for Protagonist Therapeutics, announced June 4; other investors included Lilly Ventures. JJDC also led \$18 million Series C round for Aquinox Pharmaceuticals, announced April 3; other investors included Pfizer Venture Investments. As is typical in such financings, JJDC's investment wasn't disclosed. However, JJDC investments in two companies were made public in recent years: On August 20, 2012, Danish-owned Genmab said JJDC would invest 475 million Danish crowns (\$84.2 million) in new company shares. See: <http://ir.genmab.com/releasedetail.cfm?ReleaseID=703394> (<http://ir.genmab.com/releasedetail.cfm?ReleaseID=703394>). And in 2011, JJDC made an equity investment of about \$7.5 million in Astellas shares, under a deal by which Astellas granted a license to commercialize antibodies targeting the RON receptor to J&J's Centocor, Astellas said in an SEC filing that noted the agreement was terminated as of December 6, 2012. See: <http://www.sec.gov/Archives/edgar/data/1325879/000119312513101343/R15.htm> (<http://www.sec.gov/Archives/edgar/data/1325879/000119312513101343/R15.htm>)

<sup>11</sup> JJDC criteria for pharmaceuticals and biotechnologies published online at <http://www.jjdevcorp.com/pharmaceuticals-biotechnology>; and JJDC criteria for medical devices and diagnostics, published online at <http://www.jjdevcorp.com/medical-devices-diagnostics> (<http://www.jjdevcorp.com/medical-devices-diagnostics>)

<sup>12</sup> Status updated June 6 by a Novo Growth Equity spokesperson. Back in 2009, however, Novo announced plans to invest \$200 million annually into “promising later stage and commercially viable life science companies.” See

<http://www.businesswire.com/news/home/20090625005093/en/Novo-Growth-Equity-Expands-Team-Invest-200M> (<http://www.businesswire.com/news/home/20090625005093/en/Novo-Growth-Equity-Expands-Team-Invest-200M>)

<sup>13</sup> On its web page, Novo Growth Equity states, “These late-stage investments may amount to several billion DKK per company in exchange for influential equity ownership stakes in publicly listed as well as privately owned companies.” See <http://www.novo.dk/growth-equity/about> (<http://www.novo.dk/growth-equity/about>)

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**Gilead Sciences Inc. (NASDAQ: GILD)**

\$64.87 USD (As of 05/01/19)

Zacks Rank 3-Hold

Style: Value: **A** Growth: **F** Momentum: **F** VGM: **D**

**Data Overview**

52 Week High-Low	\$79.00 - \$66.54
20 Day Average Volume	6,748,249
Beta	1.14
Market Cap	82.70 B
Dividend / Div Yld	\$2.52 / 3.88%
Industry	Medical - Biomedical and Genetics
Industry Rank	75 / 256 (Top 29%)

Current Ratio	3.38
Debt/Capital	54.33%
Net Margin	24.65%
Price/Book (P/B)	3.90
Price/Cash Flow (P/CF)	8.86
Earnings Yield	10.28%
Debt/Equity	1.19

**Value Score**

P/E (F1)	9.73
P/E (F1) Rel to Industry	20.15
PEG Ratio	0.80
P/S (F1)	3.74
P/S (TTM)	3.74
P/CFO	8.86
P/CFO Rel to Industry	0.51
EV/EBITDA Annual	7.59

**Growth Score**

Proj. EPS Growth (F1/F0)	-0.06%
Hist. EPS Growth (Q0/Q-1)	5.26%
Qtr CFO Growth	39.24
2 Yr CFO Growth	-58.05
Return on Equity (ROE)	37.03%
(NI - CFO) / Total Assets	-13.03
Asset Turnover	0.34

**Momentum Score**

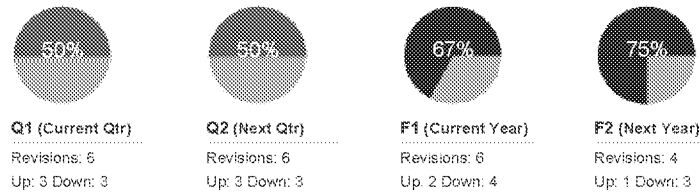
1 week Volume change	-0.26%
1 week Price Cng Rel to Industry	3.49%
(F1) EPS Est 1 week change	0.28%
(F1) EPS Est 4 week change	-0.48%
(F1) EPS Est 12 week change	-1.92%
(Q1) EPS Est 1 week change	-2.55%

**Summary**

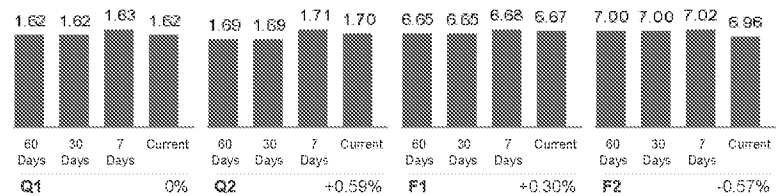
Gilead's HIV franchise maintains momentum, driven by continued uptake of Genvoya and Odefsey, and the rapid adoption of Biktarvy. However, the company's HCV franchise continues to witness a slowdown across key markets, including the United States and Europe, as a result of competition and pricing pressure. Consequently, Gilead shifted focus to its HIV franchise, and newer avenues like CAR-T therapy and NASH. However, the company suffered a setback with the failure of a late-stage study on selonsertib in patients with compensated cirrhosis (F4) due to NASH. Shares have underperformed the industry in the past three months.

**Elements of the Zacks Rank**

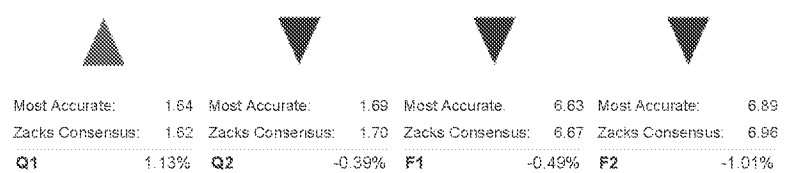
**Agreement** Estimate Revisions (60 days)



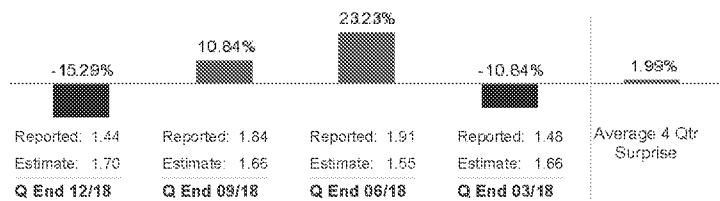
**Magnitude** Consensus Estimate Trend (60 days)



**Upside** Zacks Consensus Estimate vs. Most Accurate Estimate



**Surprise** Reported Earnings History

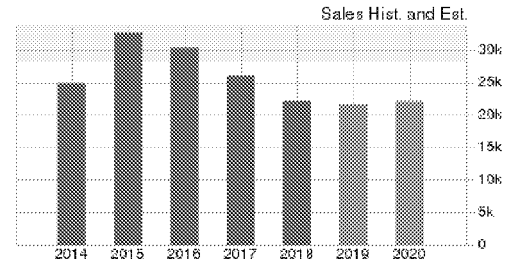
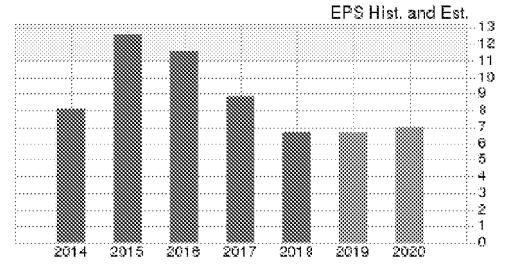


**Overview**

Headquartered in Foster City, CA, Gilead Sciences is a biopharmaceutical company, focused on developing drugs for the treatment of human immunodeficiency virus (HIV), liver diseases, hematology/oncology diseases and inflammation/respiratory diseases. Key products include HIV/AIDS therapies like tenofovir alafenamide (TAF)-based products Genvoya, Odefsey, Descovy, recently approved Biktarvy, Stribild, Atripla, Complera/Eviplera and Truvada. The portfolio also includes hepatitis C virus (HCV) drugs like Harvoni and Epclusa, and HBV drug, Vemlidy. In 2017, the company launched two new drugs — Yescarta, the first cell therapy approved for the treatment of adult patients with relapsed or refractory large B-cell lymphoma, and HCV drug, Vosevi. Other important products in the company's portfolio include Zydelig (for certain types of blood cancers), AmBisome (for serious invasive fungal infections caused by various fungal species in adults), Letairis (for pulmonary arterial hypertension), Cayston (for respiratory systems in cystic fibrosis patients aged seven years or older with Pseudomonas aeruginosa) and Ranexa (for chronic angina).

Gilead has a robust late-stage pipeline that bodes well for long-term growth. The company is also working on diversifying and growing its business beyond antivirals into other therapeutic areas. The company has a collaboration agreement with Galapagos for the development and commercialization of the JAK1-selective inhibitor, filgotinib, for inflammatory disease indications, including rheumatoid arthritis (RA). The company acquired Kite Pharma for \$11.9 billion in 2017 to enter the CAR T space. In December 2017, Gilead acquired Cell Design Labs Inc.

Revenues in 2018 came in at \$22.1 billion, down from \$26.1 billion in 2017.



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## Reasons To Buy:

▲ **Strong HIV Franchise:** Gilead is a dominant player in the HIV market with an impressive portfolio for the same. The company was the first to bring to market a single-tablet regimen (STR) for the treatment of HIV – Atripla. Additional STRs for HIV in the market include Complera/Eviplera and Stribild among others. Meanwhile, Gilead is looking to transition the HIV market to drugs with improved long-term safety profiles. The TAF-based products Genvoya, Odefsey and Descovy are performing well with strong adoption in both the United States and Europe. Genvoya has already become the most-prescribed regimen for both treatment-naïve and switch patients since its launch in Nov 2015. Also, Genvoya has been listed as a preferred regimen in several HIV treatment guidelines. Truvada, for use in the pre-exposure prophylaxis setting, continued to maintain momentum, with an estimated 202,000 patients using the drug by the end of the fourth quarter. The FDA extended the indication for Truvada as PrEP to include at-risk adolescents. The company received a major boost when the FDA approved the company's once-daily single tablet regimen ("STR"), Biktarvy (bictegravir 50mg/emtricitabine 200mg/tenofovir alafenamide 25mg, BIC/FTC/TAF) for HIV-1 infection. The approval provides a major boost to Gilead's HIV franchise. The approval of this new HIV therapy will pose stiff competition to GlaxoSmith's existing therapies, Tivicay and Triumeq. In March 2018, Biktarvy was added to the U.S. DHHS guidelines for the use of antiretroviral agents in adults and adolescents living with HIV as one of the recommended initial regimens. The recent approval in Europe will further strengthen the company's HIV franchise. Biktarvy also became the number one prescribed regimen for both treatment-naïve and switch patients.

Gilead' strong HIV franchise should help the company maintain momentum. Newly launched products should continue to perform well, thereby driving top-line growth.

▲ **Robust Pipeline:** Gilead has a robust pipeline, with several development programs currently underway, ranging from phase I through phase III. The company has quite a few programs targeting non-alcoholic steatohepatitis (NASH) with advanced fibrosis, including selonsertib (ASK-1 inhibitor; phase III), GS-9674 (FXR agonist; phase II) and GS-0976 (ACC inhibitor; phase II). Meanwhile, Gilead has been developing a pipeline, targeting inflammatory diseases. Phase III studies on filgotinib for the treatment of RA and Crohn's disease are currently ongoing. Galapagos and Gilead entered a global collaboration for the development and commercialization of filgotinib in inflammatory indications. Both the companies announced encouraging interim safety information from four studies on filgotinib for the treatment of RA.

These include 24-week results of the ongoing phase III FINCH 1, 2, and 3 trials, and updated week 156 safety data from the phase IIb DARWIN 3 long-term extension study in patients with RA. The FINCH studies are among several clinical trials of filgotinib in inflammatory diseases. Apart from RA, the candidate is being evaluated in a phase II EQUATOR program in psoriatic arthritis, the TORTUGA study in ankylosing spondylitis, the DIVERSITY phase III program in Crohn's disease and the phase III SELECTION trial in ulcerative colitis.

▲ **Acquisitions and Deals to Boost Portfolio and Strengthen Pipeline:** Gilead is looking to boost its portfolio and pipeline through deals and acquisitions. The company is also looking to expand beyond antivirals into other therapeutic areas. In January 2016, the company collaborated with Galapagos for the development and commercialization of filgotinib, for inflammatory disease indications including RA. Gilead acquired Kite Pharma to foray into the emerging field of cell therapy. Kite is a pioneer in cell therapy having developed engineered cell therapies that express either a chimeric antigen receptor (CAR) or an engineered T cell receptor (TCR), depending on the type of cancer. The approval of lead candidate Yescarta for the treatment of refractory aggressive non-Hodgkin lymphoma, which includes diffuse large B-cell lymphoma (DLBCL), transformed follicular lymphoma (TFL) and primary mediastinal B-cell lymphoma (PMBCL) is a significant boost for the company. The launch is progressing well. The drug was also approved in Europe. Gilead continues to enroll patients in ZUMA-7, a phase III randomized study comparing Yescarta to the standard of care, which is salvage chemotherapy followed by autologous stem cell transplantation in the second-line treatment of patients with DLBCL. Gilead also acquired Cell Design Labs, Inc. for \$567 million in December 2017. Cell Design Labs is a leader in developing cell-based therapies, and uses its synNotch and Throttle technology platforms. These technological platforms will enhance Gilead's cellular therapy research efforts, which Gilead acquired through Kite Pharma acquisition. Cell Design Labs is developing several pre-clinical product candidates, including CAR T and TCR therapies for prostate cancer and hepatocellular carcinoma that use the synNotch technology. The company's lead pre-clinical candidate targets multiple myeloma.

▲ **Boost Shareholder Value:** Gilead is making efforts to boost shareholders' value. During 2018, Gilead repaid \$6.3 billion of debt, paid cash dividends of \$3.0 billion and spent \$2.9 billion on repurchases of 40 million shares.

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## Recent News

### Collaborates With Insitro to Develop NASH Therapies – Apr 16

Gilead announced a collaboration with a privately-held, data-driven drug company, Insitro, for discovering and developing therapies targeting nonalcoholic steatohepatitis (“NASH”).

Despite the failure of its late-stage NASH candidate earlier this year, Gilead remains committed toward developing treatment for this indication.

Insitro focuses on using machine learning, an advanced form computer technology, to help pharma companies discover and develop drugs.

Per the deal, Gilead will use Insitro's proprietary platform for the next three years to develop five potential therapies for NASH. In return, Insitro will be eligible to receive an upfront payment of \$15 million and \$35 million in near-term operational milestone payments. Insitro will also be eligible to receive \$200 million for each of the five therapies in pre-clinical, clinical, regulatory and commercial milestones from Gilead. Insitro will also receive tiered royalties on net sales upon potential commercialization of the therapies. The deal also includes profit sharing in China, and milestone payments and royalties on other ex-U.S. sales.

### Collaborates With Novo Nordisk for NASH Treatment - Apr 11

Gilead and Denmark-based pharma giant Novo Nordisk A/S announced that both the companies intend to collaborate for developing treatments for non-alcoholic steatohepatitis (NASH).

The companies will initiate a proof-of-concept study combining Novo Nordisk's semaglutide (GLP-1 analogue) and Gilead's cilofexor (FXR agonist) and firsocostat (ACC inhibitor) for the treatment of patients suffering from NASH.

Gilead is expecting that a cocktail therapy of its NASH compounds with Novo Nordisk's semaglutide might work for it.

Ozempic, the injectable formulation of semaglutide, is a diabetes medicine, which is used with diet and exercise to treat adults whose type II diabetes is not satisfactorily controlled.

Since the NASH patients mostly suffer from obesity and diabetes, both the companies expect the combination therapy to yield positive results.

### Files sNDA for Label Expansion of HIV Therapy Descovy – Apr 5

Gilead announced the submission of a supplemental New Drug Application (sNDA) to the FDA for Descovy (emtricitabine 200 mg and tenofovir alafenamide 25 mg tablets).

The company is seeking FDA approval for Descovy as pre-exposure prophylaxis (PrEP) to reduce the risk of sexually acquired HIV-1 infection among individuals, who are HIV-negative and at risk for HIV. While Descovy is already approved in combination with other antiretroviral agents for the treatment of HIV infection in patients weighing greater or equal to 25 kg, it is not indicated for PrEP yet.

A priority review voucher was submitted with the filing. Hence, the anticipated review time for the sNDA is expected to be six months. The filing is based on the results of the phase III study, DISCOVER, which evaluated the safety and efficacy of Descovy compared to Truvada in men and transgender women, who sexually engage with men at high-risk of contracting HIV infection. The results showed that Descovy achieved non-inferiority to Truvada in study participants, who were at substantial and sustained risk of HIV acquisition.

### Announce Positive Data on Arthritis Drug – Mar 28

Gilead and partner Galapagos NV announced encouraging interim safety information from four studies on experimental candidate, filgotinib, for the treatment of rheumatoid arthritis (RA).

These include 24-week results of the ongoing phase III FINCH 1, 2, and 3 trials, and updated week 156 safety data from the phase IIb DARWIN 3 long-term extension study in patients with RA.

The phase III study, FINCH 1 evaluated filgotinib in comparison with Humira or placebo on a stable background dose of methotrexate (MTX) in patients with prior inadequate response to methotrexate. The study achieved its primary endpoint for both doses of filgotinib. Filgotinib 100 mg and 200 mg doses demonstrated significantly higher ACR20/50/70 responses compared to placebo in patients with prior inadequate methotrexate response.

### Data on HIV Candidate- Mar 7

Gilead presented data on an experimental candidate, GS-6207, for the treatment of HIV at the 2019 Conference on Retroviruses and Opportunistic Infections (CROI) in Seattle.

Data from two studies support the further development of GS-6207, a novel, selective, first-in-class inhibitor of HIV-1 capsid function, for potential future use as part of long-acting HIV combination therapy. Interim blinded data from a phase I study in healthy trial participants showed that single doses of GS-6207 of up to 450 mg, when administered subcutaneously, achieved sustained concentration levels and were well-tolerated.

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## Positive Data on HIV Drugs Biktarvy & Descovy- Mar 6

Gilead presented a series of data at the 2019 Conference on Retroviruses and Opportunistic Infections (CROI) in Seattle.

The company announced results from two studies evaluating the resistance profile of a once-daily single tablet HIV regimen, Biktarvy (bictegravir 50 mg/emtricitabine 200 mg/tenofovir alafenamide 25 mg tablets, BIC/FTC/TAF) in virologically suppressed adults switching from dolutegravir/abacavir/lamivudine (DTG/ABC/3TC) or a boosted protease inhibitor (PI)-based regimen for the treatment of HIV-1.

The results showed high rates of virologic suppression with Biktarvy in treatment-experienced adults, regardless of pre-existing resistance to nucleoside reverse transcriptase inhibitors (NRTIs).

We note that Biktarvy is already approved in the United States as a complete regimen for the treatment of HIV-1 infection in adults without any antiretroviral treatment history. Biktarvy is also approved to replace the current antiretroviral regimen in those adults who are virologically suppressed on a stable antiretroviral regimen for at least three months.

Gilead announced 48-week results from a phase II/III study evaluating the efficacy and safety of Biktarvy in virologically suppressed adolescents and children at least 6 years of age infected with HIV. Biktarvy maintained high rates of virologic suppression with a low incidence of study drug-related adverse events and no treatment-emergent resistance at week 48.

Gilead also announced results from the phase III randomized, controlled, double-blind study evaluating the safety and efficacy of the investigational use of once-daily Descovy for HIV pre-exposure prophylaxis (PrEP) compared with Truvada, in men who have sex with men and transgender women at risk of sexually acquired HIV infection.

Descovy met the pre-established criteria for non-inferiority to Truvada using a stringent rate ratio statistical comparison. Moreover, results showed that participants receiving Descovy have significant advantages with respect to bone and renal laboratory parameters, which were pre-specified secondary endpoints, compared with those receiving Truvada. Descovy is already approved in combination with other antiretroviral agents for the treatment of HIV infection in patients weighing 35 kg or more but is not indicated for PrEP.

Truvada is indicated in combination with safer sex practices for HIV PrEP to reduce the risk of sexually acquired HIV in at-risk adults and adolescents weighing 35 kg or more.

Gilead plans to file regulatory applications for Descovy for the PrEP indication as a potential important new option to prevent individuals from getting infected and contribute to the achievement of national and global HIV prevention goals.

## Late-Stage Study on Liver Disease Drug Fails – Feb 11

Gilead announced the failure of a late-stage study on pipeline candidate, selonsertib, in patients with compensated cirrhosis (F4) due to NASH.

STELLAR-4, a phase III, randomized, double-blind, placebo-controlled study (n=877) evaluated the safety and efficacy of selonsertib, which is an investigational, once-daily, oral inhibitor of apoptosis signal-regulating kinase 1 (ASK1), in patients with compensated cirrhosis due to NASH.

However, the study did not meet the pre-specified week 48 primary endpoint of a ? 1-stage histologic improvement in fibrosis without worsening of NASH.

Gilead is conducting an in-depth analysis of the findings and data will be submitted to an upcoming scientific conference. The company is also working with the Data Monitoring Committee and investigators to conclude the STELLAR-4 study in a manner consistent with the best interests of each patient.

Meanwhile, results from the phase III STELLAR-3 trial of selonsertib in patients with bridging fibrosis (F3) due to NASH and the phase II ATLAS combination trial of selonsertib, cilofexor (GS-9674) and firsocostat (GS-0976) in patients with advanced fibrosis are expected later this year.

The failure of the STELLAR-4 study comes as a disappointment, given the significant market potential of NASH.

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Industry Analysis Zacks Industry Rank:



Top Peers

Amgen Inc. (AMGN)	
Celgene Corporation (CELG)	2
Biogen Inc. (BIIB)	
CSL Limited Sponsored ADR (CSLLY)	
Regeneron Pharmaceuticals, Inc. (REGN)	
Alexion Pharmaceuticals, Inc. (ALXN)	2
Illumina, Inc. (ILMN)	
Vertex Pharmaceuticals Incorporated (VRTX)	
SINO PHARMACEUT (SBMFF)	

Industry Comparison Medical - Biomedical And Genetics   Position in Industry: 72 of 313				Industry Peers		
	GILD	X Industry	S&P 500	AMGN	CELG	BIIB
Market Cap	82.70 B	200.46 M	22.57 B	108.49 B	67.01 B	44.50 B
# of Analysts	10	2	14	10	10	28
Dividend Yield	3.88%	0.00%	1.88%	3.29%	0.00%	0.00%
<b>Value Score</b>	<b>A</b>	-	-	<b>B</b>	<b>B</b>	<b>A</b>
Cash/Price	0.36	0.25	0.04	0.26	0.12	0.09
EV/EBITDA	7.59	-3.25	12.39	8.42	12.74	6.73
PEG Ratio	0.80	1.90	1.88	2.16	0.40	0.85
Price/Book (P/B)	3.90	3.35	3.18	10.02	8.21	3.22
Price/Cash Flow (P/CF)	8.86	14.47	12.51	9.74	10.71	7.23
P/E (F1)	9.73	23.73	17.50	12.63	8.85	7.81
Price/Sales (P/S)	3.74	13.80	2.59	4.57	4.25	3.22
Earnings Yield	10.28%	-16.47%	5.67%	7.91%	11.29%	12.80%
Debt/Equity	1.19	0.00	0.66	2.71	2.42	0.43
Cash Flow (\$/share)	7.33	-0.98	6.82	18.08	8.87	31.74
<b>Growth Score</b>	<b>F</b>	-	-	<b>C</b>	<b>C</b>	<b>B</b>
Hist. EPS Growth (3-5 yrs)	5.26%	18.84%	8.82%	13.63%	24.72%	17.73%
Proj. EPS Growth (F1/F0)	-0.06%	8.66%	6.82%	-3.17%	20.98%	12.09%
Curr. Cash Flow Growth	-24.62%	16.55%	16.26%	2.84%	3.69%	11.67%
Hist. Cash Flow Growth (3-5 yrs)	21.29%	8.94%	8.89%	10.23%	18.30%	19.17%
Current Ratio	3.38	5.27	1.27	2.77	2.78	2.84
Debt/Capital	54.33%	0.00%	41.24%	73.02%	70.78%	30.07%
Net Margin	24.65%	-232.92%	11.56%	34.00%	30.10%	33.79%
Return on Equity	37.03%	-58.78%	17.88%	71.02%	106.69%	41.39%
Sales/Assets	0.34	0.18	0.55	0.36	0.45	0.55
Proj. Sales Growth (F1/F0)	-0.43%	6.69%	3.99%	-4.77%	12.06%	3.04%
<b>Momentum Score</b>	<b>F</b>	-	-	<b>D</b>	<b>F</b>	<b>B</b>
Daily Price Chg	-0.26%	-0.73%	-1.00%	-1.77%	0.38%	0.11%
1 Week Price Chg	3.49%	1.14%	1.12%	2.25%	0.49%	1.83%
4 Week Price Chg	-2.69%	-6.23%	0.96%	-8.70%	1.25%	-0.82%
12 Week Price Chg	-5.64%	0.00%	6.07%	-7.66%	7.82%	-31.13%
52 Week Price Chg	-3.01%	-23.24%	9.16%	3.96%	9.34%	-16.28%
20 Day Average Volume	6,748,249	157,035	1,794,471	2,927,808	7,226,324	2,192,170
(F1) EPS Est Wkly Chg	-1.51%	0.00%	0.00%	-0.40%	-1.65%	1.73%
(F1) EPS Est Mthly Chg	-0.48%	0.00%	0.00%	-0.59%	-1.55%	2.76%
(F1) EPS Est Qtrly Chg	-6.13%	-0.55%	-0.14%	-0.27%	0.41%	2.97%
(Q1) EPS Est Mthly Chg	-2.55%	0.00%	0.00%	-1.13%	-0.81%	2.13%

# Gilead Sciences, Inc.

**Recommendation** **HOLD**

**Price**  
USD 67.13 (as of May 03, 2019 4:00 PM ET)

**12-Mo. Target Price**  
USD 76.00

**Report Currency**  
USD

**Investment Style**  
Large-Cap Value

**Equity Analyst Kevin Huang, CFA**

**UPDATE: PLEASE SEE THE ANALYST'S LATEST RESEARCH NOTE IN THE RESEARCH NOTES SECTION**

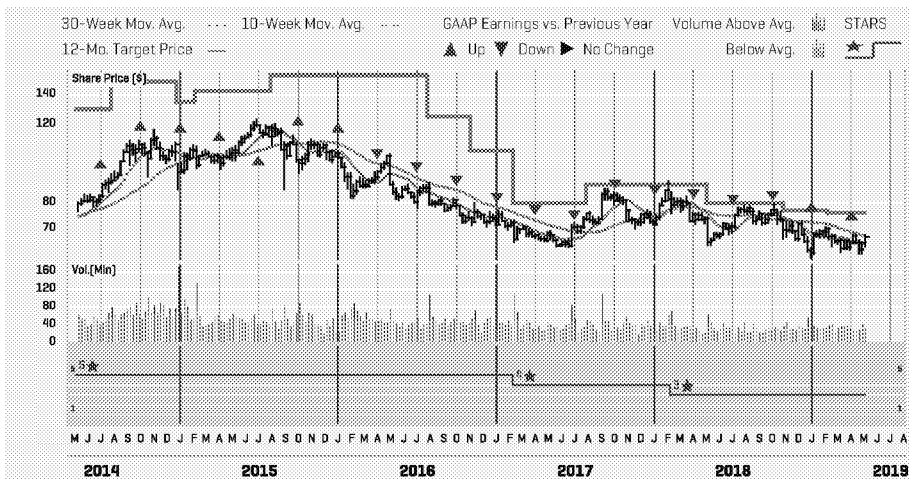
**GICS Sector** Health Care  
**Sub-Industry** Biotechnology

**Summary** GILD is engaged in the discovery, development and commercialization of treatments for infections, respiratory disorders, cardiovascular conditions and cancer.

**Key Stock Statistics** (Source: CFRA, S&P Global Market Intelligence (SPGMI), Company Reports)

52-Wk Range	<b>USD 79.61 - 60.32</b>	Oper. EPS 2019E	<b>USD 6.79</b>	Market Capitalization[B]	<b>USD 85.52</b>	Beta	<b>1.18</b>
Trailing 12-Month EPS	<b>USD 4.53</b>	Oper. EPS 2020E	<b>USD 7.13</b>	Yield [%]	<b>3.75</b>	3-Yr Proj. EPS CAGR[%]	<b>3</b>
Trailing 12-Month P/E	<b>14.81</b>	P/E on Oper. EPS 2019E	<b>9.89</b>	Dividend Rate/Share	<b>USD 2.52</b>	SPGMI's Quality Ranking	<b>B</b>
\$10K Invested 5 Yrs Ago	<b>\$9,588</b>	Common Shares Outstg.[M]	<b>1,274.0</b>	Institutional Ownership [%]	<b>83</b>		

## Price Performance



Source: CFRA, S&P Global Market Intelligence

Past performance is not an indication of future performance and should not be relied upon as such.

Analysis prepared by Equity Analyst **Kevin Huang** on Feb 11, 2019 04:58 PM, when the stock traded at **USD 67.47**.

## Highlights

- Following a 15.2% and 14.1% revenue decline in 2018 and 2017, we anticipate 2019 sales to decline 0.8% to 21.9 billion, as the well-known decay in sales of GILD's HCV franchise decelerates. In 2019, we expect HCV sales to decline approximately 22% to \$2.8 billion from \$3.6 billion in 2018 because patients are being cured and competition in the market will likely remain elevated.
- On the other hand, we expect GILD's HIV franchise to continue growing until 2021, when we expect U.S. generic competition to begin eroding GILD's HIV leadership. In 2018, sales of HIV and other antivirals rose 12% to \$14.6 billion, driven by tenofovir alafenamide (TAF) based drugs such as Biktarvy. We expect HIV sales to grow by a similar amount in 2019.
- In Q4 2018, GILD took an \$820 million charge related to the discontinuation of research and development of the KITE 585 anti-BCMA program that was acquired from Kite Pharma in 2017. Despite this setback, GILD's management appears eager to allocate capital towards M&A opportunities; although, the company may have to wait until the incoming CEO Daniel O'Day, starting March 1, 2019, is up-to-speed with the company.

## Investment Rationale/Risk

- We find GILD's shares, trading at 10.1x our next-12-month EPS estimate, to be near fair value. While GILD's HCV franchise is declining, we expect sales of HIV drugs to expand. GILD's acquisition of Kite Pharma allowed GILD to enter the complex CAR-T market; although, it will be a while before Kite's portfolio can make up for GILD's declining HCV sales. JAK-1 inhibitor Filgotinib, expected to be a future star, had a positive readout in the FINCH 3 Phase III study in Q3 2018; however, GILD's ability to file a new drug application is likely contingent upon data from the MANTA study, which has had a slower-than-expected enrollment rate. With a net debt to capital ratio of 0.0% as of December 2018, GILD has the financial flexibility to invest in its existing clinical programs and make large acquisitions.
- Risks to our recommendation and target price include weaker-than-expected sales of key products, pipeline failures, and stronger-than-expected pricing pressures.
- Our 12-month target price of \$76 is 11.4x our next-12-month EPS estimate of \$6.68. This compares to GILD's three-year forward PE range of 6.4x to 13.1x.

## Analyst's Risk Assessment

Our risk assessment reflects Gilead's ability to increase its dominant HIV market share, offset by slowing hepatitis C market. We see opportunities in oncology emerging as potential long-term growth driver.

## Revenue/Earnings Data

Revenue (Million USD)	1Q	2Q	3Q	4Q	Year
2019	5,281	--	--	--	--
2018	5,088	5,648	5,596	5,795	22,127
2017	6,505	7,141	6,512	5,949	26,107
2016	7,794	7,776	7,500	7,320	30,390
2015	7,594	8,244	8,295	8,506	32,639
2014	4,999	6,535	6,042	7,314	24,890

## Earnings Per Share (USD)

	1Q	2Q	3Q	4Q	Year
2020	<b>E 1.70</b>	<b>E 1.73</b>	<b>E 1.84</b>	<b>E 1.86</b>	<b>E 7.13</b>
2019	1.54	<b>E 1.66</b>	<b>E 1.69</b>	<b>E 1.68</b>	<b>E 6.79</b>
2018	1.17	1.39	1.60	0.00	4.17
2017	2.05	2.33	2.06	-2.96	3.51
2016	2.53	2.58	2.49	2.34	9.94
2015	2.76	2.92	3.06	3.19	11.91

Fiscal year ended Dec 31. EPS Estimates based on CFRA's Operating Earnings; historical GAAP earnings are as reported in Company reports.

## Dividend Data

Amount (USD)	Date Decl.	Ex-Div. Date	Stk. of Record	Payment Date
0.63	Feb 04	Mar 14	Mar 15	Mar 28 '19
0.57	Oct 25	Dec 13	Dec 14	Dec 28 '18
0.57	Jul 25	Sep 13	Sep 14	Sep 27 '18
0.57	May 01	Jun 14	Jun 15	Jun 28 '18

Dividends have been paid since 2015. Source: Company reports.

**Past performance is not an indication of future performance and should not be relied upon as such.**

Forecasts are not reliable indicator of future performance.

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## Business Summary October 30, 2018

**CORPORATE OVERVIEW.** Gilead Sciences [GILD] primary areas of focus include human immunodeficiency virus [HIV]; liver diseases, such as chronic hepatitis C virus [HCV] infection and chronic hepatitis B virus [HBV] infection; oncology and inflammation; and serious cardiovascular and respiratory conditions. It has operations in approximately 30 countries worldwide. However, in October 2017, GILD made significant efforts to expand their oncology franchise through the acquisition of Kite Pharmaceuticals for \$11.2 billion. This acquisition expanded its presence in the cell therapy field. In October 2017, Kite's gene-therapy, Yescarta, became the first FDA-approved chimeric antigen receptor T cell [CAR T] therapy approved. Yescarta treats adults with non-Hodgkins's lymphoma who failed chemotherapy. At the time, this was the second FDA-approved gene therapy. However, we anticipate a slow ramp up due to complicated process and potentially severe side effects. Yescarta was priced at \$373,000 when it was first launched.

In the liver diseases area, the company received approval from the U.S. Food and Drug Administration [FDA] for Sovaldi [sofosbuvir] in December 2013. Sovaldi has a 95%+ cure rate for hepatitis C after a 12 week regimen and the drug quickly became the fastest growing drug in history. In 2014, in its first full year, sales of Sovaldi was \$10.3 billion. In December 2014, GILD expanded its HCV franchise with the approval of Harvoni, the first once-daily single tablet regimen for the treatment of HCV genotype 1 infection in adults. Harvoni combines the NS5A inhibitor ledipasvir with the nucleotide analog polymerase inhibitor sofosbuvir. Since then, GILD also received approval for two additional HCV drugs, Epclusa and Vosevi. However, sales of GILD's HCV products started to decline after peaking in 2015 due to competition as well as a declining patient pool since their HCV products had a 95%+ cure rate.

The company is evaluating simtuzumab for nonalcoholic steatohepatitis [NASH] in Phase 2 clinical trials. In December 2014, it also entered into an agreement with Phenex Pharmaceuticals AG [Phenex] under which the company acquired Phenex's Farnesoid X Receptor [FXR] program consisted of small molecule FXR agonists for the treatment of liver diseases, including NASH.

In the HIV area, Stribild is an oral formulation dosed once a day for the treatment of HIV-1 infection in treatment-naïve adults. Stribild is the company's third complete single tablet regimen for the treatment of HIV and is a fixed-dose combination of its antiretroviral medications, Vitekta, Tybost, Viread and Emtriva [emtricitabine]. Stribild is approved by the FDA and the European Commission.

Atripla is an oral formulation dosed once a day for the treatment of HIV infection in adults. Atripla was the company's first single tablet regimen for HIV intended as a therapy or in combination with other antiretrovirals. It is a fixed-dose combination of the company's antiretroviral medications, Viread and Emtriva, and Bristol-Myers Squibb's non-nucleoside reverse transcriptase inhibitor, Sustiva [efavirenz].

Truvada [emtricitabine and tenofovir disoproxil fumarate] is an oral formulation dosed once a day as part of combination therapy to treat HIV infection in adults. It is a fixed-dose combination of the company's antiretroviral medications, Viread and Emtriva. The FDA also approved Truvada, in combination with safer sex practices, to reduce the risk of sexually acquired HIV-1 infection in adults at high risk, a strategy called pre-exposure prophylaxis.

Viread is an oral formulation of a nucleotide analog reverse transcriptase inhibitor, dosed once a day as part of combination therapy to treat HIV infection in patients two years of age and older. The European Commission approved the use of Viread in combination with other antiretroviral agents for the treatment of HIV-1 infected adolescent patients aged 2 to approximately 18 years with nucleoside reverse transcriptase inhibitor resistance or toxicities precluding the use of first-line pediatric agents. Viread is also approved for the treatment of chronic HBV.

**IMPACT OF MAJOR DEVELOPMENTS.** In December 2013 GILD received FDA approval for Sovaldi to treat HCV. Sovaldi has a 95%+ cure rate for hepatitis C after a 12 week regimen and the drug quickly became the fastest growing drug in history. In 2014, in its first full year, sales of Sovaldi was \$10.3 billion. In October 2017, GILD acquired Kite Pharma for \$11.2 billion, to expand its presence in the cell therapy field. In October 2017, Kite's gene-therapy, Yescarta, became the first FDA-approved chimeric antigen receptor T cell [CAR T] therapy approved. Yescarta treats adults with non-Hodgkins's lymphoma who failed chemotherapy. This is the second FDA-approved gene therapy and we view the approval positively. In July 2018, President and CEO John Milligan announced he will step down at the end of the year. Mr. Milligan has been CEO for less than 3 years and was faced with the challenge of rapidly declining HCV product sales. However, we were encouraged by his efforts to expand into oncology and gene therapy, primarily through last year's acquisition of Kite Pharmaceutical.

**FINANCIAL TRENDS.** Sales have risen from \$24.9 billion in 2014 to \$26.2 billion in 2017, representing a three-year annual growth rate [CAGR] of 1.6%. However, sales have been declining annually since peaking in 2015 at \$32.64 billion following the success of its HCV drugs, Sovaldi and Harvoni. However, due to a smaller new patient population [the cure rate for these drugs are 95%+], increased competition and much lower price points, sales of its HCV franchise has dropped significantly. In 2013, GILD's sales was \$11.2 billion, and more than doubled in 2014 following Sovaldi's approval in December 2013. Adjusted EPS has risen from \$8.09 in 2014 to \$8.84 in 2017, representing a three-year CAGR of 3.0%. However, EPS peaked at \$12.61 in 2015.

## Corporate Information

## Investor Contact

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## Office

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## Telephone

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## Fax

650-578-9264

## Website

www.gilead.com

## Officers

## CFO &amp; Executive VP

R. L. Washington

## Chairman &amp; CEO

D. O'Day

## Executive VP, General Counsel, Chief Compliance Officer &amp; Corporate Secretary

B. A. Pletcher

## Board Members

B. J. Druker

D. O'Day

E. J. Topol

E. R. Schiff

F. V. Chisari

G. E. Wilson

G. P. Shultz

H. M. Manwani

J. F. Cogan

J. K. Barton

J. R. Huff

J. W. Mellors

K. A. Kramer

K. C. Anderson

K. E. Lofton

M. C. Genovese

M. MacCoss

N. H. Afdhal

P. Berg

P. E. Klotman

P. Wold-Olsen

R. A. Harrington

R. J. Whitley

R. T. Schooley

## Domicile

Delaware

## Auditor

Ernst &amp; Young LLP

## Founded

1987

## Employees

11,000

## Stockholders

375

# Gilead Sciences, Inc.



Quantitative Evaluations						
<b>Fair Value Rank</b>	4	1	2	3	4	5
		LOWEST				HIGHEST
		Based on CFRA's proprietary quantitative model, stocks are ranked from most overvalued [1] to most undervalued [5].				
<b>Fair Value Calculation</b>	<b>USD</b>	Analysis of the stock's current worth, based on CFRA's proprietary quantitative model suggests that GILD is fairly valued.				
	<b>66.50</b>					
<b>Volatility</b>		LOW	AVERAGE	HIGH		
<b>Technical Evaluation</b>	<b>NEUTRAL</b>	Since April, 2019, the technical indicators for GILD have been NEUTRAL.				
<b>Insider Activity</b>		UNFAVORABLE	NEUTRAL	FAVORABLE		

Expanded Ratio Analysis				
	2018	2017	2016	2015
Price/Sales	3.70	3.62	3.20	4.72
Price/EBITDA	7.83	6.13	5.06	6.61
Price/Pretax Income	6.27	6.15	5.00	6.78
P/E Ratio	15.00	20.41	7.20	8.50
Avg. Diluted Shares Outsg.[M]	1308	1319	1358	1521

Figures based on fiscal year-end price

Key Growth Rates and Averages				
Past Growth Rate [%]	1 Year	3 Years	5 Years	
Sales	-15.24	-12.15	14.58	
Net Income	17.87	-32.96	12.15	

Ratio Analysis (Annual Avg.)				
Net Margin [%]		NM	NM	
% LT Debt to Capitalization	50.30	NA	NA	
Return on Equity [%]	25.98	NA	NA	

## Company Financials Fiscal year ending Dec. 31

Per Share Data (USD)	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Tangible Book Value	1.20	-0.62	6.67	5.00	2.13	-1.07	-2.30	3.10	2.77	2.69
Free Cash Flow	5.76	8.65	12.17	14.00	8.06	1.91	1.85	2.26	1.62	1.58
Earnings	4.17	3.51	9.94	11.91	7.35	1.81	1.64	1.77	1.66	1.41
Earnings (Normalized)	4.06	6.40	8.08	8.90	5.66	1.56	1.57	1.46	1.41	1.19
Dividends	2.28	2.08	1.84	1.29	NA	NA	NA	NA	NA	NA
Payout Ratio [%]	54	59	18	10	NA	NA	NA	NA	NA	NA
Prices: High	89.54	86.27	103.10	123.37	116.83	76.11	NA	21.75	24.75	26.64
Prices: Low	60.32	63.76	70.83	86.00	63.50	36.94	NA	17.23	15.87	20.31
P/E Ratio: High	60.1	9.3	9.2	19.1	46.4	49.3	NA	27.1	35.7	54.4
P/E Ratio: Low	8.4	6.5	6.4	9.2	15.9	24.1	NA	21.2	19.3	32.8

Income Statement Analysis (Million USD)										
Revenue	22,127	26,107	30,390	32,639	24,890	11,202	9,702	8,385	7,949	7,011
Operating Income	9,020	14,124	18,065	22,193	15,265	4,524	4,299	3,818	3,962	3,581
Depreciation + Amortization	1,429	1,286	1,158	1,098	1,050	345	278	302	265	213
Interest Expense	1,077	1,118	964	688	412	307	361	205	109	70
Pretax Income	7,799	13,529	17,097	21,659	14,856	4,208	3,612	3,651	3,914	3,502
Effective Tax Rate	30.0	65.7	21.1	16.4	18.8	27.4	28.7	23.6	26.2	25.0
Net Income	5,455	4,628	13,501	18,108	12,101	3,075	2,592	2,804	2,901	2,636
Net Income (Normalized)	5,310	8,440	10,969	13,539	9,327	2,648	2,481	2,314	2,457	2,231

Balance Sheet and Other Financial Data (Million USD)										
Cash	30,711	25,510	11,895	14,607	10,128	2,132	1,862	9,900	2,099	1,657
Current Assets	35,836	31,823	19,588	24,762	17,714	6,997	6,156	13,919	5,708	4,813
Total Assets	63,675	70,283	56,977	51,716	34,664	22,579	21,240	17,303	11,593	9,699
Current Liabilities	10,605	11,635	9,218	9,890	5,761	6,407	4,238	2,515	2,465	1,872
Long Term Debt	24,574	30,795	26,346	21,073	11,921	3,939	7,055	7,606	2,839	1,155
Total Capital	48,856	54,043	45,709	41,170	28,238	18,445	17,775	14,473	9,599	7,661
Capital Expenditures	924	590	748	747	557	190	397	132	62	230
Cash from Operations	8,400	11,898	17,047	21,250	12,818	3,105	3,195	3,639	2,834	3,080
Current Ratio	3.38	2.74	2.12	2.50	3.07	1.09	1.45	5.53	2.32	2.57
% Long Term Debt of Capitalization	50.3	57.0	57.6	51.2	42.2	21.4	39.7	52.6	29.6	15.1
% Net Income of Revenue	24.7	17.7	44.4	55.5	48.6	27.5	26.7	33.4	36.5	37.6
% Return on Assets	8.4	13.9	20.8	32.1	33.3	12.9	13.9	16.5	23.3	26.9
% Return on Equity	26.0	23.3	70.1	NM	87.2	28.6	31.4	42.9	45.8	47.9

Source: S&P Global Market Intelligence. Data may be preliminary or restated; before results of discontinued operations/special items. Per share data adjusted for stock dividends; EPS diluted. E-Estimated. NA-Not Available. NM-Not Meaningful. NR-Not Ranked. UR-Under Review.

# Gilead Sciences, Inc.



## Sub-Industry Outlook

We have a positive outlook on the biotechnology sub-industry ("biotech"), a historically defensive sub-industry, because we expect to see the commercialization and development of many new, innovative therapies and a decline in the prevalence of patent expirations in 2020 and 2021. Biotechnology companies have been trading at a discount to the market, which we think will be remedied as a robust pipeline of new drugs is brought to market. FDA approvals of novel drugs increased by 28% in 2018 to 59, which shattered the previous record [since 1994] of 46 novel approvals set in 2017. We think that many of the drugs that are either newly-approved or are in late-stage clinical trials have considerable commercial prospects and represent major advances in therapies for diseases such as cystic fibrosis, hepatitis C, multiple sclerosis and cancer.

2019 started off favorably with the announcement of the mega merger agreement between Celgene [CELG] and Bristol-Myers Squibb [BMY]. Industry debt levels, while still low, have risen over the last four to five years, suggesting that 2019 may not be a banner year for biotech mergers and acquisitions [M&A]. Although, there are several mature biopharmaceutical firms that have made their marks with blockbuster drugs and are looking to offset lost revenues from expiring patents or failed ventures with promising late-stage pipeline additions. For example, we see Gilead Sciences [GILD] and Biogen [BIIB] as likely acquirers in 2019. We expect GILD to be interested in M&A to offset its declining HCV therapy sales and we expect BIIB to engage in M&A activity to make up for the failure of its late-stage Alzheimer's disease treatment. Most biotechnology companies have low debt levels and attractive valuations relative to other industries, making for a

favorable M&A environment.

We think that the growth of biotechnology stocks has been limited recently because high drug prices in the U.S. have come under heightened scrutiny by the U.S. political apparatus in the last few years. Despite all the talk about lowering drug prices, we have not seen any particularly severe measures taken by legislative or regulatory bodies in the U.S. to lower drug prices. While Democrats, who took over the House of Representatives in the November 2018 mid-term elections, appear to be more motivated to address drug prices, we still don't think that there is sufficient impetus to effect any significant changes in the near future. Another source of price pressure for drug manufacturers is the pharmacy benefit managers (PBMs) and health insurers, who are exerting more influence over drug prescriptions and pricing. This pressure will likely increase, as all major PBM's have merged with a major insurer [e.g. CVS-AET, CI-ESRX].

The Biologics Price Competition and Innovation Act of 2009 [BPCIA] granted a 12-year exclusivity period to branded biologic makers. Since then, branded biologic manufacturers have aggressively used patent laws and their commercial leverage to delay the commercialization of biosimilars so that they can maintain market dominance for longer. As a result, we expect biosimilars to continue to advance slowly over the next several years.

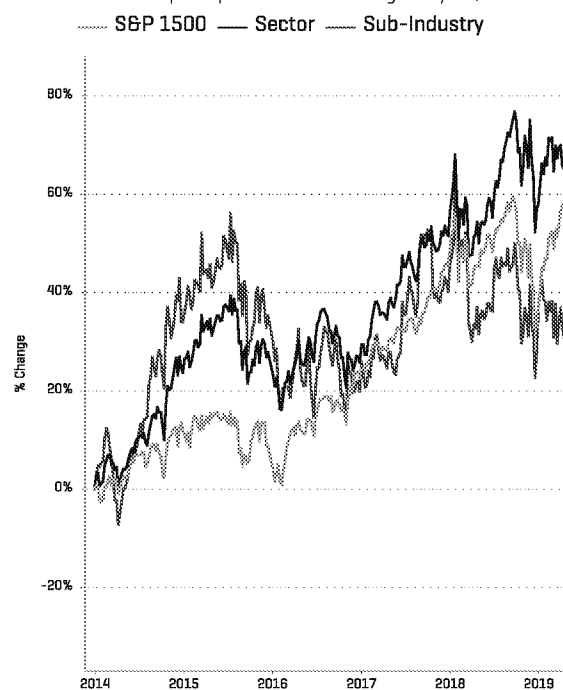
Year-to-date April 5, 2019, the S&P 1500 Biotechnology Index has risen a mere 5.0%, compared to the 15.5% rise in the value of the S&P 1500 Composite Index. In 2018, the S&P 1500 Biotechnology Index declined 7.1% vs. a 6.8% decline for the S&P 1500 Index.

/Kevin Huang, CFA

## Industry Performance

GICS Sector: Health Care  
Sub-Industry: Biotechnology

Based on S&P 1500 Indexes  
Five-Year market price performance through May 03, 2019



NOTE: All Sector & Sub-Industry information is based on the Global Industry Classification Standard [GICS].

Past performance is not an indication of future performance and should not be relied upon as such.

Source: S&P Global Market Intelligence

## Sub-Industry: Biotechnology Peer Group\*: Biotechnology

Peer Group	Stock Symbol	Exchange	Currency	Recent Stock Price	Stk. Mkt. Cap. [M]	30-Day Price Chg. [%]	1-Year Price Chg. [%]	P/E Ratio	Fair Value Calc.	Yield [%]	Return on Equity [%]	LTD to Cap [%]
<b>Gilead Sciences, Inc.</b>	<b>GILD</b>	<b>NasdaqGS</b>	<b>USD</b>	<b>67.13</b>	<b>85,524</b>	<b>0.7</b>	<b>3.0</b>	<b>15</b>	<b>66.50</b>	<b>3.8</b>	<b>26.0</b>	<b>50.3</b>
AbbVie Inc.	ABBV	NYSE	USD	78.71	116,360	-5.3	-21.5	22	68.32	5.4	NM	109.8
Alexion Pharmaceuticals, Inc.	ALXN	NasdaqGS	USD	136.69	30,651	-2.4	20.1	73	106.27	Nil	0.9	20.3
Amgen Inc.	AMGN	NasdaqGS	USD	177.31	108,148	-8.1	6.6	14	170.06	3.3	44.5	63.6
Biogen Inc.	BIIB	NasdaqGS	USD	231.18	44,824	-0.1	-13.2	10	395.58	Nil	34.9	31.3
CSL Limited	CSLLY	OTCPK	USD	70.14	63,590	-2.6	9.6	39	NA	1.3	46.7	53.7
Celgene Corporation	CELG	NasdaqGS	USD	96.88	68,326	3.2	13.4	15	155.12	Nil	61.9	74.8
Grifols, S.A.	GIKLY	OTCPK	USD	13.73	16,681	-3.0	-4.9	27	NA	1.7	14.3	54.8
Incyte Corporation	INCY	NasdaqGS	USD	83.06	17,811	-1.5	33.1	71	46.17	Nil	6.2	0.9
Regeneron Pharmaceuticals, Inc.	REGN	NasdaqGS	USD	336.89	36,777	-17.2	15.2	16	448.73	Nil	32.8	NA
Vertex Pharmaceuticals Incorporated	VRTX	NasdaqGS	USD	173.87	44,532	-7.5	16.2	21	261.31	Nil	64.4	NA

\*For Peer Groups with more than 10 companies or stocks, selection of issues is based on market capitalization.

NA-Not Available NM-Not Meaningful.

Note: Peers are selected based on Global Industry Classification Standards and market capitalization. The peer group list includes companies with similar characteristics, but may not include all the companies within the same industry and/or that engage in the same line of business.

# Gilead Sciences, Inc.

**Recommendation** HOLD BUY SELL STRONG BUY STRONG SELL

**Price** USD 65.57 [as of May 10, 2019 4:00 PM ET] **12-Mo. Target Price** USD 76.00 **Report Currency** USD **Investment Style** Large-Cap Value

**Equity Analyst Kevin Huang, CFA**

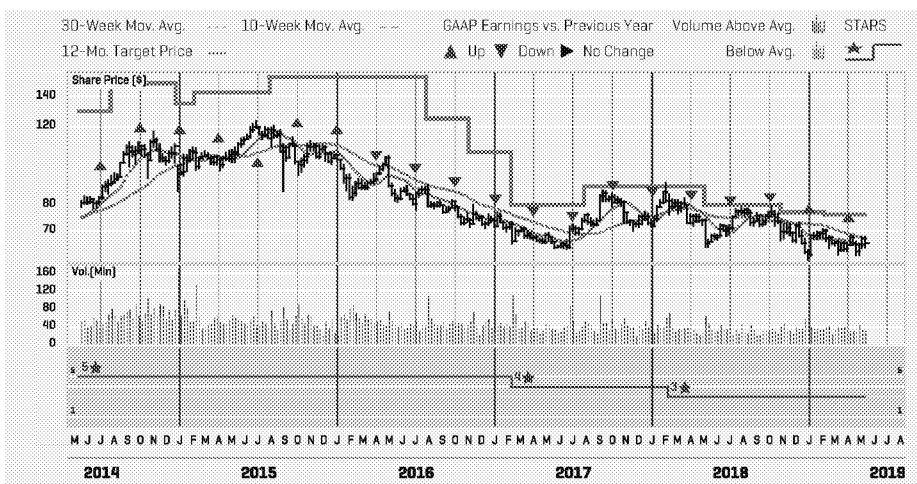
**GICS Sector** Health Care  
**Sub-Industry** Biotechnology

**Summary** GILD is engaged in the discovery, development and commercialization of treatments for infections, respiratory disorders, cardiovascular conditions and cancer.

**Key Stock Statistics** [Source: CFRA, S&P Global Market Intelligence (SPGMI), Company Reports]

52-Wk Range	<b>USD 79.61 - 60.32</b>	Oper. EPS 2019E	<b>USD 6.79</b>	Market Capitalization[B]	<b>USD 83.38</b>	Beta	<b>1.17</b>
Trailing 12-Month EPS	<b>USD 4.53</b>	Oper. EPS 2020E	<b>USD 7.13</b>	Yield [%]	<b>3.84</b>	3-Yr Proj. EPS CAGR[%]	<b>3</b>
Trailing 12-Month P/E	<b>14.59</b>	P/E on Oper. EPS 2019E	<b>9.66</b>	Dividend Rate/Share	<b>USD 2.52</b>	SPGMI's Quality Ranking	<b>B</b>
\$10K Invested 5 Yrs Ago	<b>\$9,124</b>	Common Shares Outstg.[M]	<b>1,271.6</b>	Institutional Ownership [%]	<b>82</b>		

**Price Performance**



Source: CFRA, S&P Global Market Intelligence

Past performance is not an indication of future performance and should not be relied upon as such.

Analysis prepared by Equity Analyst **Kevin Huang** on May 10, 2019 12:35 PM, when the stock traded at **USD 66.13**.

**Highlights**

- Following a 15.2% and 14.1% revenue decline in 2018 and 2017, we anticipate 2019 sales to decline 0.7% to \$22.0 billion, as the well-known decay in sales of GILD's HCV franchise decelerates. In 2019, we expect HCV sales to decline approximately 22% to \$2.8 billion from \$3.6 billion in 2018 because patients are being cured and competition in the market will likely remain elevated.
- On the other hand, we expect GILD's HIV franchise to continue growing until 2021, when we expect U.S. generic competition to begin eroding GILD's HIV leadership. In 2018, sales of HIV and other antivirals rose 12% to \$14.6 billion, driven by tenofovir alafenamide [TAF] based drugs such as Biktarvy. We expect HIV sales to grow by a similar amount in 2019.
- In Q4 2018, GILD took an \$820 million charge related to the discontinuation of research and development of the KITE 585 anti-BCMA program that was acquired from Kite Pharma in 2017. Despite this setback, GILD's top priority for capital allocation will continue to be portfolio tuck-ins, either through M&A or partnerships, followed by dividends and then share buybacks.

**Investment Rationale/Risk**

- We find GILD's shares, trading at 9.6x our next-12-month EPS estimate, to be near fair value. While GILD's HCV franchise is declining, we expect sales of HIV drugs to expand. GILD's acquisition of Kite Pharma allowed GILD to enter the complex CAR-T market; although, it will be a while before Kite's portfolio can make up for GILD's declining HCV sales. JAK-1 inhibitor Filgotinib, expected to be a future star, had a positive readout in the FINCH 3 Phase III study in Q3 2018; however, GILD's ability to file a new drug application is likely contingent upon data from the MANTA study, which has had a slower-than-expected enrollment rate. With a net cash position as of March 2019, GILD has the financial flexibility to invest in its existing clinical programs and make acquisitions, which will likely be supplemental rather than transformative.
- Risks to our recommendation and target price include weaker-than-expected sales of key products, pipeline failures, and stronger-than-expected pricing pressures.
- Our 12-month target price of \$76 is 11.3x our next-12-month EPS estimate of \$6.73. This compares to GILD's three-year forward P/E range of 6.4x to 13.2x.

**Analyst's Risk Assessment**

**LOW** **MEDIUM** **HIGH**

Our risk assessment reflects Gilead's ability to increase its dominant HIV market share, offset by slowing hepatitis C market. We see opportunities in oncology emerging as potential long-term growth driver.

**Revenue/Earnings Data**

**Revenue (Million USD)**

	1Q	2Q	3Q	4Q	Year
2019	5,281	--	--	--	--
2018	5,088	5,648	5,596	5,795	22,127
2017	6,505	7,141	6,512	5,949	26,107
2016	7,794	7,776	7,500	7,320	30,390
2015	7,594	8,244	8,295	8,506	32,639
2014	4,999	6,535	6,042	7,314	24,890

**Earnings Per Share (USD)**

	1Q	2Q	3Q	4Q	Year
2020	<b>E 1.70</b>	<b>E 1.73</b>	<b>E 1.84</b>	<b>E 1.86</b>	<b>E 7.13</b>
2019	1.54	<b>E 1.66</b>	<b>E 1.69</b>	<b>E 1.68</b>	<b>E 6.79</b>
2018	1.17	1.39	1.60	0.00	4.17
2017	2.05	2.33	2.06	-2.96	3.51
2016	2.53	2.58	2.49	2.34	9.94
2015	2.76	2.92	3.06	3.19	11.91

Fiscal year ended Dec 31. EPS Estimates based on CFRA's Operating Earnings; historical GAAP earnings are as reported in Company reports.

**Dividend Data**

Amount (USD)	Date Decl.	Ex-Div. Date	Stk. of Record	Payment Date
0.63	May 02	Jun 13	Jun 14	Jun 27 '19
0.63	Feb 04	Mar 14	Mar 15	Mar 28 '19
0.57	Oct 25	Dec 13	Dec 14	Dec 28 '18
0.57	Jul 25	Sep 13	Sep 14	Sep 27 '18
0.57	May 01	Jun 14	Jun 15	Jun 28 '18

Dividends have been paid since 2015. Source: Company reports.

**Past performance is not an indication of future performance and should not be relied upon as such.**

Forecasts are not reliable indicator of future performance.

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## Business Summary October 30, 2018

**CORPORATE OVERVIEW.** Gilead Sciences [GILD] primary areas of focus include human immunodeficiency virus [HIV]; liver diseases, such as chronic hepatitis C virus [HCV] infection and chronic hepatitis B virus [HBV] infection; oncology and inflammation; and serious cardiovascular and respiratory conditions. It has operations in approximately 30 countries worldwide. However, in October 2017, GILD made significant efforts to expand their oncology franchise through the acquisition of Kite Pharmaceuticals for \$11.2 billion. This acquisition expanded its presence in the cell therapy field. In October 2017, Kite's gene-therapy, Yescarta, became the first FDA-approved chimeric antigen receptor T cell [CAR T] therapy approved. Yescarta treats adults with non-Hodgkins's lymphoma who failed chemotherapy. At the time, this was the second FDA-approved gene therapy. However, we anticipate a slow ramp up due to complicated process and potentially severe side effects. Yescarta was priced at \$373,000 when it was first launched.

In the liver diseases area, the company received approval from the U.S. Food and Drug Administration [FDA] for Sovaldi [sofosbuvir] in December 2013. Sovaldi has a 95%+ cure rate for hepatitis C after a 12 week regimen and the drug quickly became the fastest growing drug in history. In 2014, in its first full year, sales of Sovaldi was \$10.3 billion. In December 2014, GILD expanded its HCV franchise with the approval of Harvoni, the first once-daily single tablet regimen for the treatment of HCV genotype 1 infection in adults. Harvoni combines the NS5A inhibitor ledipasvir with the nucleotide analog polymerase inhibitor sofosbuvir. Since then, GILD also received approval for two additional HCV drugs, Epclusa and Vosevi. However, sales of GILD's HCV products started to decline after peaking in 2015 due to competition as well as a declining patient pool since their HCV products had a 95%+ cure rate.

The company is evaluating simtuzumab for nonalcoholic steatohepatitis [NASH] in Phase 2 clinical trials. In December 2014, it also entered into an agreement with Phenex Pharmaceuticals AG [Phenex] under which the company acquired Phenex's Farnesoid X Receptor [FXR] program consisted of small molecule FXR agonists for the treatment of liver diseases, including NASH.

In the HIV area, Stribild is an oral formulation dosed once a day for the treatment of HIV-1 infection in treatment-naïve adults. Stribild is the company's third complete single tablet regimen for the treatment of HIV and is a fixed-dose combination of its antiretroviral medications, Vitekta, Tybost, Viread and Emtriva [emtricitabine]. Stribild is approved by the FDA and the European Commission.

Atripla is an oral formulation dosed once a day for the treatment of HIV infection in adults. Atripla was the company's first single tablet regimen for HIV intended as a therapy or in combination with other antiretrovirals. It is a fixed-dose combination of the company's antiretroviral medications, Viread and Emtriva, and Bristol-Myers Squibb's non-nucleoside reverse transcriptase inhibitor, Sustiva [efavirenz].

Truvada [emtricitabine and tenofovir disoproxil fumarate] is an oral formulation dosed once a day as part of combination therapy to treat HIV infection in adults. It is a fixed-dose combination of the company's antiretroviral medications, Viread and Emtriva. The FDA also approved Truvada, in combination with safer sex practices, to reduce the risk of sexually acquired HIV-1 infection in adults at high risk, a strategy called pre-exposure prophylaxis.

Viread is an oral formulation of a nucleotide analog reverse transcriptase inhibitor, dosed once a day as part of combination therapy to treat HIV infection in patients two years of age and older. The European Commission approved the use of Viread in combination with other antiretroviral agents for the treatment of HIV-1 infected adolescent patients aged 2 to approximately 18 years with nucleoside reverse transcriptase inhibitor resistance or toxicities precluding the use of first-line pediatric agents. Viread is also approved for the treatment of chronic HBV.

**IMPACT OF MAJOR DEVELOPMENTS.** In December 2013 GILD received FDA approval for Sovaldi to treat HCV. Sovaldi has a 95%+ cure rate for hepatitis C after a 12 week regimen and the drug quickly became the fastest growing drug in history. In 2014, in its first full year, sales of Sovaldi was \$10.3 billion. In October 2017, GILD acquired Kite Pharma for \$11.2 billion, to expand its presence in the cell therapy field. In October 2017, Kite's gene-therapy, Yescarta, became the first FDA-approved chimeric antigen receptor T cell [CAR T] therapy approved. Yescarta treats adults with non-Hodgkins's lymphoma who failed chemotherapy. This is the second FDA-approved gene therapy and we view the approval positively. In July 2018, President and CEO John Milligan announced he will step down at the end of the year. Mr. Milligan has been CEO for less than 3 years and was faced with the challenge of rapidly declining HCV product sales. However, we were encouraged by his efforts to expand into oncology and gene therapy, primarily through last year's acquisition of Kite Pharmaceutical.

**FINANCIAL TRENDS.** Sales have risen from \$24.9 billion in 2014 to \$26.2 billion in 2017, representing a three-year annual growth rate [CAGR] of 1.6%. However, sales have been declining annually since peaking in 2015 at \$32.64 billion following the success of its HCV drugs, Sovaldi and Harvoni. However, due to a smaller new patient population [the cure rate for these drugs are 95%+], increased competition and much lower price points, sales of its HCV franchise has dropped significantly. In 2013, GILD's sales was \$11.2 billion, and more than doubled in 2014 following Sovaldi's approval in December 2013. Adjusted EPS has risen from \$8.09 in 2014 to \$8.84 in 2017, representing a three-year CAGR of 3.0%. However, EPS peaked at \$12.61 in 2015.

## Corporate Information

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## Officers

## CFO &amp; Executive VP

R. L. Washington

## Chairman &amp; CEO

D. O'Day

## Executive VP, General Counsel, Chief Compliance Officer &amp; Corporate Secretary

B. A. Pletcher

## Board Members

B. J. Druker

D. O'Day

E. J. Topol

E. R. Schiff

F. V. Chisari

G. E. Wilson

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M. MacCoss

N. H. Afdhal

P. Berg

P. E. Klotman

P. Wold-Olsen

R. A. Harrington

R. J. Whitley

R. T. Schooley

## Domicile

Delaware

## Auditor

Ernst &amp; Young LLP

## Founded

1987

## Employees

11,000

## Stockholders

375

## Gilead Sciences, Inc.

Quantitative Evaluations						
<b>Fair Value Rank</b>	4	1	2	3	4	5
		LOWEST				HIGHEST
		Based on CFRA's proprietary quantitative model, stocks are ranked from most overvalued [1] to most undervalued [5].				
<b>Fair Value Calculation</b>	<b>USD 68.48</b>	Analysis of the stock's current worth, based on CFRA's proprietary quantitative model suggests that GILD is slightly undervalued by USD 2.91 or 4.4%.				
<b>Volatility</b>		LOW	AVERAGE	HIGH		
<b>Technical Evaluation</b>	<b>NEUTRAL</b>	Since April, 2019, the technical indicators for GILD have been NEUTRAL.				
<b>Insider Activity</b>		UNFAVORABLE	NEUTRAL	FAVORABLE		

Expanded Ratio Analysis				
	2018	2017	2016	2015
Price/Sales	3.70	3.62	3.20	4.72
Price/EBITDA	7.83	6.13	5.06	6.61
Price/Pretax Income	6.27	6.15	5.00	6.78
P/E Ratio	15.00	20.41	7.20	8.50
Avg. Diluted Shares Outsg.[M]	1308	1319	1358	1521

Figures based on fiscal year-end price

Key Growth Rates and Averages			
Past Growth Rate [%]	1 Year	3 Years	5 Years
Sales	-15.24	-12.15	14.58
Net Income	17.87	-32.96	12.15

Ratio Analysis (Annual Avg.)			
Net Margin [%]		NM	NM
% LT Debt to Capitalization	50.30	NA	NA
Return on Equity [%]	25.98	NA	NA

### Company Financials Fiscal year ending Dec. 31

Per Share Data (USD)	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Tangible Book Value	1.20	-0.62	6.67	5.00	2.13	-1.07	-2.30	3.10	2.77	2.69
Free Cash Flow	5.76	8.65	12.17	14.00	8.06	1.91	1.85	2.26	1.62	1.58
Earnings	4.17	3.51	9.94	11.91	7.35	1.81	1.64	1.77	1.66	1.41
Earnings (Normalized)	4.06	6.40	8.08	8.90	5.66	1.56	1.57	1.46	1.41	1.19
Dividends	2.28	2.08	1.84	1.29	NA	NA	NA	NA	NA	NA
Payout Ratio [%]	54	59	18	10	NA	NA	NA	NA	NA	NA
Prices: High	89.54	86.27	103.10	123.37	116.83	76.11	NA	21.75	24.75	26.64
Prices: Low	60.32	63.76	70.83	86.00	63.50	36.94	NA	17.23	15.87	20.31
P/E Ratio: High	60.1	9.3	9.2	19.1	46.4	49.3	NA	27.1	35.7	54.4
P/E Ratio: Low	8.4	6.5	6.4	9.2	15.9	24.1	NA	21.2	19.3	32.8

Income Statement Analysis (Million USD)										
Revenue	22,127	26,107	30,390	32,639	24,890	11,202	9,702	8,385	7,949	7,011
Operating Income	9,020	14,124	18,065	22,193	15,265	4,524	4,299	3,818	3,962	3,581
Depreciation + Amortization	1,429	1,286	1,158	1,098	1,050	345	278	302	265	213
Interest Expense	1,077	1,118	964	688	412	307	361	205	109	70
Pretax Income	7,799	13,529	17,097	21,659	14,856	4,208	3,612	3,651	3,914	3,502
Effective Tax Rate	30.0	65.7	21.1	16.4	18.8	27.4	28.7	23.6	26.2	25.0
Net Income	5,455	4,628	13,501	18,108	12,101	3,075	2,592	2,804	2,901	2,636
Net Income (Normalized)	5,310	8,440	10,969	13,539	9,327	2,648	2,481	2,314	2,457	2,231

Balance Sheet and Other Financial Data (Million USD)										
Cash	30,711	25,510	11,895	14,607	10,128	2,132	1,862	9,900	2,099	1,657
Current Assets	35,836	31,823	19,588	24,762	17,714	6,997	6,156	13,919	5,708	4,813
Total Assets	63,675	70,283	56,977	51,716	34,664	22,579	21,240	17,303	11,593	9,699
Current Liabilities	10,605	11,635	9,218	9,890	5,761	6,407	4,238	2,515	2,465	1,872
Long Term Debt	24,574	30,795	26,346	21,073	11,921	3,939	7,055	7,606	2,839	1,155
Total Capital	48,856	54,043	45,709	41,170	28,238	18,445	17,775	14,473	9,599	7,661
Capital Expenditures	924	590	748	747	557	190	397	132	62	230
Cash from Operations	8,400	11,898	17,047	21,250	12,818	3,105	3,195	3,639	2,834	3,080
Current Ratio	3.38	2.74	2.12	2.50	3.07	1.09	1.45	5.53	2.32	2.57
% Long Term Debt of Capitalization	50.3	57.0	57.6	51.2	42.2	21.4	39.7	52.6	29.6	15.1
% Net Income of Revenue	24.7	17.7	44.4	55.5	48.6	27.5	26.7	33.4	36.5	37.6
% Return on Assets	8.4	13.9	20.8	32.1	33.3	12.9	13.9	16.5	23.3	26.9
% Return on Equity	26.0	23.3	70.1	NM	87.2	28.6	31.4	42.9	45.8	47.9

Source: S&P Global Market Intelligence. Data may be preliminary or restated; before results of discontinued operations/special items. Per share data adjusted for stock dividends; EPS diluted. E-Estimated. NA-Not Available. NM-Not Meaningful. NR-Not Ranked. UR-Under Review.

# Gilead Sciences, Inc.



## Sub-Industry Outlook

We have a positive outlook on the biotechnology sub-industry ("biotech"), a historically defensive sub-industry, because we expect to see the commercialization and development of many new, innovative therapies and a decline in the prevalence of patent expirations in 2020 and 2021. Biotechnology companies have been trading at a discount to the market, which we think will be remedied as a robust pipeline of new drugs is brought to market. FDA approvals of novel drugs increased by 28% in 2018 to 59, which shattered the previous record [since 1994] of 46 novel approvals set in 2017. We think that many of the drugs that are either newly-approved or are in late-stage clinical trials have considerable commercial prospects and represent major advances in therapies for diseases such as cystic fibrosis, hepatitis C, multiple sclerosis and cancer.

2019 started off favorably with the announcement of the mega merger agreement between Celgene [CELG] and Bristol-Myers Squibb [BMY]. Industry debt levels, while still low, have risen over the last four to five years, suggesting that 2019 may not be a banner year for biotech mergers and acquisitions [M&A]. Although, there are several mature biopharmaceutical firms that have made their marks with blockbuster drugs and are looking to offset lost revenues from expiring patents or failed ventures with promising late-stage pipeline additions. For example, we see Gilead Sciences [GILD] and Biogen [BIIB] as likely acquirers in 2019. We expect GILD to be interested in M&A to offset its declining HCV therapy sales and we expect BIIB to engage in M&A activity to make up for the failure of its late-stage Alzheimer's disease treatment. Most biotechnology companies have low debt levels and attractive valuations relative to other industries, making for a

favorable M&A environment.

We think that the growth of biotechnology stocks has been limited recently because high drug prices in the U.S. have come under heightened scrutiny by the U.S. political apparatus in the last few years. Despite all the talk about lowering drug prices, we have not seen any particularly severe measures taken by legislative or regulatory bodies in the U.S. to lower drug prices. While Democrats, who took over the House of Representatives in the November 2018 mid-term elections, appear to be more motivated to address drug prices, we still don't think that there is sufficient impetus to effect any significant changes in the near future. Another source of price pressure for drug manufacturers is the pharmacy benefit managers (PBMs) and health insurers, who are exerting more influence over drug prescriptions and pricing. This pressure will likely increase, as all major PBM's have merged with a major insurer [e.g. CVS-AET, CI-ESRX].

The Biologics Price Competition and Innovation Act of 2009 [BPCIA] granted a 12-year exclusivity period to branded biologic makers. Since then, branded biologic manufacturers have aggressively used patent laws and their commercial leverage to delay the commercialization of biosimilars so that they can maintain market dominance for longer. As a result, we expect biosimilars to continue to advance slowly over the next several years.

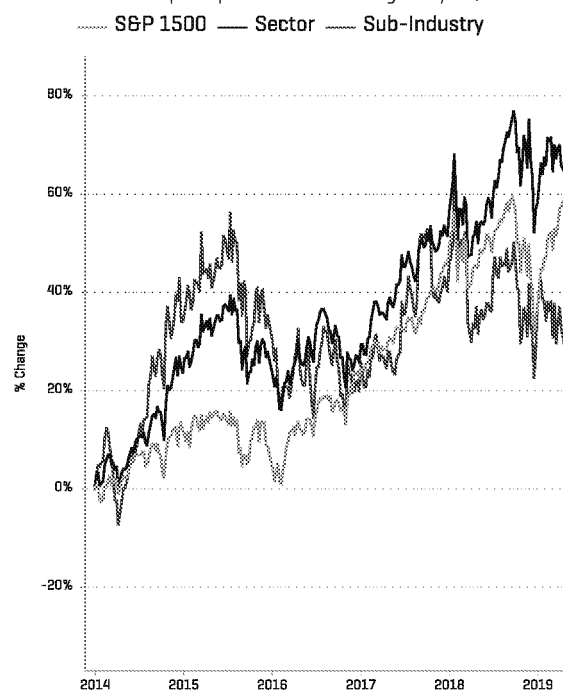
Year-to-date April 5, 2019, the S&P 1500 Biotechnology Index has risen a mere 5.0%, compared to the 15.5% rise in the value of the S&P 1500 Composite Index. In 2018, the S&P 1500 Biotechnology Index declined 7.1% vs. a 6.8% decline for the S&P 1500 Index.

/Kevin Huang, CFA

## Industry Performance

GICS Sector: Health Care  
Sub-Industry: Biotechnology

Based on S&P 1500 Indexes  
Five-Year market price performance through May 10, 2019



NOTE: All Sector & Sub-Industry information is based on the Global Industry Classification Standard (GICS).

Past performance is not an indication of future performance and should not be relied upon as such.

Source: S&P Global Market Intelligence

## Sub-Industry: Biotechnology Peer Group\*: Biotechnology

Peer Group	Stock Symbol	Exchange	Currency	Recent Stock Price	Stk. Mkt. Cap. [M]	30-Day Price Chg. [%]	1-Year Price Chg. [%]	P/E Ratio	Fair Value Calc.	Yield [%]	Return on Equity [%]	LTD to Cap [%]
<b>Gilead Sciences, Inc.</b>	<b>GILD</b>	<b>NasdaqGS</b>	<b>USD</b>	<b>65.57</b>	<b>83,376</b>	<b>-2.7</b>	<b>0.3</b>	<b>14</b>	<b>68.48</b>	<b>3.8</b>	<b>26.0</b>	<b>50.3</b>
AbbVie Inc.	ABBV	NYSE	USD	77.45	114,497	-6.6	-24.7	22	67.35	5.5	NM	109.8
Alexion Pharmaceuticals, Inc.	ALXN	NasdaqGS	USD	131.69	29,530	-6.8	13.4	71	110.37	Nil	0.9	20.3
Amgen Inc.	AMGN	NasdaqGS	USD	171.85	104,817	-11.4	0.6	14	154.31	3.4	44.5	63.6
Biogen Inc.	BIIB	NasdaqGS	USD	226.23	43,865	-5.8	-17.4	10	390.49	Nil	34.9	31.3
CSL Limited	CSLLY	OTCPK	USD	68.99	62,521	-4.1	4.5	39	NA	1.3	46.7	53.7
Celgene Corporation	CELG	NasdaqGS	USD	95.51	67,359	1.3	15.9	15	164.30	Nil	61.9	74.8
Grifols, S.A.	GIKLY	OTCPK	USD	12.96	15,746	-7.9	-12.4	27	NA	1.8	14.3	54.8
Incyte Corporation	INCY	NasdaqGS	USD	80.68	17,301	-3.3	23.6	69	66.18	Nil	6.2	0.9
Regeneron Pharmaceuticals, Inc.	REGN	NasdaqGS	USD	312.86	34,154	-23.4	8.3	15	467.87	Nil	32.8	NA
Vertex Pharmaceuticals Incorporated	VRTX	NasdaqGS	USD	168.85	43,246	-11.3	11.8	20	250.94	Nil	64.4	NA

\*For Peer Groups with more than 10 companies or stocks, selection of issues is based on market capitalization.

NA-Not Available NM-Not Meaningful.

Note: Peers are selected based on Global Industry Classification Standards and market capitalization. The peer group list includes companies with similar characteristics, but may not include all the companies within the same industry and/or that engage in the same line of business.

# Gilead Sciences, Inc.

**Recommendation** HOLD BUY SELL STRONG BUY STRONG SELL

**Price** USD 66.36 [as of May 17, 2019 4:00 PM ET] **12-Mo. Target Price** USD 76.00 **Report Currency** USD **Investment Style** Large-Cap Value

**Equity Analyst Kevin Huang, CFA**

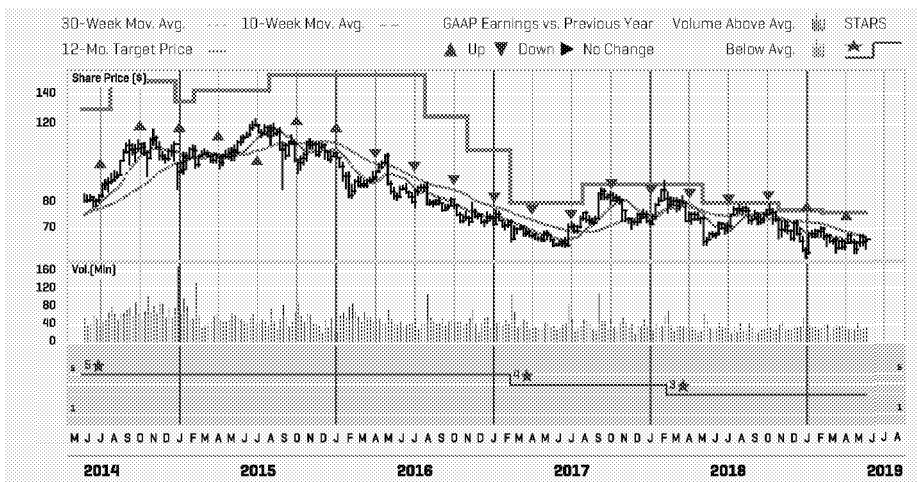
**GICS Sector** Health Care  
**Sub-Industry** Biotechnology

**Summary** GILD is engaged in the discovery, development and commercialization of treatments for infections, respiratory disorders, cardiovascular conditions and cancer.

**Key Stock Statistics** [Source: CFRA, S&P Global Market Intelligence (SPGMI), Company Reports]

52-Wk Range	<b>USD 79.61 - 60.32</b>	Oper. EPS 2019E	<b>USD 6.79</b>	Market Capitalization[B]	<b>USD 84.38</b>	Beta	<b>1.17</b>
Trailing 12-Month EPS	<b>USD 4.53</b>	Oper. EPS 2020E	<b>USD 7.13</b>	Yield [%]	<b>3.80</b>	3-Yr Proj. EPS CAGR[%]	<b>3</b>
Trailing 12-Month P/E	<b>14.51</b>	P/E on Oper. EPS 2019E	<b>9.69</b>	Dividend Rate/Share	<b>USD 2.52</b>	SPGMI's Quality Ranking	<b>B</b>
\$10K Invested 5 Yrs Ago	<b>\$9,115</b>	Common Shares Outstg.[M]	<b>1,271.6</b>	Institutional Ownership [%]	<b>82</b>		

**Price Performance**



Source: CFRA, S&P Global Market Intelligence

Past performance is not an indication of future performance and should not be relied upon as such.

Analysis prepared by Equity Analyst **Kevin Huang** on May 17, 2019 02:53 PM, when the stock traded at **USD 65.78**.

**Highlights**

- Following a 15.2% and 14.1% revenue decline in 2018 and 2017, we anticipate 2019 sales to decline 0.7% to \$22.0 billion, as the well-known decay in sales of GILD's HCV franchise decelerates. In 2019, we expect HCV sales to decline approximately 22% to \$2.8 billion from \$3.6 billion in 2018 because patients are being cured and competition in the market will likely remain elevated.
- On the other hand, we expect GILD's HIV franchise to continue growing until 2021, when we expect U.S. generic competition to begin eroding GILD's HIV leadership. In 2018, sales of HIV and other antivirals rose 12% to \$14.6 billion, driven by tenofovir alafenamide (TAF) based drugs such as Biktarvy. We expect HIV sales to grow by a similar amount in 2019.
- In Q4 2018, GILD took an \$820 million charge related to the discontinuation of research and development of the KITE 585 anti-BCMA program that was acquired from Kite Pharma in 2017. Despite this setback, GILD's top priority for capital allocation will continue to be portfolio tuck-ins, either through M&A or partnerships, followed by dividends and then share buybacks.

**Investment Rationale/Risk**

- We find GILD's shares, trading at 9.6x our next-12-month EPS estimate, to be near fair value. While GILD's HCV franchise is declining, we expect sales of HIV drugs to expand. GILD's acquisition of Kite Pharma allowed GILD to enter the complex CAR-T market; although, it will be a while before Kite's portfolio can make up for GILD's declining HCV sales. JAK-1 inhibitor Filgotinib, expected to be a future star, had a positive readout in the FINCH 3 Phase III study in Q3 2018; however, GILD's ability to file a new drug application is likely contingent upon data from the MANTA study, which has had a slower-than-expected enrollment rate. With a net cash position as of March 2019, GILD has the financial flexibility to invest in its existing clinical programs and make acquisitions, which will likely be supplemental rather than transformative.
- Risks to our recommendation and target price include weaker-than-expected sales of key products, pipeline failures, and stronger-than-expected pricing pressures.
- Our 12-month target price of \$76 is 11.3x our next-12-month EPS estimate of \$6.73. This compares to GILD's three-year forward P/E range of 6.4x to 13.2x.

**Analyst's Risk Assessment**

LOW MEDIUM HIGH

Our risk assessment reflects Gilead's ability to increase its dominant HIV market share, offset by slowing hepatitis C market. We see opportunities in oncology emerging as potential long-term growth driver.

**Revenue/Earnings Data**

Revenue (Million USD)	1Q	2Q	3Q	4Q	Year
2019	5,281	--	--	--	--
2018	5,088	5,648	5,596	5,795	22,127
2017	6,505	7,141	6,512	5,949	26,107
2016	7,794	7,776	7,500	7,320	30,390
2015	7,594	8,244	8,295	8,506	32,639
2014	4,999	6,535	6,042	7,314	24,890

**Earnings Per Share (USD)**

	1Q	2Q	3Q	4Q	Year
2020	<b>E 1.70</b>	<b>E 1.73</b>	<b>E 1.84</b>	<b>E 1.86</b>	<b>E 7.13</b>
2019	1.54	<b>E 1.66</b>	<b>E 1.69</b>	<b>E 1.68</b>	<b>E 6.79</b>
2018	1.17	1.39	1.60	0.00	4.17
2017	2.05	2.33	2.06	-2.96	3.51
2016	2.53	2.58	2.49	2.34	9.94
2015	2.76	2.92	3.06	3.19	11.91

Fiscal year ended Dec 31. Next earnings report expected: Late Jul. EPS Estimates based on CFRA's Operating Earnings; historical GAAP earnings are as reported in Company reports.

**Dividend Data**

Amount (USD)	Date Decl.	Ex-Div. Date	Stk. of Record	Payment Date
0.63	May 02	Jun 13	Jun 14	Jun 27 '19
0.63	Feb 04	Mar 14	Mar 15	Mar 28 '19
0.57	Oct 25	Dec 13	Dec 14	Dec 28 '18
0.57	Jul 25	Sep 13	Sep 14	Sep 27 '18
0.57	May 01	Jun 14	Jun 15	Jun 28 '18

Dividends have been paid since 2015. Source: Company reports.

**Past performance is not an indication of future performance and should not be relied upon as such.**

Forecasts are not reliable indicator of future performance.

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**Gilead Sciences, Inc.****Business Summary** May 17, 2019

**CORPORATE OVERVIEW.** Gilead Sciences [GILD] is a research-based biopharmaceutical company that discovers, develops and commercializes innovative medicines in areas of unmet medical need. GILD's primary areas of focus include HIV/AIDS, liver diseases, hematology/oncology and inflammation/respiratory diseases. GILD has operations in more than 35 countries worldwide. At the end of 2018, GILD's research and development (R&D) pipeline included 119 active clinical studies, of which 41 were Phase 3 clinical trials. Additionally, GILD completed 26 collaborations, partnerships and strategic investments in 2018. As of early 2019, GILD has more than 24 marketed products across its primary areas of focus.

Total product sales in 2018 were \$21.7 billion, with 75% of sales coming from the U.S. In 2018, GILD's largest franchise by product sales was its HIV franchise, which generated \$14.6 billion in sales. GILD's HIV franchise is maturing and facing increasing competition, but GILD has been working to defend the franchise with the launch of newer and more effective therapies. GILD had a successful launch of Biktarvy, a once-daily single tablet triple regimen, which was approved by the FDA in February 2018 and the European Commission in June 2018.

GILD's HIV franchise is followed by the company's chronic hepatitis C virus [HCV] franchise, which achieved \$3.7 billion in sales in 2018, down from \$9.1 billion in 2017. Sales of GILD's HCV franchise has been declining as patients are becoming cured.

Outside of GILD's key therapeutic franchises (i.e. HIV and HCV), we see near-term potential in commercial product Yescarta for non-Hodgkin's lymphoma and clinical candidates selonsertib for the treatment of NASH and filgotinib for the treatment of rheumatoid arthritis.

**COMPETITIVE ENVIRONMENT.** GILD operates in a highly competitive environment. The company faces significant competition from global pharmaceutical and biotechnology companies, specialized pharmaceutical firms and generic drug manufacturers. GILD's products compete with other commercially available products based primarily on efficacy, safety, tolerability, acceptance by doctors, ease of patient compliance, ease of use, price, insurance and other reimbursement coverage, distribution and marketing. As GILD's products mature, private insurers and government payers often reduce the amount they will reimburse patients, which increases pressure on GILD to reduce prices. Further, as new branded or generic products are introduced into major markets, GILD's ability to maintain pricing and market share may be affected.

**MAJOR DEVELOPMENTS.** In July 2018, President and CEO John Milligan announced he would step down at the end of the year. New CEO Daniel O'Day took over as of March 1, 2019. Prior to GILD, O'Day served as the CEO of Roche Pharmaceuticals. So far, O'Day has not shown any inclination to make any significant changes to the company's long-term strategy.

In October 2017, GILD acquired Kite Pharma for \$11.2 billion to expand its presence in the cell therapy field. In that same month, Kite's gene-therapy, Yescarta, became the first FDA-approved chimeric antigen receptor T cell [CAR T] therapy. Yescarta treats adults with non-Hodgkins's lymphoma for whom chemotherapy has failed. This is the second FDA-approved gene therapy. In Q4 2018, GILD took an \$820 million charge related to the discontinuation of R&D of the KITE 585 anti-BCMA program for treatment of multiple myeloma that was acquired from Kite Pharma.

**FINANCIAL TRENDS.** In 2018, GILD's revenue declined 15.2% year-over-year to \$22.1 billion, primarily due to its declining HCV franchise. We expect the decline in the HCV franchise to decelerate over the next few years. Adjusted EPS was \$6.67 in 2018, down from \$8.84 in 2017 and \$11.57 in 2016. Free cash flow was \$7.5 billion in 2018, down from \$11.3 billion in 2017. As of March 31, 2019, GILD had a net cash position.

**Corporate Information****Investor Contact**

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R. L. Washington

**Chairman & CEO**

D. O'Day

**Executive VP, General Counsel, Chief Compliance Officer & Corporate Secretary**

B. A. Pletcher

**Board Members**

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R. J. Whitley

R. T. Schooley

**Domicile**

Delaware

**Auditor**

Ernst &amp; Young LLP

**Founded**

1987

**Employees**

11,000

**Stockholders**

375

## Gilead Sciences, Inc.

Quantitative Evaluations						
<b>Fair Value Rank</b>	4	1	2	3	4	5
		LOWEST				HIGHEST
		Based on CFRA's proprietary quantitative model, stocks are ranked from most overvalued [1] to most undervalued [5].				
<b>Fair Value Calculation</b>	<b>USD 67.37</b>	Analysis of the stock's current worth, based on CFRA's proprietary quantitative model suggests that GILD is fairly valued.				
<b>Volatility</b>		LOW	AVERAGE	HIGH		
<b>Technical Evaluation</b>	<b>NEUTRAL</b>	Since May, 2019, the technical indicators for GILD have been NEUTRAL.				
<b>Insider Activity</b>		UNFAVORABLE	NEUTRAL	FAVORABLE		

Expanded Ratio Analysis				
	2018	2017	2016	2015
Price/Sales	3.70	3.62	3.20	4.72
Price/EBITDA	7.83	6.13	5.06	6.61
Price/Pretax Income	6.27	6.15	5.00	6.78
P/E Ratio	15.00	20.41	7.20	8.50
Avg. Diluted Shares Outsg.[M]	1308	1319	1358	1521

Figures based on fiscal year-end price

Key Growth Rates and Averages				
Past Growth Rate [%]	1 Year	3 Years	5 Years	
Sales	-15.24	-12.15	14.58	
Net Income	17.87	-32.96	12.15	

Ratio Analysis (Annual Avg.)				
Net Margin [%]		NM	NM	
% LT Debt to Capitalization		50.30	NA	
Return on Equity [%]		25.98	NA	

### Company Financials Fiscal year ending Dec. 31

Per Share Data (USD)	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Tangible Book Value	1.20	-0.62	6.67	5.00	2.13	-1.07	-2.30	3.10	2.77	2.69
Free Cash Flow	5.76	8.65	12.17	14.00	8.06	1.91	1.85	2.26	1.62	1.58
Earnings	4.17	3.51	9.94	11.91	7.35	1.81	1.64	1.77	1.66	1.41
Earnings (Normalized)	4.06	6.40	8.08	8.90	5.66	1.56	1.57	1.46	1.41	1.19
Dividends	2.28	2.08	1.84	1.29	NA	NA	NA	NA	NA	NA
Payout Ratio [%]	54	59	18	10	NA	NA	NA	NA	NA	NA
Prices: High	89.54	86.27	103.10	123.37	116.83	76.11	NA	21.75	24.75	26.64
Prices: Low	60.32	63.76	70.83	86.00	63.50	36.94	NA	17.23	15.87	20.31
P/E Ratio: High	60.1	9.3	9.2	19.1	46.4	49.3	NA	27.1	35.7	54.4
P/E Ratio: Low	8.4	6.5	6.4	9.2	15.9	24.1	NA	21.2	19.3	32.8

Income Statement Analysis (Million USD)										
Revenue	22,127	26,107	30,390	32,639	24,890	11,202	9,702	8,385	7,949	7,011
Operating Income	9,020	14,124	18,065	22,193	15,265	4,524	4,299	3,818	3,962	3,581
Depreciation + Amortization	1,429	1,286	1,158	1,098	1,050	345	278	302	265	213
Interest Expense	1,077	1,118	964	688	412	307	361	205	109	70
Pretax Income	7,799	13,529	17,097	21,659	14,856	4,208	3,612	3,651	3,914	3,502
Effective Tax Rate	30.0	65.7	21.1	16.4	18.8	27.4	28.7	23.6	26.2	25.0
Net Income	5,455	4,628	13,501	18,108	12,101	3,075	2,592	2,804	2,901	2,636
Net Income (Normalized)	5,310	8,440	10,969	13,539	9,327	2,648	2,481	2,314	2,457	2,231

Balance Sheet and Other Financial Data (Million USD)										
Cash	30,711	25,510	11,895	14,607	10,128	2,132	1,862	9,900	2,099	1,657
Current Assets	35,836	31,823	19,588	24,762	17,714	6,997	6,156	13,919	5,708	4,813
Total Assets	63,675	70,283	56,977	51,716	34,664	22,579	21,240	17,303	11,593	9,699
Current Liabilities	10,605	11,635	9,218	9,890	5,761	6,407	4,238	2,515	2,465	1,872
Long Term Debt	24,574	30,795	26,346	21,073	11,921	3,939	7,055	7,606	2,839	1,155
Total Capital	48,856	54,043	45,709	41,170	28,238	18,445	17,775	14,473	9,599	7,661
Capital Expenditures	924	590	748	747	557	190	397	132	62	230
Cash from Operations	8,400	11,898	17,047	21,250	12,818	3,105	3,195	3,639	2,834	3,080
Current Ratio	3.38	2.74	2.12	2.50	3.07	1.09	1.45	5.53	2.32	2.57
% Long Term Debt of Capitalization	50.3	57.0	57.6	51.2	42.2	21.4	39.7	52.6	29.6	15.1
% Net Income of Revenue	24.7	17.7	44.4	55.5	48.6	27.5	26.7	33.4	36.5	37.6
% Return on Assets	8.4	13.9	20.8	32.1	33.3	12.9	13.9	16.5	23.3	26.9
% Return on Equity	26.0	23.3	70.1	NM	87.2	28.6	31.4	42.9	45.8	47.9

Source: S&P Global Market Intelligence. Data may be preliminary or restated; before results of discontinued operations/special items. Per share data adjusted for stock dividends; EPS diluted. E-Estimated. NA-Not Available. NM-Not Meaningful. NR-Not Ranked. UR-Under Review.

# Gilead Sciences, Inc.



## Sub-Industry Outlook

We have a positive outlook on the biotechnology sub-industry ("biotech"), a historically defensive sub-industry, because we expect to see the commercialization and development of many new, innovative therapies and a decline in the prevalence of patent expirations in 2020 and 2021. Biotechnology companies have been trading at a discount to the market, which we think will be remedied as a robust pipeline of new drugs is brought to market. FDA approvals of novel drugs increased by 28% in 2018 to 59, which shattered the previous record [since 1994] of 46 novel approvals set in 2017. We think that many of the drugs that are either newly-approved or are in late-stage clinical trials have considerable commercial prospects and represent major advances in therapies for diseases such as cystic fibrosis, hepatitis C, multiple sclerosis and cancer.

2019 started off favorably with the announcement of the mega merger agreement between Celgene [CELG] and Bristol-Myers Squibb [BMY]. Industry debt levels, while still low, have risen over the last four to five years, suggesting that 2019 may not be a banner year for biotech mergers and acquisitions [M&A]. Although, there are several mature biopharmaceutical firms that have made their marks with blockbuster drugs and are looking to offset lost revenues from expiring patents or failed ventures with promising late-stage pipeline additions. For example, we see Gilead Sciences [GILD] and Biogen [BIIB] as likely acquirers in 2019. We expect GILD to be interested in M&A to offset its declining HCV therapy sales and we expect BIIB to engage in M&A activity to make up for the failure of its late-stage Alzheimer's disease treatment. Most biotechnology companies have low debt levels and attractive valuations relative to other industries, making for a

favorable M&A environment.

We think that the growth of biotechnology stocks has been limited recently because high drug prices in the U.S. have come under heightened scrutiny by the U.S. political apparatus in the last few years. Despite all the talk about lowering drug prices, we have not seen any particularly severe measures taken by legislative or regulatory bodies in the U.S. to lower drug prices. While Democrats, who took over the House of Representatives in the November 2018 mid-term elections, appear to be more motivated to address drug prices, we still don't think that there is sufficient impetus to effect any significant changes in the near future. Another source of price pressure for drug manufacturers is the pharmacy benefit managers (PBMs) and health insurers, who are exerting more influence over drug prescriptions and pricing. This pressure will likely increase, as all major PBM's have merged with a major insurer [e.g. CVS-AET, CI-ESRX].

The Biologics Price Competition and Innovation Act of 2009 [BPCIA] granted a 12-year exclusivity period to branded biologic makers. Since then, branded biologic manufacturers have aggressively used patent laws and their commercial leverage to delay the commercialization of biosimilars so that they can maintain market dominance for longer. As a result, we expect biosimilars to continue to advance slowly over the next several years.

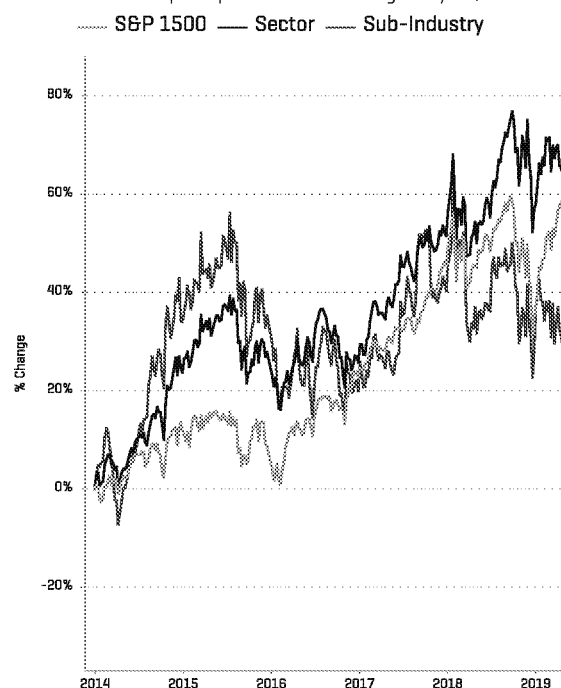
Year-to-date April 5, 2019, the S&P 1500 Biotechnology Index has risen a mere 5.0%, compared to the 15.5% rise in the value of the S&P 1500 Composite Index. In 2018, the S&P 1500 Biotechnology Index declined 7.1% vs. a 6.8% decline for the S&P 1500 Index.

/Kevin Huang, CFA

## Industry Performance

GICS Sector: Health Care  
Sub-Industry: Biotechnology

Based on S&P 1500 Indexes  
Five-Year market price performance through May 17, 2019



NOTE: All Sector & Sub-Industry information is based on the Global Industry Classification Standard (GICS).

Past performance is not an indication of future performance and should not be relied upon as such.

Source: S&P Global Market Intelligence

## Sub-Industry: Biotechnology Peer Group\*: Biotechnology

Peer Group	Stock Symbol	Exchange	Currency	Recent Stock Price	Stk. Mkt. Cap. [M]	30-Day Price Chg. [%]	1-Year Price Chg. [%]	P/E Ratio	Fair Value Calc.	Yield [%]	Return on Equity [%]	LTD to Cap [%]
<b>Gilead Sciences, Inc.</b>	<b>GILD</b>	<b>NasdaqGS</b>	<b>USD</b>	<b>66.36</b>	<b>84,380</b>	<b>4.9</b>	<b>-1.8</b>	<b>15</b>	<b>67.37</b>	<b>3.8</b>	<b>26.0</b>	<b>50.3</b>
AbbVie Inc.	ABBV	NYSE	USD	79.46	117,468	1.9	-24.6	23	67.02	5.4	NM	109.8
Alexion Pharmaceuticals, Inc.	ALXN	NasdaqGS	USD	130.90	29,353	4.0	8.0	70	107.48	Nil	0.9	20.3
Amgen Inc.	AMGN	NasdaqGS	USD	169.91	103,634	-6.9	-2.7	14	150.11	3.4	44.5	63.6
Biogen Inc.	BIIB	NasdaqGS	USD	229.28	44,456	0.9	-18.3	10	388.87	Nil	34.9	31.3
CSL Limited	CSLLY	OTCPK	USD	71.01	64,307	2.5	7.5	40	NA	1.2	46.7	53.7
Celgene Corporation	CELG	NasdaqGS	USD	95.42	67,296	1.2	19.3	15	162.19	Nil	61.9	74.8
Grifols, S.A.	GIKLY	OTCPK	USD	13.45	16,257	-1.3	-9.3	28	NA	1.7	14.3	54.8
Incyte Corporation	INCY	NasdaqGS	USD	77.20	16,555	3.9	15.8	66	64.65	Nil	6.2	0.9
Regeneron Pharmaceuticals, Inc.	REGN	NasdaqGS	USD	304.94	33,289	-11.1	-1.0	14	437.82	Nil	32.8	NA
Vertex Pharmaceuticals Incorporated	VRTX	NasdaqGS	USD	168.73	43,215	1.1	7.9	20	245.75	Nil	64.4	NA

\*For Peer Groups with more than 10 companies or stocks, selection of issues is based on market capitalization.

NA-Not Available NM-Not Meaningful.

Note: Peers are selected based on Global Industry Classification Standards and market capitalization. The peer group list includes companies with similar characteristics, but may not include all the companies within the same industry and/or that engage in the same line of business.

**Gilead Sciences Inc. (NASDAQ: GILD)**

\$65.86 USD (As of 05/20/19)

Zacks Rank 2-Buy



Style: Value: **A** Growth: **D** Momentum: **D** VGM: **C**

**Data Overview**

Target Price	\$74.00
52 Week High-Low	\$79.00 - \$60.54
20 Day Average Volume	6,821,812
Beta	1.14
Market Cap	\$3.96 B
Dividend / Div Yld	\$2.52 / 3.83%
Industry	Medical - Biomedical and Genetics
Industry Rank	80 / 256 (Top 31%)
Current Ratio	3.62
Debt/Capital	52.15%
Net Margin	26.40%
Price/Book (P/B)	3.80
Price/Cash Flow (P/CF)	8.99
Earnings Yield	10.48%
Debt/Equity	1.09

**Value Score**

**A**

P/E (F1)	9.55
P/E (F1) Rel to Industry	12.98
PEG Ratio	0.77
P/S (F1)	3.76
P/S (TTM)	3.76
P/CFO	8.99
P/CFO Rel to Industry	0.53
EV/EBITDA Annual	7.78

**Growth Score**

**D**

Proj. EPS Growth (F1/F0)	3.43%
Hist. EPS Growth (Q0/Q-1)	-3.06%
Qtr CFO Growth	105.48
2 Yr CFO Growth	-51.96
Return on Equity (ROE)	37.98%
(NI - CFO) / Total Assets	-10.46
Asset Turnover	0.35

**Momentum Score**

**D**

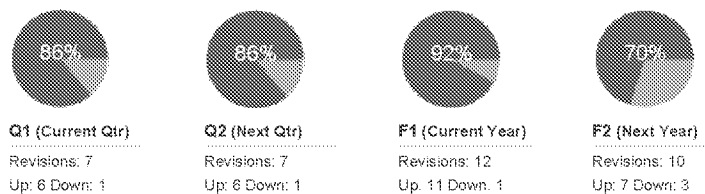
1 week Volume change	-2.73%
1 week Price Cng Rel to Industry	1.20%
(F1) EPS Est 1 week change	0.00%
(F1) EPS Est 4 week change	4.88%
(F1) EPS Est 12 week change	3.76%
(Q1) EPS Est 1 week change	0.00%

**Summary**

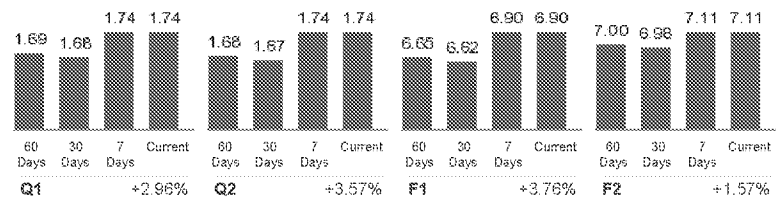
Although the sales miss was disappointing, Gilead's earnings beat the consensus mark in the first quarter. Soft HCV franchise sales stabilized as compared to the levels in prior quarters. Gilead's HIV franchise maintains momentum on continued uptake of Genvoya and Odefsey, and the rapid adoption of Biktarvy. Meanwhile, it shifted focus to the HIV franchise, and newer avenues like CAR-T therapy and NASH. Gilead's collaboration with Novo Nordisk for NASH treatments is a step in the right direction, given its recent debacles. The company suffered a setback with the failure of a late-stage study on selonsertib in patients with compensated cirrhosis (F4) due to NASH. It is also developing a pipeline targeting inflammatory diseases. Data from phase III studies on filgotinib were also encouraging. A potential filing is planned by the end of this year. Shares have outperformed the industry in the year so far.

**Elements of the Zacks Rank**

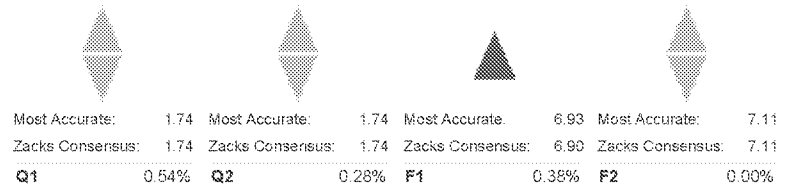
**Agreement** Estimate Revisions (60 days)



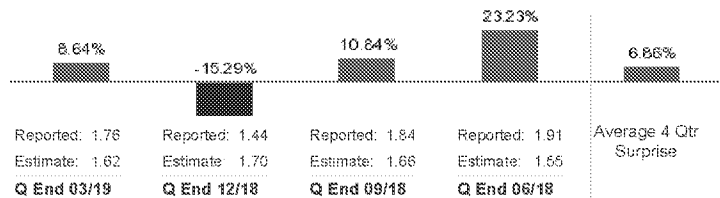
**Magnitude** Consensus Estimate Trend (60 days)



**Upside** Zacks Consensus Estimate vs. Most Accurate Estimate



**Surprise** Reported Earnings History



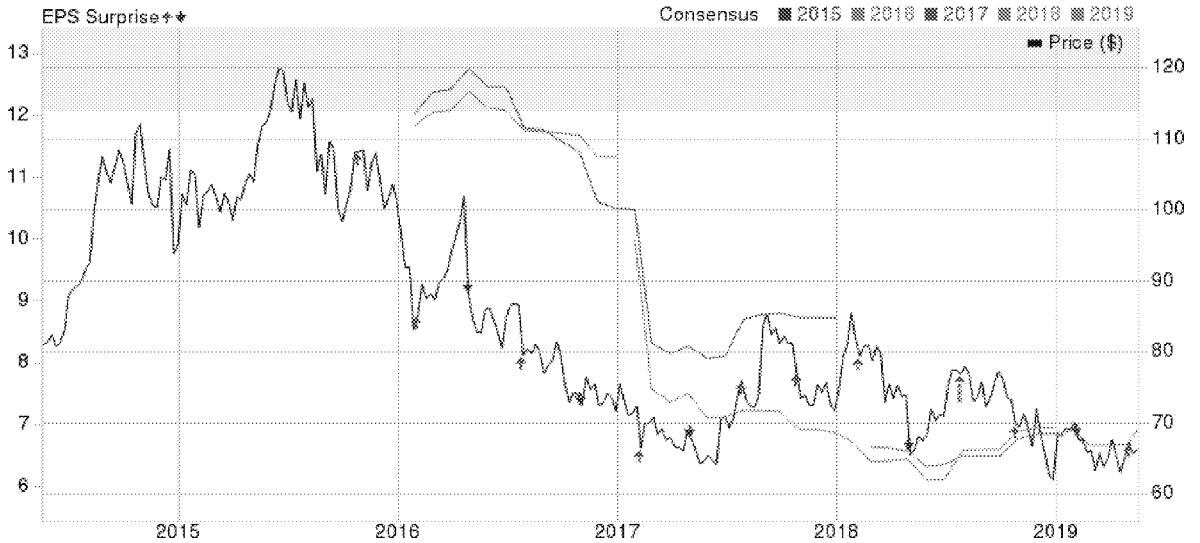
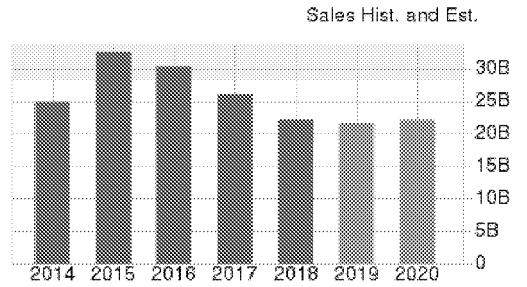
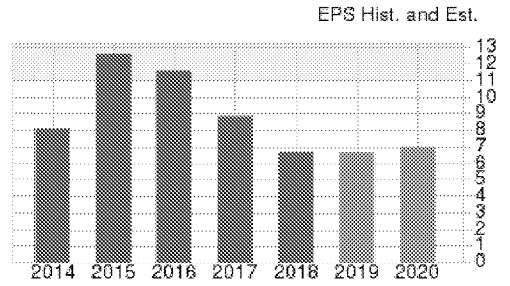


**Overview**

Headquartered in Foster City, CA, Gilead Sciences is a biopharmaceutical company, focused on developing drugs for the treatment of human immunodeficiency virus (HIV), liver diseases, hematology/oncology diseases and inflammation/respiratory diseases. Key products include HIV/AIDS therapies like tenofovir alafenamide (TAF)-based products Genvoya, Odefsey, Descovy, recently approved Biktarvy, Stribild, Atripla, Complera/Eviplera and Truvada. The portfolio also includes hepatitis C virus (HCV) drugs like Harvoni and Epclusa, and HBV drug, Vemlidy. In 2017, the company launched two new drugs — Yescarta, the first cell therapy approved for the treatment of adult patients with relapsed or refractory large B-cell lymphoma, and HCV drug, Vosevi. Other important products in the company's portfolio include Zydelig (for certain types of blood cancers), AmBisome (for serious invasive fungal infections caused by various fungal species in adults), Letairis (for pulmonary arterial hypertension), and Ranexa (for chronic angina).

Gilead has a robust late-stage pipeline that bodes well for long-term growth. The company is also working on diversifying and growing its business beyond antivirals into other therapeutic areas. The company has a collaboration agreement with Galapagos for the development and commercialization of the JAK1-selective inhibitor, filgotinib, for inflammatory disease indications, including rheumatoid arthritis (RA). The company acquired Kite Pharma for \$11.9 billion in 2017 to enter the CAR T space. In December 2017, Gilead acquired Cell Design Labs Inc.

Revenues in 2018 came in at \$22.1 billion, down from \$26.1 billion in 2017.



## Reasons To Buy:

- ▲ **Share Price Performance:** Gilead's stock has gained 5.3% in the year so far compared with the industry's growth of 5.1%.
- ▲ **Strong HIV Franchise:** Gilead is a dominant player in the HIV market with an impressive portfolio for the same. The company was the first to bring to market a single-tablet regimen (STR) for the treatment of HIV – Atripla. Additional STRs for HIV in the market include Complera/Eviplera and Stribild among others. Meanwhile, Gilead is looking to transition the HIV market to drugs with improved long-term safety profiles. The TAF-based products Genvoya, Odefsey and Descovy are performing well with strong adoption in both the United States and Europe. Descovy-based regimens continue to gain share and now account for approximately 80% of Gilead's total U.S. treatment prescription volumes. Genvoya has already become the most-prescribed regimen for both treatment-naïve and switch patients since its launch in Nov 2015. Also, Genvoya has been listed as a preferred regimen in several HIV treatment guidelines. Truvada, for use in the pre-exposure prophylaxis setting, continued to maintain momentum, with an estimated 202,000 patients using the drug by the end of the fourth quarter. The FDA extended the indication for Truvada as PrEP to include at-risk adolescents. The company received a major boost when the FDA approved the company's once-daily single tablet regimen ("STR"), Biktarvy (bictegravir 50mg/emtricitabine 200mg/tenofovir alafenamide 25mg, BIC/FTC/TAF) for HIV-1 infection. The approval provides a major boost to Gilead's HIV franchise. The approval of this new HIV therapy will pose stiff competition to GlaxoSmith's existing therapies, Tivicay and Triumeq. In March 2018, Biktarvy was added to the U.S. DHHS guidelines for the use of antiretroviral agents in adults and adolescents living with HIV as one of the recommended initial regimens. The recent approval in Europe will further strengthen the company's HIV franchise. Biktarvy has become the number one prescribed regimen for both treatment-naïve and switch patients.

Gilead is evaluating if once-daily Descovy is as safe and effective as once-daily Truvada at reducing the risk of HIV infection, when used as PrEP or pre-exposure prophylaxis in the DISCOVER trial. It submitted a supplemental NDA to the FDA for Descovy for the PrEP indication as a potential important new option to prevent HIV infection. An approval is expected in the fourth quarter of 2019.
- ▲ **Robust Pipeline:** Gilead has a robust pipeline, with several development programs currently underway, ranging from phase I through phase III. The company has quite a few programs targeting non-alcoholic steatohepatitis (NASH) with advanced fibrosis, including selonsertib (ASK-1 inhibitor; phase III), GS-9674 (FXR agonist; phase II) and GS-0976 (ACC inhibitor; phase II). Inflammation is one of the three emerging areas, and the company has been developing a pipeline targeting inflammatory diseases. Phase III studies on filgotinib for the treatment of RA and Crohn's disease are currently ongoing. Galapagos and Gilead entered a global collaboration for the development and commercialization of filgotinib in inflammatory indications. Both the companies announced encouraging interim safety information from four studies on filgotinib for the treatment of RA. These include 24-week results of the ongoing phase III FINCH 1, 2, and 3 trials, and updated week 156 safety data from the phase IIb DARWIN 3 long-term extension study in patients with RA. The FINCH studies are among several clinical trials of filgotinib in inflammatory diseases. Based on the positive data from the ongoing trials, Gilead plans to progress with filgotinib for the rheumatoid arthritis indication for regulatory approval in Europe in the second half of this year. Apart from RA, the candidate is being evaluated in a phase II EQUATOR program in psoriatic arthritis, the TORTUGA study in ankylosing spondylitis, the DIVERSITY phase III program in Crohn's disease and the phase III SELECTION trial in ulcerative colitis.
- ▲ **Acquisitions and Deals to Boost Portfolio and Strengthen Pipeline:** Gilead is looking to boost its portfolio and pipeline through deals and acquisitions. The company is also looking to expand beyond antivirals into other therapeutic areas. In January 2016, the company collaborated with Galapagos for the development and commercialization of filgotinib, for inflammatory disease indications including RA. Gilead acquired Kite Pharma to foray into the emerging field of cell therapy. Kite is a pioneer in cell therapy having developed engineered cell therapies that express either a chimeric antigen receptor (CAR) or an engineered T cell receptor (TCR), depending on the type of cancer. The approval of lead candidate Yescarta for the treatment of refractory aggressive non-Hodgkin lymphoma, which includes diffuse large B-cell lymphoma (DLBCL), transformed follicular lymphoma (TFL) and primary mediastinal B-cell lymphoma (PMBCL) is a significant boost for the company. The launch is progressing well. The drug was also approved in Europe. Gilead reported positive top-line results from ZUMA-2, a registrational trial of KTE-X19 cell therapy in patients with relapsed/refractory mantle cell lymphoma. A filing KTE-X19 for this indication is planned by the end of 2019. Gilead continues to enroll patients in ZUMA-7, a phase III randomized study comparing Yescarta to the standard of care, which is salvage chemotherapy followed by autologous stem cell transplantation in the second-line treatment of patients with DLBCL. Gilead has now decided to separate its Kite business into a separate unit. Gilead also acquired Cell Design Labs, Inc. for \$567 million in December 2017. Cell Design Labs is a leader in developing cell-based therapies, and uses its synNotch and Throttle technology platforms. These technological platforms will enhance Gilead's cellular therapy research efforts, which Gilead acquired through Kite Pharma acquisition. Cell Design Labs is developing several pre-clinical product candidates, including CAR T and TCR therapies for prostate cancer and hepatocellular carcinoma that use the synNotch technology.
- ▲ **Boost Shareholder Value:** Gilead is making efforts to boost shareholders' value. During 2018, Gilead repaid \$6.3 billion of debt, paid cash dividends of \$3.0 billion and spent \$2.9 billion on repurchases of 40 million shares.

Gilead' strong HIV franchise should help the company maintain momentum. Newly launched products should continue to perform well, thereby driving top-line growth.

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## Recent News

### Collaborates With Goldfinch Bio for Kidney Disease – May 8

Gilead announced an alliance with the biotechnology company Goldfinch Bio to discover, develop and commercialize a pipeline of innovative therapeutics for the diabetic kidney disease (DKD) and certain orphan kidney diseases. The company has exclusive options to license the worldwide rights to certain products directed toward targets emerging from Goldfinch's proprietary Kidney Genome Atlas (KGA). Per the terms of the collaborative deal, Goldfinch will receive \$55 million in upfront payments, including a \$5-million equity investment and an additional \$54-million fee to support the development of the KGA platform for DKD. It is also eligible to receive up to \$1.95 billion in potential payments for the first five collaboration programs based on the successful achievement of its research, development, regulatory and commercial milestones, and tiered royalties on the sales of potential products originating from this collaboration.

### Data From Phase 3 STELLAR-3 Study on Selonsertib – Apr 25

Gilead announced that STELLAR-3, a phase III, randomized, double-blind, placebo-controlled study evaluating the safety and efficacy of selonsertib, which is an investigational, once daily, oral inhibitor of apoptosis signal-regulating kinase 1 (ASK1), in patients with bridging fibrosis (F3) due to nonalcoholic steatohepatitis (NASH), did not meet the pre-specified week 48 primary endpoint of a ? 1-stage histologic improvement in fibrosis without worsening of NASH. The study enrolled 802 patients, of which 9.3% treated with selonsertib 18 mg (p=0.42 versus placebo) and 12.1% with selonsertib 6 mg (p=0.93) achieved a ? 1-stage improvement in fibrosis, according to the NASH Clinical Research Network (CRN) classification, without worsening of NASH after 48 weeks of treatment versus 13.2% treated with placebo. Selonsertib was generally well tolerated and safety results were consistent with prior studies.

### Collaborates With Insitro to Develop NASH Therapies – Apr 16

Gilead announced a collaboration with a privately-held, data-driven drug company, Insitro, for discovering and developing therapies targeting nonalcoholic steatohepatitis ("NASH").

Despite the failure of its late-stage NASH candidate earlier this year, Gilead remains committed toward developing treatment for this indication.

Insitro focuses on using machine learning, an advanced form computer technology, to help pharma companies discover and develop drugs.

Per the deal, Gilead will use Insitro's proprietary platform for the next three years to develop five potential therapies for NASH. In return, Insitro will be eligible to receive an upfront payment of \$15 million and \$35 million in near-term operational milestone payments. Insitro will also be eligible to receive \$200 million for each of the five therapies in pre-clinical, clinical, regulatory and commercial milestones from Gilead. Insitro will also receive tiered royalties on net sales upon potential commercialization of the therapies. The deal also includes profit sharing in China, and milestone payments and royalties on other ex-U.S. sales.

### Collaborates With Novo Nordisk for NASH Treatment - Apr 11

Gilead and Denmark-based pharma giant Novo Nordisk A/S announced that both the companies intend to collaborate for developing treatments for non-alcoholic steatohepatitis (NASH).

The companies will initiate a proof-of-concept study combining Novo Nordisk's semaglutide (GLP-1 analogue) and Gilead's cilofexor (FXR agonist) and firsocostat (ACC inhibitor) for the treatment of patients suffering from NASH.

Gilead is expecting that a cocktail therapy of its NASH compounds with Novo Nordisk's semaglutide might work for it.

Ozempic, the injectable formulation of semaglutide, is a diabetes medicine, which is used with diet and exercise to treat adults whose type II diabetes is not satisfactorily controlled.

Since the NASH patients mostly suffer from obesity and diabetes, both the companies expect the combination therapy to yield positive results.

### Files sNDA for Label Expansion of HIV Therapy Descovy – Apr 5

Gilead announced the submission of a supplemental New Drug Application (sNDA) to the FDA for Descovy (emtricitabine 200 mg and tenofovir alafenamide 25 mg tablets).

The company is seeking FDA approval for Descovy as pre-exposure prophylaxis (PrEP) to reduce the risk of sexually acquired HIV-1 infection among individuals, who are HIV-negative and at risk for HIV. While Descovy is already approved in combination with other antiretroviral agents for the treatment of HIV infection in patients weighing greater or equal to 25 kg, it is not indicated for PrEP yet.

A priority review voucher was submitted with the filing. Hence, the anticipated review time for the sNDA is expected to be six months. The filing is based on the results of the phase III study, DISCOVER, which evaluated the safety and efficacy of Descovy compared to Truvada in men and transgender women, who sexually engage with men at high-risk of contracting HIV infection. The results showed that Descovy achieved non-inferiority to Truvada in study participants, who were at substantial and sustained risk of HIV acquisition.

### Announce Positive Data on Arthritis Drug – Mar 28

Industry Analysis Zacks Industry Rank:



Top Peers

Amgen Inc. (AMGN)	C
Celgene Corporation (CELG)	2
Biogen Inc. (BIIB)	2
CSL Limited Sponsored ADR (CSLLY)	C
Regeneron Pharmaceuticals, Inc. (REGN)	5
Alexion Pharmaceuticals, Inc. (ALXN)	2
Illumina, Inc. (ILMN)	2
Vertex Pharmaceuticals Incorporated (VRTX)	2
SINO PHARMACEUT (SBMFF)	C

Industry Comparison Medical - Biomedical And Genetics   Position in Industry: 11 of 319				Industry Peers		
	GILD 2	X Industry	S&P 500	AMGN C	CELG 2	BIIB 2
Market Cap	83.96 B	187.45 M	22.33 B	102.71 B	66.88 B	44.74 B
# of Analysts	10	2.5	14	11	10	28
Dividend Yield	3.83%	0.00%	1.98%	3.44%	0.00%	0.00%
<b>Value Score</b>	<b>A</b>	-	-	<b>B</b>	<b>B</b>	<b>A</b>
Cash/Price	0.33	0.24	0.04	0.25	0.11	0.09
EV/EBITDA	7.78	-3.29	12.35	8.21	12.72	6.76
PEG Ratio	0.77	1.74	1.83	2.22	0.40	0.91
Price/Book (P/B)	3.80	3.70	3.03	9.48	8.19	3.24
Price/Cash Flow (P/CF)	8.99	14.07	12.10	9.32	10.69	7.27
P/E (F1)	9.55	24.38	16.86	12.08	8.83	7.80
Price/Sales (P/S)	3.76	13.19	2.52	4.32	4.24	3.24
Earnings Yield	10.48%	-16.74%	5.87%	8.28%	11.31%	12.82%
Debt/Equity	1.09	0.02	0.68	2.71	2.42	0.43
Cash Flow (\$/share)	7.33	-1.02	6.82	18.08	8.87	31.74
<b>Growth Score</b>	<b>D</b>	-	-	<b>D</b>	<b>C</b>	<b>B</b>
Hist. EPS Growth (3-5 yrs)	-3.06%	18.84%	9.10%	12.86%	24.72%	17.73%
Proj. EPS Growth (F1/F0)	3.43%	8.06%	6.59%	-3.18%	21.03%	12.92%
Curr. Cash Flow Growth	-24.62%	17.25%	16.20%	2.84%	3.69%	11.67%
Hist. Cash Flow Growth (3-5 yrs)	21.29%	9.06%	8.89%	10.23%	18.30%	19.17%
Current Ratio	3.62	5.18	1.27	2.77	2.78	2.84
Debt/Capital	52.15%	3.88%	42.09%	73.02%	70.78%	30.07%
Net Margin	26.40%	-220.72%	11.59%	34.00%	30.10%	33.79%
Return on Equity	37.98%	-58.69%	17.70%	71.02%	106.69%	41.39%
Sales/Assets	0.35	0.18	0.55	0.36	0.45	0.55
Proj. Sales Growth (F1/F0)	-0.26%	3.97%	3.83%	-4.94%	12.08%	3.27%
<b>Momentum Score</b>	<b>D</b>	-	-	<b>A</b>	<b>F</b>	<b>C</b>
Daily Price Chg	-0.75%	-0.79%	-0.35%	-0.69%	-0.62%	0.65%
1 Week Price Chg	1.20%	-2.36%	-0.77%	-1.13%	-0.09%	1.35%
4 Week Price Chg	6.45%	-3.34%	-1.69%	-4.52%	1.51%	0.85%
12 Week Price Chg	0.78%	-5.92%	0.42%	-11.29%	4.89%	-29.54%
52 Week Price Chg	-2.62%	-31.50%	2.01%	-4.58%	26.97%	-16.89%
20 Day Average Volume	6,821,812	146,472	1,990,906	3,017,877	5,059,206	2,119,773
(F1) EPS Est Wkly Chg	0.00%	0.00%	0.00%	0.12%	0.00%	0.00%
(F1) EPS Est Mthly Chg	4.88%	0.00%	0.10%	0.92%	-1.65%	2.44%
(F1) EPS Est Qtrly Chg	5.97%	0.00%	0.19%	0.10%	-1.55%	3.14%
(Q1) EPS Est Mthly Chg	6.97%	0.00%	-0.22%	0.77%	-0.81%	1.62%

**Gilead Sciences Inc.(GILD)**

**\$67.08** (As of 06/27/19)

Price Target (6-12 Months): **\$77.00**

Long Term: 6-12 Months | **Zacks Recommendation:** Outperform  
(Since: 05/08/19)  
Prior Recommendation: Neutral

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Short Term: 1-3 Months | **Zacks Rank:** (1-5) **2-Buy**  
**Zacks Style Scores:** VGM: B  
Value: A | Growth: D | Momentum: B

**Summary**

Gilead's HIV franchise maintains momentum on continued uptake of Genvoya and Odefsey, and the rapid adoption of Biktarvy. The company has shifted focus to the HIV franchise, and newer avenues like CAR-T therapy and NASH, owing to a decline in sales of HCV franchise. Gilead's collaboration with Novo Nordisk for NASH treatments is a step in the right direction, given its recent debacles. The company suffered a setback with the failure of a late-stage study on selonsertib in patients with compensated cirrhosis (F4) due to NASH. Nevertheless, it is also developing a pipeline targeting inflammatory diseases. Data from phase III studies on filgotinib were also encouraging. A filing is planned by the end of this year. Soft HCV sales have stabilized of late. Shares have outperformed the industry in the year so far.

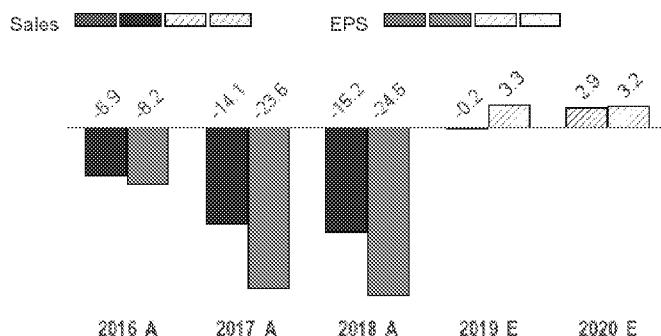
**Price, Consensus & Surprise**



**Data Overview**

52 Week High-Low	\$79.61 - \$60.32
20 Day Average Volume (sh)	6,010,029
Market Cap	\$85.5 B
YTD Price Change	7.2%
Beta	1.10
Dividend / Div Yld	\$2.52 / 3.8%
Industry	<b>Medical - Biomedical and Genetics</b>
Zacks Industry Rank	Top 28% (67 out of 256)

**Sales and EPS Growth Rates (Y/Y %)**



Last EPS Surprise	8.6%
Last Sales Surprise	-0.5%
EPS F1 Est- 4 week change	0.0%
Expected Report Date	07/24/2019
Earnings ESP	0.0%
P/E TTM	9.7
P/E F1	9.7
PEG F1	0.8
P/S TTM	3.8

**Sales Estimates (millions of \$)**

	Q1	Q2	Q3	Q4	Annual*
2020	5,497 E	5,690 E	5,787 E	5,952 E	22,702 E
2019	5,281 A	5,522 E	5,579 E	5,724 E	22,072 E
2018	5,088 A	5,648 A	5,596 A	5,795 A	22,127 A

**EPS Estimates**

	Q1	Q2	Q3	Q4	Annual*
2020	\$1.65 E	\$1.72 E	\$1.82 E	\$1.87 E	\$7.11 E
2019	\$1.76 A	\$1.73 E	\$1.74 E	\$1.71 E	\$6.89 E
2018	\$1.48 A	\$1.91 A	\$1.84 A	\$1.44 A	\$6.67 A

\*Quarterly figures may not add up to annual.

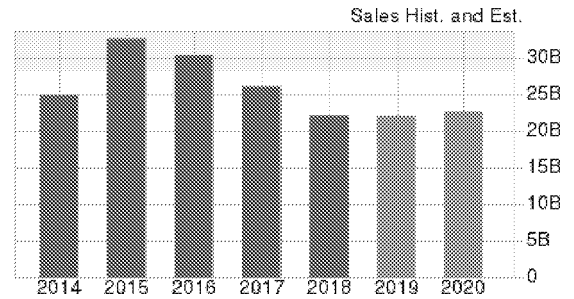
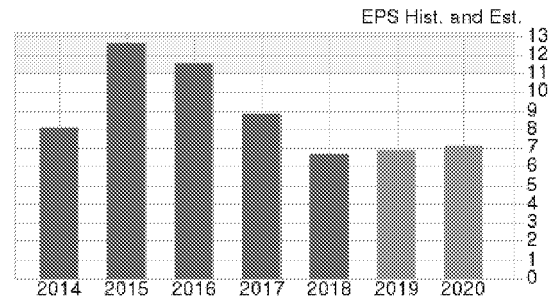
The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 06/27/2019. The reports text is as of 06/28/2019.

## Overview

Headquartered in Foster City, CA, Gilead Sciences is a biopharmaceutical company, focused on developing drugs for the treatment of human immunodeficiency virus (HIV), liver diseases, hematology/oncology diseases and inflammation/respiratory diseases. Key products include HIV/AIDS therapies like tenofovir alafenamide (TAF)-based products Genvoya, Odefsey, Descovy, recently approved Biktarvy, Stribild, Atripla, Complera/Eviplera and Truvada. The portfolio also includes hepatitis C virus (HCV) drugs like Harvoni and Epclusa, and HBV drug, Vemlidy. In 2017, the company launched two new drugs — Yescarta, the first cell therapy approved for the treatment of adult patients with relapsed or refractory large B-cell lymphoma, and HCV drug, Vosevi. Other important products in the company's portfolio include Zydelig (for certain types of blood cancers), AmBisome (for serious invasive fungal infections caused by various fungal species in adults), Letairis (for pulmonary arterial hypertension), and Ranexa (for chronic angina).

Gilead has a robust late-stage pipeline that bodes well for long-term growth. The company is also working on diversifying and growing its business beyond antivirals into other therapeutic areas. The company has a collaboration agreement with Galapagos for the development and commercialization of the JAK1-selective inhibitor, filgotinib, for inflammatory disease indications, including rheumatoid arthritis (RA). The company acquired Kite Pharma for \$11.9 billion in 2017 to enter the CAR T space. In December 2017, Gilead acquired Cell Design Labs Inc. The company has recently collaborated with Novo Nordisk to develop drugs for the treatment of NASH.

Revenues in 2018 came in at \$22.1 billion, down from \$26.1 billion in 2017.



The company has recently collaborated with Novo Nordisk to develop drugs for the treatment of NASH.



## Reasons To Buy:

▲ **Share Price Performance:** Gilead's stock has outperformed the industry in the year so far.

▲ **Strong HIV Franchise:** Gilead is a dominant player in the HIV market with an impressive portfolio for the same. The company was the first to bring to market a single-tablet regimen (STR) for the treatment of HIV – Atripla. Additional STRs for HIV in the market include Complera/Eviplera and Stribild among others. Meanwhile, Gilead is looking to transition the HIV market to drugs with improved long-term safety profiles. The TAF-based products Genvoya, Odefsey and Descovy are performing well with strong adoption in both the United States and Europe. Descovy-based regimens continue to gain share and now account for approximately 80% of Gilead's total U.S. treatment prescription volumes. Genvoya has already become the most-prescribed regimen for both treatment-naïve and switch patients since its launch in Nov 2015. Also, Genvoya has been listed as a preferred regimen in several HIV treatment guidelines. Truvada, for use in the pre-exposure prophylaxis setting, continued to maintain momentum, with an estimated 202,000 patients using the drug by the end of the fourth quarter. The FDA extended the indication for Truvada as PrEP to include at-risk adolescents. The company received a major boost when the FDA approved the company's once-daily single tablet regimen ("STR"), Biktarvy (bictegravir 50mg/emtricitabine 200mg/tenofovir alafenamide 25mg, BIC/FTC/TAF) for HIV-1 infection. The approval provides a major boost to Gilead's HIV franchise. The approval of this new HIV therapy will pose stiff competition to GlaxoSmith's existing therapies, Tivicay and Triumeq. In March 2018, Biktarvy was added to the U.S. DHHS guidelines for the use of antiretroviral agents in adults and adolescents living with HIV as one of the recommended initial regimens. The recent approval in Europe will further strengthen the company's HIV franchise. Biktarvy has become the number one prescribed regimen for both treatment-naïve and switch patients.

Gilead's strong HIV franchise should help the company maintain momentum. Newly launched products should continue to perform well, thereby driving top-line growth.

Gilead is evaluating if once-daily Descovy is as safe and effective as once-daily Truvada at reducing the risk of HIV infection, when used as PrEP or pre-exposure prophylaxis in the DISCOVER trial. It submitted a supplemental NDA to the FDA for Descovy for the PrEP indication as a potential important new option to prevent HIV infection. An approval is expected in the fourth quarter of 2019.

▲ **Robust Pipeline:** Gilead has a robust pipeline, with several development programs currently underway, ranging from phase I through phase III. The company has quite a few programs targeting non-alcoholic steatohepatitis (NASH) with advanced fibrosis, including selonsertib (ASK-1 inhibitor; phase III), GS-9674 (FXR agonist; phase II) and GS-0976 (ACC inhibitor; phase II). Inflammation is one of the three emerging areas, and the company has been developing a pipeline targeting inflammatory diseases. Phase III studies on filgotinib for the treatment of RA and Crohn's disease are currently ongoing. Galapagos and Gilead entered a global collaboration for the development and commercialization of filgotinib in inflammatory indications. Both the companies announced encouraging interim safety information from four studies on filgotinib for the treatment of RA. These include 24-week results of the ongoing phase III FINCH 1, 2, and 3 trials, and updated week 156 safety data from the phase IIb DARWIN 3 long-term extension study in patients with RA. The FINCH studies are among several clinical trials of filgotinib in inflammatory diseases. Based on the positive data from the ongoing trials, Gilead plans to progress with filgotinib for the rheumatoid arthritis indication for regulatory approval in Europe in the second half of this year. Apart from RA, the candidate is being evaluated in a phase II EQUATOR program in psoriatic arthritis, the TORTUGA study in ankylosing spondylitis, the DIVERSITY phase III program in Crohn's disease and the phase III SELECTION trial in ulcerative colitis.

▲ **Acquisitions and Deals to Boost Portfolio and Strengthen Pipeline:** Gilead is looking to boost its portfolio and pipeline through deals and acquisitions. The company is also looking to expand beyond antivirals into other therapeutic areas. In January 2016, the company collaborated with Galapagos for the development and commercialization of filgotinib, for inflammatory disease indications including RA. Gilead acquired Kite Pharma to foray into the emerging field of cell therapy. Kite is a pioneer in cell therapy having developed engineered cell therapies that express either a chimeric antigen receptor (CAR) or an engineered T cell receptor (TCR), depending on the type of cancer. The approval of lead candidate Yescarta for the treatment of refractory aggressive non-Hodgkin lymphoma, which includes diffuse large B-cell lymphoma (DLBCL), transformed follicular lymphoma (TFL) and primary mediastinal B-cell lymphoma (PMBCL) is a significant boost for the company. The launch is progressing well. The drug was also approved in Europe. Gilead reported positive top-line results from ZUMA-2, a registrational trial of KTE-X19 cell therapy in patients with relapsed/refractory mantle cell lymphoma. A filing KTE-X19 for this indication is planned by the end of 2019. Gilead continues to enroll patients in ZUMA-7, a phase III randomized study comparing Yescarta to the standard of care, which is salvage chemotherapy followed by autologous stem cell transplantation in the second-line treatment of patients with DLBCL. Gilead has now decided to separate its Kite business into a separate unit. Gilead also acquired Cell Design Labs, Inc. for \$567 million in December 2017. Cell Design Labs is a leader in developing cell-based therapies, and uses its synNotch and Throttle technology platforms. These technological platforms will enhance Gilead's cellular therapy research efforts, which Gilead acquired through Kite Pharma acquisition. Cell Design Labs is developing several pre-clinical product candidates, including CAR T and TCR therapies for prostate cancer and hepatocellular carcinoma that use the synNotch technology.

▲ **Boost Shareholder Value:** Gilead is making efforts to boost shareholders' value. During 2018, Gilead repaid \$6.3 billion of debt, paid cash dividends of \$3.0 billion and spent \$2.9 billion on repurchases of 40 million shares.

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## Recent News

### Inks Deal With Carma Biosciences for Immuno-Oncology — Jun 24

Gilead entered a research and development collaboration with Japan-based biopharmaceutical company, Carma Biosciences Inc. Both the companies have collaborated to develop and commercialize small molecule compounds in immuno-oncology. The deal will also allow Gilead to access Carma's proprietary lipid kinase drug discovery platform. Per the terms, the company will license worldwide rights to develop and commercialize inhibitors against an undisclosed immuno-oncology target to Carma. In exchange, Carma will receive an upfront payment of \$20 million and is eligible to receive up to an additional \$450 million in milestone payments. Carma will also receive royalties on future net sales.

### Teams Up With Nurix for Cancer and Other Drugs – Jun 20

Gilead collaborated with San Francisco-based Nurix Therapeutics, Inc. to discover, develop and commercialize a pipeline of innovative targeted protein degradation drugs for patients with cancer and other challenging diseases.

Per the deal, Nurix will receive an upfront payment of \$45 million, and is also entitled to milestone payments of \$2.3 billion and up to low-double-digit-tiered royalties on net sales. For those programs that Nurix opts in to co-develop and co-detail, the parties will split development costs as well as profits and losses equally in the United States. Nurix will be eligible to receive royalties on ex-U.S. sales and reduced milestone payments.

While Nurix will utilize its proprietary drug discovery platform to identify novel agents that utilize E3 ligases to induce degradation of specified drug targets, Gilead will have an option to license drug candidates directed to up to five targets resulting from this discovery. Nurix will retain the option to co-develop and co-detail for up to two programs in the United States. However, the collaboration excludes its lead degradation program, for which Nurix retains all rights.

### New Data on Yescarta- Jun 3

Gilead announced data from two new analyses of the ZUMA-1 trial on Yescarta in adult patients with relapsed or refractory large B-cell lymphoma. These results include a two-year sub-population analysis of efficacy and safety in ZUMA-1 patients (registrial Cohorts 1 and 2) by age, as well as preliminary data from a separate safety management study of patients receiving early steroid intervention for cytokine release syndrome (CRS) and neurologic events.

Sub-population analysis showed high rates of durable response and overall survival regardless of age at two years post-treatment.

### Presents Data at ASCO – Jun 1

Gilead announced encouraging results from the completed phase I of the single-arm ZUMA-3 study evaluating pipeline candidate KTE-X19, an investigational CD19 chimeric antigen receptor T (CAR T) cell therapy, in an oral session at the 2019 American Society of Clinical Oncology (ASCO) Annual Meeting in Chicago. The data was presented by Kite, a wholly-owned company of Gilead.

The study is being conducted in adult patients with relapsed or refractory acute lymphoblastic leukemia (ALL).

The study results provide guidance on dosing and safety management of KTE-X19 for the ongoing phase II study. Altogether, 45 patients received KTE-X19 at one of three different dose levels (2 x 10<sup>6</sup> cells/kg [n=6], 1 x 10<sup>6</sup> cells/kg [n=23], or 0.5 x 10<sup>6</sup> cells/kg [n=16]) by the end of phase I.

Patients enrolled in this study were primary refractory or relapsed/refractory after at least two prior lines of therapy. Of them, 68% achieved complete response (CR) with incomplete hematological recovery (CRI) and 100% had undetectable minimal residual disease (MRD) among the 41 patients, who were evaluable for efficacy after a minimum two months of follow-up (median follow-up of 16 months). Of the 23 patients treated with the dose level that will be used in the ongoing phase II study (1 x 10<sup>6</sup> cells/kg), 19 were evaluable for efficacy. At the time of data cut-off, 16 patients achieved CR or CRI, and 12 were in ongoing response.

However, grade 7/3 cytokine release syndrome (CRS) events and neurologic events occurred in 29% and 38% of patients, respectively. The company had previously reported that two patients experienced KTE-X19-related grade 5 adverse events (AEs) during the study — one developed stroke in the context of CRS and neurologic events, and another experienced multi-organ failure secondary to CRS.

Consequently, a revised AE management protocol was implemented in nine patients treated with 1 x 10<sup>6</sup> cells/kg of KTE-X19 during the study.

The company is evaluating the use of KTE-X19 at the selected dose with this safety management protocol in the ongoing ZUMA-3 phase II study. KTE-X19 is currently in phase I/II trials in ALL, mantle cell lymphoma (MCL) and chronic lymphocytic leukemia (CLL).

### Collaboration with Humanigen – May 31

Kite inked a collaboration with Humanigen, Inc. to conduct a phase I/II study on lenzilumab, an investigational anti-GM-CSF monoclonal antibody, with Yescarta (axicabtagenecloroleucel) in patients with relapsed or refractory diffuse large B-cell lymphoma (DLBCL). The goal of this study is to evaluate the effect of the drug on the safety of Yescarta. Kite will act as the sponsor of this study and be responsible for its conduct. The study will begin enrolling in the fourth quarter of 2019.

### Collaborates With Goldfinch Bio for Kidney Disease – May 8

Gilead announced an alliance with the biotechnology company Goldfinch Bio to discover, develop and commercialize a pipeline of innovative therapeutics for the diabetic kidney disease (DKD) and certain orphan kidney diseases. The company has exclusive options to license the worldwide rights to certain products directed toward targets emerging from Goldfinch's proprietary Kidney Genome Atlas (KGA). Per the terms of the collaborative deal, Goldfinch will receive \$55 million in upfront payments, including a \$5-million equity investment and an additional \$54-million fee to support the development of the KGA platform for DKD. It is also eligible to receive up to \$1.95 billion in potential payments for the



first five collaboration programs based on the successful achievement of its research, development, regulatory and commercial milestones, and tiered royalties on the sales of potential products originating from this collaboration.

#### Data From Phase 3 STELLAR-3 Study on Selonsertib – Apr 25

Gilead announced that STELLAR-3, a phase III, randomized, double-blind, placebo-controlled study evaluating the safety and efficacy of selonsertib, which is an investigational, once daily, oral inhibitor of apoptosis signal-regulating kinase 1 (ASK1), in patients with bridging fibrosis (F3) due to nonalcoholic steatohepatitis (NASH), did not meet the pre-specified week 48 primary endpoint of a ? 1-stage histologic improvement in fibrosis without worsening of NASH. The study enrolled 802 patients, of which 9.3% treated with selonsertib 18 mg (p=0.42 versus placebo) and 12.1% with selonsertib 6 mg (p=0.93) achieved a ? 1-stage improvement in fibrosis, according to the NASH Clinical Research Network (CRN) classification, without worsening of NASH after 48 weeks of treatment versus 13.2% treated with placebo. Selonsertib was generally well tolerated and safety results were consistent with prior studies.

#### Collaborates With Insitro to Develop NASH Therapies – Apr 16

Gilead announced a collaboration with a privately-held, data-driven drug company, Insitro, for discovering and developing therapies targeting nonalcoholic steatohepatitis ("NASH").

Despite the failure of its late-stage NASH candidate earlier this year, Gilead remains committed toward developing treatment for this indication.

Insitro focuses on using machine learning, an advanced form computer technology, to help pharma companies discover and develop drugs.

Per the deal, Gilead will use Insitro's proprietary platform for the next three years to develop five potential therapies for NASH. In return, Insitro will be eligible to receive an upfront payment of \$15 million and \$35 million in near-term operational milestone payments. Insitro will also be eligible to receive \$200 million for each of the five therapies in pre-clinical, clinical, regulatory and commercial milestones from Gilead. Insitro will also receive tiered royalties on net sales upon potential commercialization of the therapies. The deal also includes profit sharing in China, and milestone payments and royalties on other ex-U.S. sales.

#### Valuation

Gilead's shares are up 7.2% in the year-to-date period but lost 5.3% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Medical sector are up 3.9% and 5.6% in the year-to-date period, respectively. Over the past year, the Zacks sub-industry is down 17.5% while the sector is down 1.2%.

The S&P 500 index is up 15.3% in the year-to-date period and 6.2% in the past year.

The stock is currently trading at 10.3X forward 12-month earnings per share, which compares to 53.62X for the Zacks sub-industry, 20.17X for the Zacks sector and 16.88X for the S&P 500 index.

Over the past five years, the stock has traded as high as 13.65X and as low as 6.28X, with a 5-year median of 9.96X. Our Outperform recommendation indicates that the stock will perform better than the market. Our \$77.00 price target reflects 11.52X forward 12-month earnings per share.

The table below shows summary valuation data for GILD

Valuation Multiples - GILD					
		Stock	Sub-industry	Sector	S&P 500
P/E F 12M	Current	10.3	53.62	20.17	16.88
	5-Year High	13.65	64.18	20.63	19.29
	5-Year Low	6.28	21.29	16.04	15.09
	5-Year Median	9.96	28.89	18.44	17.34
P/S F 12M	Current	3.82	2.36	2.67	3.18
	5-Year High	6.45	3.32	3.82	3.41
	5-Year Low	3.11	2.18	2.51	2.53
	5-Year Median	4.26	2.53	2.99	2.86
P/B TTM	Current	3.87	3.35	4.7	4.03
	5-Year High	12.45	6.31	5.04	4.18
	5-Year Low	3.4	2.65	3.44	2.85
	5-Year Median	5.5	3.63	4.27	3.41

As of 06/27/2019

Industry Analysis Zacks Industry Rank: Top 26% (67 out of 256)



Top Peers

Merck & Co., Inc. (MRK)	Outperform
AbbVie Inc. (ABBV)	Neutral
Bristol-Myers Squibb Company (BMY)	Neutral
GlaxoSmithKline plc (GSK)	Neutral
Johnson & Johnson (JNJ)	Neutral
Novartis AG (NVS)	Neutral
Pfizer Inc. (PFE)	Neutral
United Therapeutics Corporation (UTHR)	Neutral

Industry Comparison Industry: Medical - Biomedical And Genetics				Industry Peers		
	GILD Outperform	X Industry	S&P 500	ABBV Neutral	BMY Neutral	JNJ Neutral
<b>VGM Score</b>	<b>B</b>	-	-	<b>A</b>	<b>A</b>	<b>B</b>
Market Cap	85.52 B	178.86 M	22.59 B	103.48 B	73.77 B	373.54 B
# of Analysts	13	2	14	6	6	9
Dividend Yield	3.76%	0.00%	1.93%	6.11%	3.64%	2.70%
<b>Value Score</b>	<b>A</b>	-	-	<b>A</b>	<b>B</b>	<b>B</b>
Cash/Price	0.32	0.26	0.04	0.04	0.11	0.04
EV/EBITDA	7.93	-3.11	12.46	16.45	10.70	14.88
PEG Ratio	0.78	2.06	1.95	1.44	2.10	2.43
Price/Book (P/B)	3.87	3.47	3.18	NA	4.82	6.34
Price/Cash Flow (P/CF)	9.16	13.97	12.47	7.50	10.29	12.90
P/E (F1)	9.74	23.78	17.55	7.98	10.74	16.36
Price/Sales (P/S)	3.83	13.92	2.53	3.17	3.17	4.58
Earnings Yield	10.27%	-18.01%	5.67%	12.54%	9.31%	6.11%
Debt/Equity	1.09	0.02	0.71	-4.48	0.37	0.47
Cash Flow (\$/share)	7.33	-1.03	6.86	9.34	4.38	10.90
<b>Growth Score</b>	<b>D</b>	-	-	<b>A</b>	<b>A</b>	<b>A</b>
Hist. EPS Growth (3-5 yrs)	-3.06%	18.84%	9.19%	21.34%	18.64%	8.01%
Proj. EPS Growth (F1/F0)	3.36%	7.71%	6.50%	10.96%	5.48%	5.15%
Curr. Cash Flow Growth	-24.62%	18.16%	16.11%	33.63%	24.21%	13.87%
Hist. Cash Flow Growth (3-5 yrs)	21.29%	9.00%	8.88%	18.69%	13.59%	7.92%
Current Ratio	3.62	5.20	1.23	1.04	1.93	1.44
Debt/Capital	52.15%	4.55%	43.11%	NA	26.90%	31.93%
Net Margin	26.40%	-220.72%	11.61%	16.42%	22.23%	17.99%
Return on Equity	37.98%	-57.49%	17.71%	-221.09%	48.72%	36.29%
Sales/Assets	0.35	0.19	0.55	0.54	0.68	0.53
Proj. Sales Growth (F1/F0)	-0.37%	1.77%	3.65%	0.11%	6.25%	-0.46%
<b>Momentum Score</b>	<b>B</b>	-	-	<b>C</b>	<b>A</b>	<b>C</b>
Daily Price Chg	0.60%	0.62%	0.61%	2.94%	0.40%	-0.82%
1 Week Price Chg	4.55%	1.99%	1.76%	0.11%	3.74%	1.43%
4 Week Price Chg	5.90%	0.00%	4.72%	-9.81%	-1.70%	6.49%
12 Week Price Chg	0.36%	-12.87%	1.25%	-15.47%	-3.36%	3.78%
52 Week Price Chg	-4.62%	-28.30%	6.38%	-24.27%	-18.45%	15.32%
20 Day Average Volume	6,010,029	153,680	1,971,307	12,048,156	13,290,402	7,295,138
(F1) EPS Est 1 week change	0.00%	0.00%	0.00%	-0.39%	-0.18%	0.00%
(F1) EPS Est 4 week change	0.00%	0.00%	0.00%	-0.39%	0.49%	0.00%
(F1) EPS Est 12 week change	5.91%	0.00%	0.18%	1.14%	0.92%	0.26%
(Q1) EPS Est Mthly Chg	0.00%	0.00%	0.00%	-0.03%	2.14%	0.00%

**Gilead Sciences Inc.(GILD)**

**\$66.32** (As of 07/25/19)

Price Target (6-12 Months): **\$70.00**

Long Term: 6-12 Months | **Zacks Recommendation:** Neutral  
(Since: 07/02/19)  
Prior Recommendation: Outperform

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Short Term: 1-3 Months | **Zacks Rank:** (1-5) **2-Buy**  
**Zacks Style Scores:** VGM: B  
Value: A | Growth: D | Momentum: B

**Summary**

Gilead's HIV franchise maintains momentum on continued uptake of Genvoya and Odefsey, and the rapid adoption of Biktarvy. The company has shifted focus to the HIV franchise, and newer avenues like CAR-T therapy and NASH, owing to a decline in sales of the HCV franchise. Gilead's collaboration with Novo Nordisk for NASH treatments is a step in the right direction, given its recent debacles. The company suffered a setback with the failure of a late-stage study on selonsertib in patients with compensated cirrhosis due to NASH. Nevertheless, it is also developing a pipeline targeting inflammatory diseases. A filing is planned by the end of 2019. However, the HIV franchise is also expected to face stiff competition. Shares have outperformed the industry in the year so far. Estimates are stable ahead of second-quarter results.

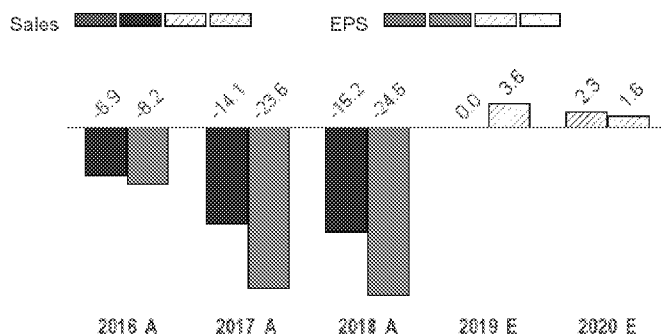
**Price, Consensus & Surprise**



**Data Overview**

52 Week High-Low	\$79.61 - \$60.32
20 Day Average Volume (sh)	5,972,653
Market Cap	\$84.6 B
YTD Price Change	6.0%
Beta	1.12
Dividend / Div Yld	\$2.52 / 3.8%
Industry	<b>Medical - Biomedical and Genetics</b>
Zacks Industry Rank	Top 20% (51 out of 255)

**Sales and EPS Growth Rates (Y/Y %)**



Last EPS Surprise	8.6%
Last Sales Surprise	-0.5%
EPS F1 Est- 4 week change	0.3%
Expected Report Date	07/30/2019
Earnings ESP	3.2%
P/E TTM	9.5
P/E F1	9.6
PEG F1	0.8
P/S TTM	3.8

**Sales Estimates (millions of \$)**

	Q1	Q2	Q3	Q4	Annual*
2020	5,496 E	5,676 E	5,791 E	5,931 E	22,643 E
2019	5,281 A	5,556 E	5,597 E	5,743 E	22,132 E
2018	5,088 A	5,648 A	5,596 A	5,795 A	22,127 A

**EPS Estimates**

	Q1	Q2	Q3	Q4	Annual*
2020	\$1.66 E	\$1.72 E	\$1.83 E	\$1.87 E	\$7.02 E
2019	\$1.76 A	\$1.74 E	\$1.74 E	\$1.71 E	\$6.91 E
2018	\$1.48 A	\$1.91 A	\$1.84 A	\$1.44 A	\$6.67 A

\*Quarterly figures may not add up to annual.

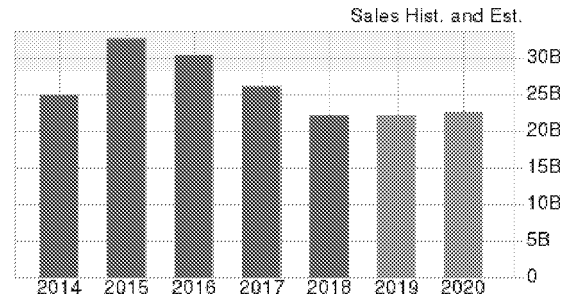
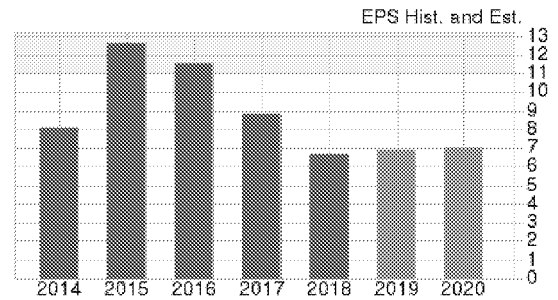
The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 07/25/2019. The reports text is as of 07/25/2019.

## Overview

Headquartered in Foster City, CA, Gilead Sciences is a biopharmaceutical company, focused on developing drugs for the treatment of human immunodeficiency virus (HIV), liver diseases, hematology/oncology diseases and inflammation/respiratory diseases. Key products include HIV/AIDS therapies like tenofovir alafenamide (TAF)-based products Genvoya, Odefsey, Descovy, recently approved Biktarvy, Stribild, Atripla, Complera/Eviplera and Truvada. The portfolio also includes hepatitis C virus (HCV) drugs like Harvoni and Epclusa, and HBV drug, Vemlidy. In 2017, the company launched two new drugs — Yescarta, the first cell therapy approved for the treatment of adult patients with relapsed or refractory large B-cell lymphoma, and HCV drug, Vosevi. Other important products in the company's portfolio include Zydelig (for certain types of blood cancers), AmBisome (for serious invasive fungal infections caused by various fungal species in adults), Letairis (for pulmonary arterial hypertension), and Ranexa (for chronic angina).

Gilead has a robust late-stage pipeline that bodes well for long-term growth. The company is also working on diversifying and growing its business beyond antivirals into other therapeutic areas. The company has a collaboration agreement with Galapagos for the development and commercialization of the JAK1-selective inhibitor, filgotinib, for inflammatory disease indications, including rheumatoid arthritis (RA). The company acquired Kite Pharma for \$11.9 billion in 2017 to enter the CAR T space. In December 2017, Gilead acquired Cell Design Labs Inc. The company has recently collaborated with Novo Nordisk to develop drugs for the treatment of NASH.

Revenues in 2018 came in at \$22.1 billion, down from \$26.1 billion in 2017.



## Reasons To Buy:

▲ **Share Price Performance:** Gilead's stock has outperformed the industry in the year so far.

▲ **Strong HIV Franchise:** Gilead is a dominant player in the HIV market with an impressive portfolio for the same. The company was the first to bring to market a single-tablet regimen (STR) for the treatment of HIV – Atripla. Additional STRs for HIV in the market include Complera/Eviplera and Stribild among others. Meanwhile, Gilead is looking to transition the HIV market to drugs with improved long-term safety profiles. The TAF-based products Genvoya, Odefsey and Descovy are performing well with strong adoption in both the United States and Europe. Descovy-based regimens continue to gain share and now account for approximately 80% of Gilead's total U.S. treatment prescription volumes. Genvoya has already become the most-prescribed regimen for both treatment-naïve and switch patients since its launch in Nov 2015. Also, Genvoya has been listed as a preferred regimen in several HIV treatment guidelines. Truvada, for use in the pre-exposure prophylaxis setting, continued to maintain momentum, with an estimated 202,000 patients using the drug by the end of the fourth quarter. The FDA extended the indication for Truvada as PrEP to include at-risk adolescents. The company received a major boost when the FDA approved the company's once-daily single tablet regimen ("STR"), Biktarvy (bictegravir 50mg/emtricitabine 200mg/tenofovir alafenamide 25mg, BIC/FTC/TAF) for HIV-1 infection. The approval provides a major boost to Gilead's HIV franchise. The approval of this new HIV therapy will pose stiff competition to GlaxoSmith's existing therapies, Tivicay and Triumeq. In March 2018, Biktarvy was added to the U.S. DHHS guidelines for the use of antiretroviral agents in adults and adolescents living with HIV as one of the recommended initial regimens. The recent approval in Europe will further strengthen the company's HIV franchise. Biktarvy has become the number one prescribed regimen for both treatment-naïve and switch patients.

Gilead's strong HIV franchise should help the company maintain momentum. Newly launched products should continue to perform well, thereby driving top-line growth.

Gilead is evaluating if once-daily Descovy is as safe and effective as once-daily Truvada at reducing the risk of HIV infection, when used as PrEP or pre-exposure prophylaxis in the DISCOVER trial. It submitted a supplemental NDA to the FDA for Descovy for the PrEP indication as a potential important new option to prevent HIV infection. An approval is expected in the fourth quarter of 2019.

▲ **Robust Pipeline:** Gilead has a robust pipeline, with several development programs currently underway, ranging from phase I through phase III. The company has quite a few programs targeting non-alcoholic steatohepatitis (NASH) with advanced fibrosis, including selonsertib (ASK-1 inhibitor; phase III), GS-9674 (FXR agonist; phase II) and GS-0976 (ACC inhibitor; phase II). Inflammation is one of the three emerging areas, and the company has been developing a pipeline targeting inflammatory diseases. Phase III studies on filgotinib for the treatment of RA and Crohn's disease are currently ongoing. Galapagos and Gilead entered a global collaboration for the development and commercialization of filgotinib in inflammatory indications. Both the companies announced encouraging interim safety information from four studies on filgotinib for the treatment of RA. These include 24-week results of the ongoing phase III FINCH 1, 2, and 3 trials, and updated week 156 safety data from the phase IIb DARWIN 3 long-term extension study in patients with RA. The FINCH studies are among several clinical trials of filgotinib in inflammatory diseases. Based on the positive data from the ongoing trials, Gilead is planning to submit a new drug application ("NDA") seeking approval for filgotinib as a treatment for rheumatoid arthritis in 2019. The decision was taken by the company following a pre-NDA meeting with the FDA. Apart from RA, the candidate is being evaluated in a phase II EQUATOR program in psoriatic arthritis, the TORTUGA study in ankylosing spondylitis, the DIVERSITY phase III program in Crohn's disease and the phase III SELECTION trial in ulcerative colitis.

▲ **Acquisitions and Deals to Boost Portfolio and Strengthen Pipeline:** Gilead is looking to boost its portfolio and pipeline through deals and acquisitions. The company is also looking to expand beyond antivirals into other therapeutic areas. In January 2016, the company collaborated with Galapagos for the development and commercialization of filgotinib, for inflammatory disease indications including RA. Gilead acquired Kite Pharma to foray into the emerging field of cell therapy. Kite is a pioneer in cell therapy having developed engineered cell therapies that express either a chimeric antigen receptor (CAR) or an engineered T cell receptor (TCR), depending on the type of cancer. The approval of lead candidate Yescarta for the treatment of refractory aggressive non-Hodgkin lymphoma, which includes diffuse large B-cell lymphoma (DLBCL), transformed follicular lymphoma (TFL) and primary mediastinal B-cell lymphoma (PMBCL) is a significant boost for the company. The launch is progressing well. The drug was also approved in Europe. Gilead reported positive top-line results from ZUMA-2, a registrational trial of KTE-X19 cell therapy in patients with relapsed/refractory mantle cell lymphoma. A filing KTE-X19 for this indication is planned by the end of 2019. Gilead continues to enroll patients in ZUMA-7, a phase III randomized study comparing Yescarta to the standard of care, which is salvage chemotherapy followed by autologous stem cell transplantation in the second-line treatment of patients with DLBCL. Gilead has now decided to separate its Kite business into a separate unit. Gilead also acquired Cell Design Labs, Inc. for \$567 million in December 2017. Cell Design Labs is a leader in developing cell-based therapies, and uses its synNotch and Throttle technology platforms. These technological platforms will enhance Gilead's cellular therapy research efforts, which Gilead acquired through Kite Pharma acquisition. Cell Design Labs is developing several pre-clinical product candidates, including CAR T and TCR therapies for prostate cancer and hepatocellular carcinoma that use the synNotch technology.

▲ **Boost Shareholder Value:** Gilead is making efforts to boost shareholders' value. During 2018, Gilead repaid \$6.3 billion of debt, paid cash dividends of \$3.0 billion and spent \$2.9 billion on repurchases of 40 million shares.

## Recent News

### Data on Biktarvy – Jul 22

Gilead announced data from two phase III trials — one demonstrating the effectiveness of switching to Biktarvy (bictegravir 50mg/emtricitabine 200mg/tenofovir alafenamide 25mg tablets, B/F/TAF) from other regimens in women, and another evaluating the potential for the single-tablet regimen to be an effective treatment option in virologically suppressed patients with known resistance to nucleo(s)tide or non-nucleo(s)tide reverse transcriptase inhibitors. At week 96, 99.5% of women, who received Biktarvy throughout the study duration, and 98.5% of women, who switched to Biktarvy at week 48, maintained virologic suppression with no development of treatment-emergent resistance.

### Gilead Licenses Research Programs From Novartis, Provides Other Updates – Jul 19

Gilead licensed three preclinical antiviral programs from Novartis, including investigational agents for the treatment of human rhinovirus, influenza and herpes viruses. Per the terms, the company will acquire exclusive global rights to develop and commercialize novel small molecules against three undisclosed targets. In exchange, Novartis will receive an upfront payment and an additional \$291 million as milestone payments.

### Collaborates With Galapagos for \$5.1 Billion – Jul 14

Gilead entered a 10-year global research and development collaboration with Galapagos NV, whereby the former will gain access to an innovative portfolio of compounds, including six molecules currently in clinical trials, more than 20 preclinical programs and a proven drug discovery platform of the latter.

In exchange, Gilead will make a \$3.95-billion upfront payment to Galapagos and a \$1.1-billion equity investment in the same. Galapagos will use the proceeds to expand and accelerate its research and development programs. The company's equity investment will consist of a subscription for new Galapagos shares at €140.59 per share. The price represents a 20% premium to Galapagos' 30-day, volume-weighted average price. As a result, Gilead's stake in Galapagos will increase to 22% from 12.3%. In addition, Galapagos intends to seek shareholder approval to issue two warrants, allowing Gilead to further increase its ownership of Galapagos to up to 29.9% of the company's issued and outstanding shares. The agreement also includes a 10-year standstill, restricting Gilead's ability to seek acquisition of Galapagos or increase its stake beyond 29.9% of the company's issued and outstanding shares, subject to limited exceptions.

### Submit NDA for Inflammation Drug Filgotinib – Jul 1

Gilead is planning to submit a new drug application ("NDA") seeking approval for its oral JAK1 inhibitor, filgotinib, as a treatment for RA in 2019. The decision was taken by the company following a pre-NDA meeting with the FDA.

The NDA will likely include data from the ongoing phase III clinical program, FINCH, which comprises three studies. The company had discussion on the phase III FINCH studies with the regulatory authority during the pre-NDA meeting. In 2016, it had collaborated with Galapagos for the development and commercialization of filgotinib for inflammatory disease indications, including RA.

### Inks Deal With Carma Biosciences for Immuno-Oncology — Jun 24

Gilead entered a research and development collaboration with Japan-based biopharmaceutical company, Carma Biosciences Inc. Both the companies have collaborated to develop and commercialize small molecule compounds in immuno-oncology. The deal will also allow Gilead to access Carma's proprietary lipid kinase drug discovery platform. Per the terms, the company will license worldwide rights to develop and commercialize inhibitors against an undisclosed immuno-oncology target to Carma. In exchange, Carma will receive an upfront payment of \$20 million and is eligible to receive up to an additional \$450 million in milestone payments. Carma will also receive royalties on future net sales.

### Teams Up With Nurix for Cancer and Other Drugs – Jun 20

Gilead collaborated with San Francisco-based Nurix Therapeutics, Inc. to discover, develop and commercialize a pipeline of innovative targeted protein degradation drugs for patients with cancer and other challenging diseases.

Per the deal, Nurix will receive an upfront payment of \$45 million, and is also entitled to milestone payments of \$2.3 billion and up to low-double-digit-tiered royalties on net sales. For those programs that Nurix opts in to co-develop and co-detail, the parties will split development costs as well as profits and losses equally in the United States. Nurix will be eligible to receive royalties on ex-U.S. sales and reduced milestone payments.

While Nurix will utilize its proprietary drug discovery platform to identify novel agents that utilize E3 ligases to induce degradation of specified drug targets, Gilead will have an option to license drug candidates directed to up to five targets resulting from this discovery. Nurix will retain the option to co-develop and co-detail for up to two programs in the United States. However, the collaboration excludes its lead degradation program, for which Nurix retains all rights.

### New Data on Yescarta- Jun 3

Gilead announced data from two new analyses of the ZUMA-1 trial on Yescarta in adult patients with relapsed or refractory large B-cell lymphoma. These results include a two-year sub-population analysis of efficacy and safety in ZUMA-1 patients (registrial Cohorts 1 and 2) by age, as well as preliminary data from a separate safety management study of patients receiving early steroid intervention for cytokine release syndrome (CRS) and neurologic events.

Sub-population analysis showed high rates of durable response and overall survival regardless of age at two years post-treatment.

### Presents Data at ASCO – Jun 1

Gilead announced encouraging results from the completed phase I of the single-arm ZUMA-3 study evaluating pipeline candidate KTE-X19, an investigational CD19 chimeric antigen receptor T (CAR T) cell therapy, in an oral session at the 2019 American Society of Clinical Oncology

Industry Analysis Zacks Industry Rank: Top 20% (51 out of 255)



Top Peers

AbbVie Inc. (ABBV)	Neutral
Bristol-Myers Squibb Company (BMY)	Neutral
GlaxoSmithKline plc (GSK)	Neutral
Johnson & Johnson (JNJ)	Neutral
Merck & Co., Inc. (MRK)	Neutral
Novartis AG (NVS)	Neutral
Pfizer Inc. (PFE)	Neutral
United Therapeutics Corporation (UTHR)	Neutral

Industry Comparison Industry: Medical - Biomedical And Genetics				Industry Peers		
	GILD Neutral	X Industry	S&P 500	ABBV Neutral	BMY Neutral	JNJ Neutral
<b>VGM Score</b>	<b>B</b>	-	-	<b>A</b>	<b>A</b>	<b>B</b>
Market Cap	84.55 B	171.05 M	23.10 B	98.55 B	74.26 B	348.13 B
# of Analysts	13	2.5	13	6	6	9
Dividend Yield	3.80%	0.00%	1.87%	6.42%	3.61%	2.90%
<b>Value Score</b>	<b>A</b>	-	-	<b>A</b>	<b>B</b>	<b>B</b>
Cash/Price	0.34	0.27	0.04	0.05	0.12	0.04
EV/EBITDA	7.83	-2.81	12.83	15.84	10.77	13.90
PEG Ratio	0.78	1.79	1.99	1.36	2.11	2.22
Price/Book (P/B)	3.83	3.37	3.19	NA	4.85	5.91
Price/Cash Flow (P/CF)	9.05	13.69	12.58	7.14	10.36	12.02
P/E (F1)	9.66	23.00	17.68	7.55	10.87	15.25
Price/Sales (P/S)	3.79	13.01	2.56	3.02	3.11	4.28
Earnings Yield	10.42%	-18.58%	5.59%	13.23%	9.21%	6.56%
Debt/Equity	1.09	0.02	0.71	-4.48	0.37	0.47
Cash Flow (\$/share)	7.33	-1.03	6.86	9.34	4.38	10.90
<b>Growth Score</b>	<b>D</b>	-	-	<b>B</b>	<b>A</b>	<b>A</b>
Hist. EPS Growth (3-5 yrs)	-3.06%	18.84%	9.26%	21.34%	18.64%	8.56%
Proj. EPS Growth (F1/F0)	3.62%	9.14%	6.55%	11.55%	4.98%	5.11%
Curr. Cash Flow Growth	-24.62%	18.16%	16.11%	33.63%	24.21%	13.87%
Hist. Cash Flow Growth (3-5 yrs)	21.29%	9.06%	8.93%	18.69%	13.59%	7.92%
Current Ratio	3.62	5.20	1.23	1.04	1.93	1.44
Debt/Capital	52.15%	4.32%	43.11%	NA	26.90%	31.93%
Net Margin	26.40%	-209.02%	11.53%	16.42%	26.14%	20.08%
Return on Equity	37.98%	-57.49%	17.65%	-221.09%	49.08%	38.57%
Sales/Assets	0.35	0.19	0.55	0.54	0.69	0.53
Proj. Sales Growth (F1/F0)	0.02%	3.26%	3.54%	0.15%	6.10%	-0.09%
<b>Momentum Score</b>	<b>B</b>	-	-	<b>B</b>	<b>B</b>	<b>F</b>
Daily Price Chg	-0.48%	-1.03%	-0.50%	-1.19%	5.02%	1.03%
1 Week Price Chg	-1.84%	-0.79%	-1.07%	-2.48%	-2.12%	-2.97%
4 Week Price Chg	-1.13%	-3.28%	2.45%	-4.77%	0.67%	-6.80%
12 Week Price Chg	1.56%	-9.80%	2.83%	-15.05%	-3.16%	-7.19%
52 Week Price Chg	-15.15%	-31.19%	5.42%	-29.04%	-21.62%	0.64%
20 Day Average Volume	5,972,653	160,651	1,813,698	11,250,079	12,949,209	7,292,443
(F1) EPS Est 1 week change	0.17%	0.00%	0.00%	0.00%	1.60%	0.00%
(F1) EPS Est 4 week change	0.27%	0.00%	-0.00%	0.46%	1.37%	-0.04%
(F1) EPS Est 12 week change	5.10%	0.96%	-0.04%	0.14%	1.12%	0.00%
(Q1) EPS Est Mthly Chg	0.26%	0.00%	-0.07%	0.45%	0.00%	-2.45%

Partnerships /

AbbVie Ventures



Team

Portfolio

# AbbVie Ventures

As tomorrow's innovations are developed by today's entrepreneurs, we invest in transformational scientific opportunities aligned with our core R&D interests to gain access to next-generation science and build



## We're AbbVie's Corporate Strategic Venture Capital Arm

Investing since 2009, we focus exclusively on novel, transformational therapeutics at discovery and pre-clinical stages. Aligning with AbbVie's strategic focus, our investments address critical needs in oncology, immunology, and neuroscience. We offer our partners access to AbbVie's vast internal network of experts in all phases of drug development, from drug discovery through successful commercialization.



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Learn more about our team's approach and key investments in 2018

Our current portfolio is comprised of more than a dozen companies based in the US and Europe. Targeting 6-8 new investments annually, at the Seed or Series A stage, we have the capability and flexibility to lead or co-lead a syndicate. Our team of eight investing professionals is based in three locations: Boston, San Francisco and Chicago areas.

AbbVie Ventures

Team

[./#top](#)

[Early History and  
Acquisitions](#)

[Interview With David  
Piacquad, SVP, BD](#)

[Amgen Ventures](#)

## WHO WE ARE

Amgen Business Development partners with innovators to fight against serious illness.

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### Amgen Business Development

Amgen is committed to partnering with innovators in the fight against serious illness. Amgen's business development team brings together deep scientific, financial, deal, partnership, and integration expertise—along with an ability to bring the right people inside Amgen to the right conversations. Business Development plays a critical role in the execution of Amgen's growth strategy. From the early-stage innovations we fund through Amgen Ventures to the integration and alliance management work we engage in once an agreement is reached, Amgen Business Development is organized to effectively manage the process of working with partners every step of the way.

[Meet the Team \(/meet-the-team/\)](#)

## [Amgen Ventures](#) (#top)

Amgen Ventures is dedicated to providing innovative biotechnology companies with resources to develop pioneering discoveries focused on human therapeutics.

For more than a decade, Amgen Ventures has invested in more than 30 emerging biotechnology companies to advance promising medicines and technologies that could ultimately make a difference for patients suffering from serious illnesses. Investments are made in areas of strategic interest and with the intent of earning a financial return. We invest in North America, United Kingdom and Europe.

[View Amgen Ventures Investments](#)

[More About Amgen Ventures \(pdf\)](#)

<http://wwwext.amgen.com/pdfs/misc/Amgen-Ventures-Overview.pdf>

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More About Amgen

([http://wwwext.amgen.com/pdfs/misc/Fact\\_Sheet\\_Amgen.pdf](http://wwwext.amgen.com/pdfs/misc/Fact_Sheet_Amgen.pdf))

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## A Venture Capital Success Story

Founded in 1980 by a small group of enterprising venture capitalists and scientists who saw the promise of emerging research in genetics, Amgen has grown to be one of the world's largest independent biotechnology companies with a presence in more than 75 countries.

At Amgen, Business Development remains a critical capability. We recognize that one of the most important drivers of success is our balanced approach of capturing internal and external innovation. We have invested in 30 early-stage biotechnology companies in the last decade. These investments, along with the work we have done at Amgen, have led to significant advances in the treatment of cancer, rheumatoid arthritis, kidney disease and other serious illnesses. Our success continues to come from cultivating home-grown innovation inside the walls of Amgen while also capturing external innovation and forging valuable partnerships that dramatically enhance how we deliver for patients.



## Interview With David Piacquad, SVP, Business Development

### What does business development mean at Amgen?

Business Development means different things in different industries—and at different companies. At Amgen, business development focuses on bringing external innovation into the corporation. We do this in a number of ways, especially through acquisitions and licensing agreements that include investigational medicines in specific therapeutic areas as well as discovery research capabilities and delivery system technologies. Amgen Business Development also operates Amgen Ventures, a fund focused on early-stage innovation, and out-licensing efforts.

### How seriously does Amgen take innovations not created inside the company?

We really believe that to be successful going forward you have to find the best science, the best innovation, wherever it may reside. If you look at our late-stage pipeline today, it's nicely balanced. Roughly half the molecules have come from outside through acquisitions and licensing deals, and half have come from internal research at Amgen. This should say something about how we source innovation at Amgen—and the importance we place on building relationships outside our own walls.

### Can you explain the recent changes to Amgen Business Development?

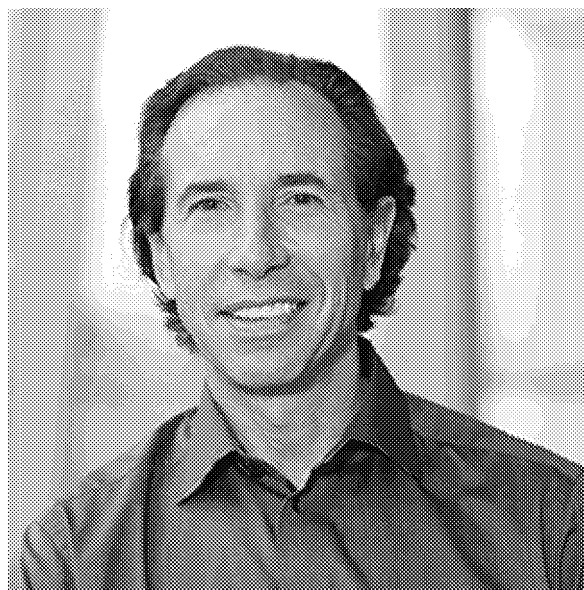
For many years, Amgen had two business development groups—one in finance and one in R&D. What we heard as we talked to people on the outside is that this created some confusion. So in 2014, we combined the two organizations. We're now able to speak with one unified voice to potential partners. Our objective is for people to find Amgen a much easier organization to work with than they have in the past. It has been very exciting to re-introduce ourselves to potential partners and meet some exciting new startups.

When it comes to <sup>(/#top)</sup> global reach, what does Amgen have to offer a small biopharma?

One of the great challenges and opportunities for an emerging biotech company is how you get out of what I like to call "the biotech trap." The biotech trap is that young biotech companies have a tendency to cut deals to out-license their international rights. It's understandable as it's a way to finance a corporation. And yet, it leads you into a trap. The trap is that when you have a big new product ready to launch, you can't take it internationally because you never built the infrastructure. And when you have opportunity outside the US, you can't make a pitch for it because you don't have the capabilities embedded. To some extent, this was a challenge for Amgen early on.

Around 2010, however, we decided to get out of this trap by partnering internationally, ahead of our maturing pipeline, to really start building aggressively, about five years in advance of the launch of products. We didn't just think about commercial capabilities but also R&D and manufacturing as well because, as those who have operated internationally know, you can't operate effectively unless you do this. You have to have a real presence on the ground, meaning that you're doing clinical trials in R&D and doing manufacturing regionally.

So we've worked very hard to get out of this trap. This includes doing an acquisition in Brazil, buying back rights to our distributor in Brazil, buying a company in Turkey that gave us access to the Middle East (an attractive market), buying back one of our legacy products in 100 markets, and doing two joint ventures—one in Japan and one in China—that will eventually allow us to step into two up-and-running businesses. We have pulled a number of different levers to allow us to expand globally, and our feeling is that we've got an exciting future. So we've really created a global launch pad for our upcoming products—for those that come from inside Amgen and for those that will come from future partnerships.



**David A. Piacquad—SVP, Business  
Development**

David A. Piacquad has been in the biopharmaceuticals business for more than 30 years. Piacquad joined Amgen in 2010 and was named senior vice president, Business Development, in March 2014. He is responsible for business development across Amgen and leads a new organization that combines the previously separate Corporate Development and External Research & Development groups. Prior to this role, Piacquad served as vice president, Strategy & Corporate Development, responsible for mergers and acquisitions, inbound and outbound Licensing, Amgen Ventures and Corporate Alliance Management.

Prior to Amgen, Piacquad was senior vice president, Business Development & Licensing at Schering-Plough Corporation. Before joining Schering-Plough, Piacquad spent more than 20 years at Johnson & Johnson, where he held a series of leadership roles in finance and business development.

Piacquad holds a BA degree from Colgate University and an MBA from the Wharton School.

---

## Amgen Ventures Investments

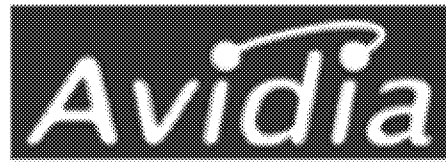
In 2004, Amgen announced the formation of Amgen Ventures, a corporate venture capital fund dedicated to providing emerging biotechnology companies with resources to develop pioneering discoveries focused on human therapeutics. Since then we have made direct investments into promising biotech companies, with a selection of a few shown below. Amgen has also become a limited partner in other life science–focused venture funds that are committed to building and growing innovative companies.

### Direct Investments

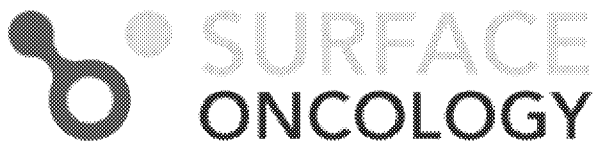
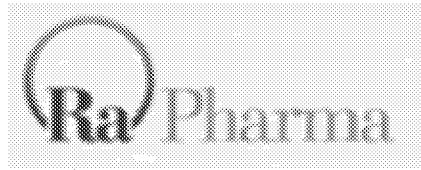




[./#top](#)



[./#top](#)



Limited Partnership Investments

[./#top](#)



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[Amgen.com \(http://wwwext.amgen.com/\)](http://wwwext.amgen.com/)

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[APPROACH](#)[TEAM](#)[PORTFOLIO](#)[CONTACT](#)[INVESTOR LOGIN](#)

Illumina Ventures is an independently managed firm focused on early-stage companies that are pioneering new applications of genomics and enabling precision medicine.

We invest in life science tools, clinical diagnostics, therapeutics, and other opportunities to improve human health.

Our strategic relationship with Illumina provides us access to the expertise and vision of the world's leading genomics solutions provider.

Our **team members** have decades of entrepreneurial experience in genomics and a passion for improving human health.



About us

# Johnson & Johnson INNOVATION

— JJDC —

Johnson & Johnson Innovation – JJDC, Inc. (JJDC) is the strategic venture capital arm of Johnson & Johnson. JJDC pursues opportunities to solve critical healthcare needs. Our portfolio companies benefit from the full global capabilities of Johnson & Johnson as we collaborate to drive innovation.

## Strategic

[Visit our other sites](#)



2018 marks an important milestone for JJDC as we celebrate our 45th anniversary as strategic investors for the Johnson & Johnson Family of Companies.

[Click here to view newsletter](#)

works hand-in-hand with partners to navigate the path to creating breakthrough health innovations.

We invest across sectors—pharmaceuticals, medical devices and consumer healthcare—and at all stages, from seed-level startups to Series B and beyond.

All of our portfolio companies receive the same unwavering commitment. We take a long-term approach, deploying the full capabilities of the Johnson & Johnson family of companies, including discovery, clinical development, regulatory affairs, manufacturing and commercialization.

Our team includes leaders in the healthcare and technology communities, many with deep R&D experience. This gives us the ability to understand our partners and provide the help they need.

Every opportunity is unique, with tailored roles and terms that provide the best path to success.



### Team



Tom Heyman  
President, JJDC



Jeanne Bolger  
Vice President, Venture Investments



Stacy Feld  
Vice President of Consumer Venture Investments and



### Approach

We're positively impacting human health through innovation. To do this, we identify the best opportunities across all sectors and allow innovators to leverage Johnson & Johnson's many resources.

## We've Been There Before

Our highly experienced team hails from throughout the healthcare and technology venture communities, many of us bringing deep R&D experience in addition to investment acumen. Just like you, we are entrepreneurs, scientists and studied risk-takers. Our team's unique vantage point gives us an exceptional ability to understand the challenges and provide the right kind of help at the right time.

## Investing With Impact

We have dedicated teams focused on investing at all stages of innovation, and across all four sectors: pharmaceuticals, medical devices, consumer health and global public health. We seek innovations with potential to make a transformational impact in the health and lives of people around the globe.

If your early-stage company is looking to advance a program that is pre-proof of concept in humans, connect with one of our Johnson & Johnson Innovation Centers, located around the globe in the life science hot spots of Asia Pacific, Boston, California and London.

## Each Investment Is Unique

At JJDC, there's no such thing as a one-size-fits-all approach. We understand that each idea is unique, requiring an equally distinct investment strategy. We customize every deal to the opportunity, ranging from Seed and Series A investments in the earliest-stage startups to Series B investments and beyond in more mature companies. We also make private investments in public equity.

## Creating Thriving Enterprises

For more than 40 years, JJDC has made investments in hundreds of innovative companies across pharmaceuticals, medical devices and consumer healthcare. Once we invest, we're committed to you. We believe in value-add investing, playing an active role in providing strategic direction and enabling access to internal expertise across the Johnson & Johnson Family of Companies.

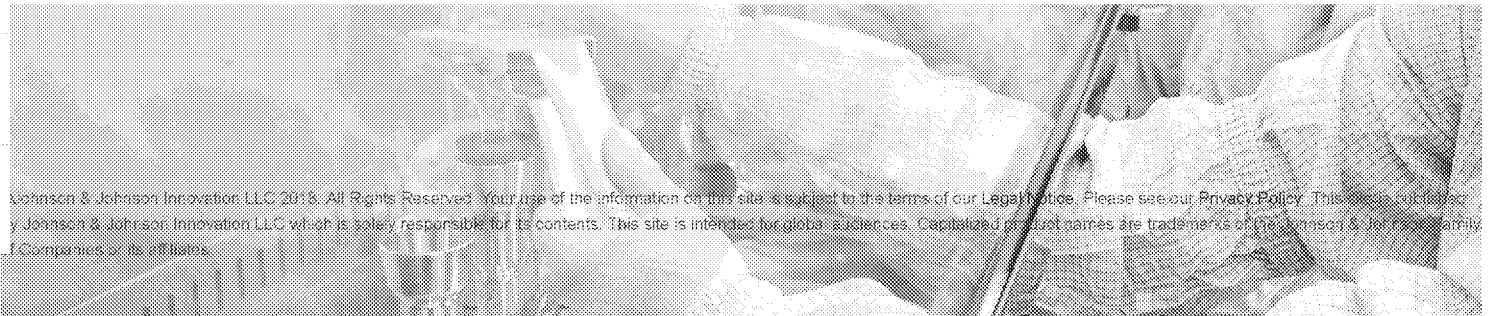


Contact

## Make the Connection

We look forward to our first discussion. If you would like to discuss a collaboration, simply click the [contact us](#) button which will connect you to our Idea Portal and a member of our team will contact you.

### CONTACT



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**Lilly** 礼来亚洲资本  
Asia Ventures

[Portfolio](#)

[News](#)

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# POWER THE COURSE OF FIGHTING DISEASES AND SAVING LIVES

Domain expertise, global resource, long-term capital

# About Us

Lilly Asia Ventures (LAV) is a leading biomedical venture capital firm, with offices in Shanghai, Hong Kong, and Palo Alto. Originated in 2008 as a corporate venture subsidiary of Eli Lilly, we spun off and became an independent management company. As one of the earliest biomedical venture firms in the region, we have been consistently investing in the region for over a decade. We recently increased our footprint in the U.S. Our team of over 100 scientific, medical, investment, and operational professionals brings a wealth of integrity, entrepreneurship, and team work. Currently, we manage over \$1.2 billion of committed capital.

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LAV has significant resources in China, with extensive local expertise in preclinical and clinical development, regulatory knowhow, and market insights. We also have strong global perspective and connections, driven by the consolidated experience of our team members overseas as well as our network of scientific advisors. By combining our China expertise and global perspectives, we are uniquely positioned to support our portfolio companies and investors worldwide.

Our vision is to become the trusted partner for exceptional entrepreneurs seeking smart capital and to build great companies developing breakthrough products that treat diseases and improve human health.

## Our Philosophy

We bet on people. We are very selective, but when we find entrepreneurs with a unique combination of ambition, experience, leadership, and integrity, we are thrilled to support them with the long-term capital they need to succeed. In

working with such exceptional entrepreneurs, we “first, do no harm”; where needed, we can bring significant value by in helping make strategic decisions, recruit executives, secure industry contacts, and explore business development opportunities.

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products. We constantly ask ourselves “what will be the selling products 5-10 years from now?” and we find or build such products. Our investment team remains up to date on literature and clinical studies, as well as key opinion leader and insights.

At our core is a focus on quality science. LAV will not make an investment in low-quality products – we are not interested in “quick flip” investments built on hype. We will only make investments when attractive financial returns are aligned with the ethics of providing truly science-based, high-quality products to treat diseases and save lives.

Last but not the least, we are long-term thinkers. We are not driven by overnight success; instead, we are focused on building sustainable companies for the many decades ahead and catalyzing global medical innovations and humanity’s ever-increasing demand for better healthcare. This long-term thinking guides every investment decision, our organizational development, and the way we treat our partners.

# *Our Story*

Since 2002, Lilly Ventures has focused its investments in great companies with compelling life science innovations that have the potential to create a pipeline of life-changing medicines. We partner actively with our portfolio company management teams and provide intellectual, as well as financial, resources to accelerate the path to success.

# MRL VENTURES FUND INVESTING IN THE FUTURE

.....

Investing globally in early-stage therapeutics companies to transform patient care.

## About Us

.....

MRL Ventures Fund (MRLV) invests in innovative therapeutics companies that are developing transformative medicines that have the potential to meaningfully improve the lives of patients. MRLV is based in Cambridge, MA and is actively seeking investment opportunities globally.

**We are:**

Looking for the highest quality, differentiated science that will redefine patient care

---

Committed to backing imaginative scientists and proven entrepreneurs

---

Agnostic to therapeutic area or modality

---

We do not ask for any product or technology rights as a condition of investment. We do not invest in medical devices, diagnostic platforms or digital health. For digital health opportunities, please visit Global Health Innovation Fund (GHI) (<http://msdghifund.com/>).

## BY THE NUMBERS

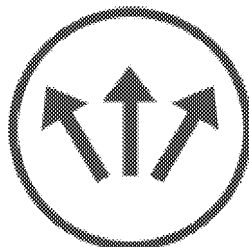
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\$250 MILLION FUND



35 FINANCING EVENTS



>\$85 MILLION DEPLOYED

## OUR SCOPE

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THERAPEUTICS

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PRECLINICAL STAGE

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ANY MODALITY

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## Delivering More than Capital

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### INVESTMENTS

Traditional seed and early-stage company investments

Therapeutics companies—from concept to IND. Seek to invest up to \$15 million per company, providing long-term, and committed capital

Lead or join a syndicate of investors and play an active role on company boards

Transparent and streamlined investment process

---

## COMPANY INVOLVEMENT

Over the life of the company, we will continue to provide capital and expertise. We protect the confidentiality of our current and future portfolio companies by providing a robust firewall from the rest of the corporation.

At a portfolio company's choosing, MRLV can act as a conduit to the larger corporate organization to solicit advice / expertise.

---

## Our Portfolio Companies

ALECTOR  
THERAPIES TO REMEMBER



(<https://www.alector.com/>)



(<http://carismatx.com/>)



(<http://www.entradatx.com/>)



(<http://www.imagobio.com/>)



(<http://www.kymeratx.com/>)



(<http://www.lavatherapeutics.com>)



(<http://lifeminetx.com/>)



(<http://www.miragen.com/>)



(<https://labcentral.org/resident-companies/rheostat-therapeutics>)



(<https://sperotherapeutics.com/>)



(<https://translate.bio/>)



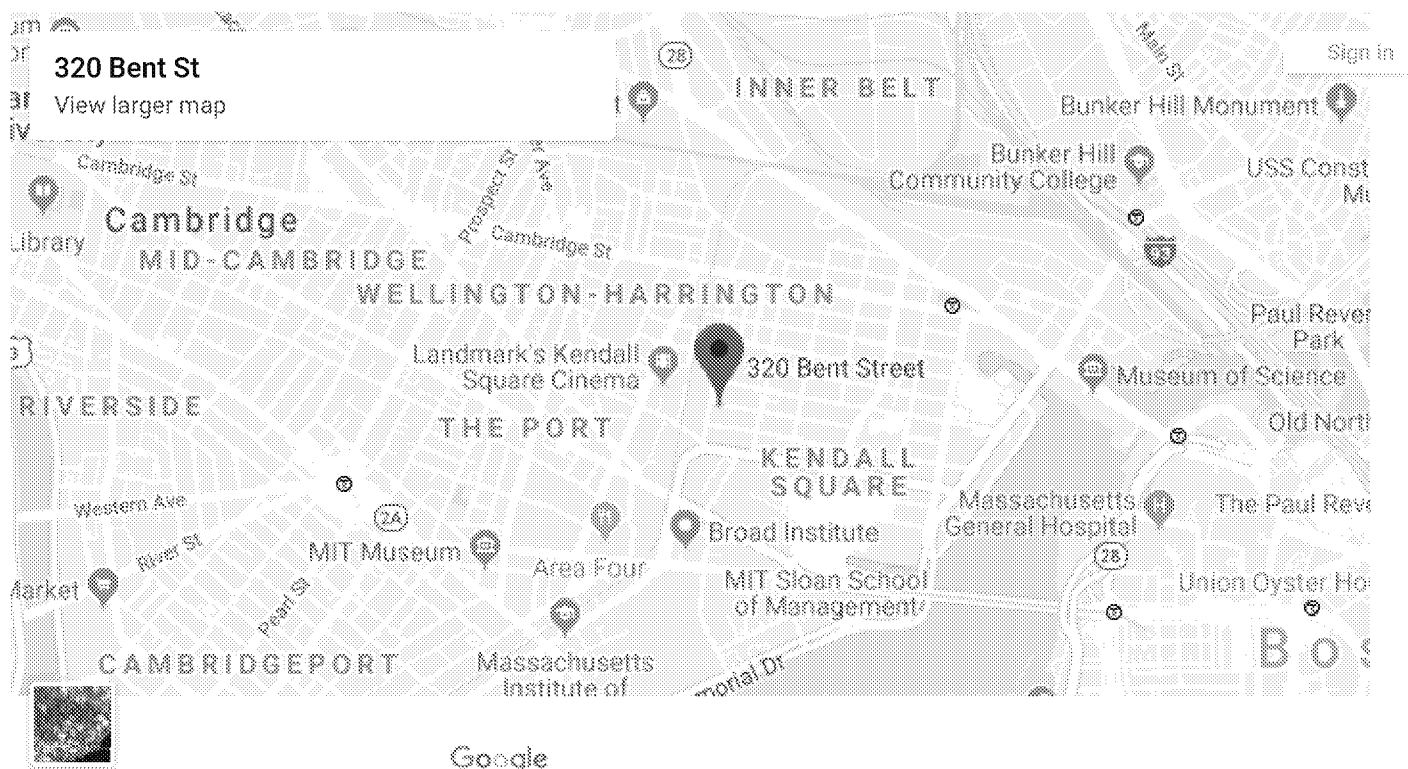
(<http://www.visterrainc.com/>)

## Our Team

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Our team is growing and has years of accumulated experience as scientists, investors, entrepreneurs, and business development & licensing leaders in both biotechnology and pharmaceutical companies. This broad experience enables a rich engagement with portfolio companies and co-investors.

MRL Ventures Fund is actively developing a portfolio of early-stage therapeutic companies, which are focused on delivering innovative therapies to improve patient care.



Map [Report a map error](#)

## MRL Ventures Fund

320 Bent Street

4th Floor

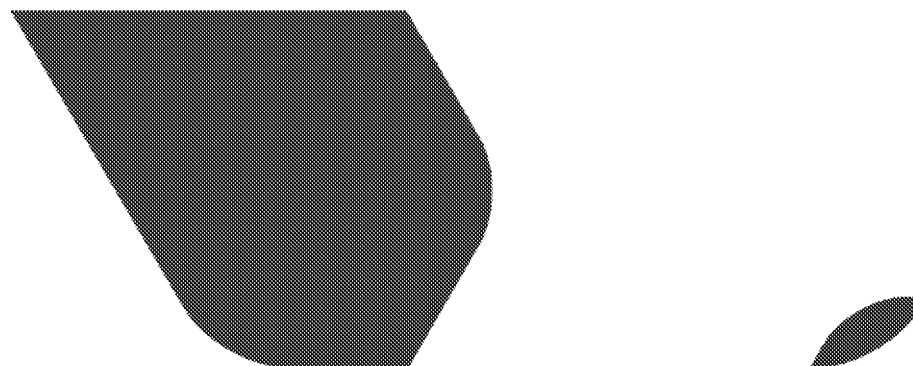
Cambridge, MA 02141

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# About Us

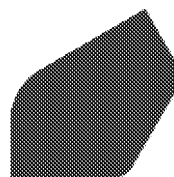
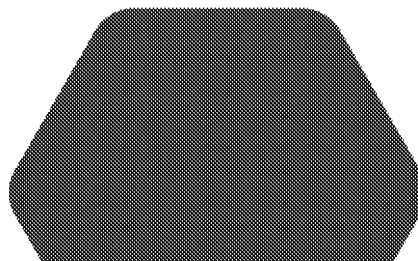
## Mission Statement

We drive innovation and back entrepreneurs through equity investments and hands on support in fields that could impact the vitality and sustainability of Merck KGaA, Darmstadt, Germany's current and future businesses. We are the strategic, corporate venture capital arm of Merck KGaA, Darmstadt, Germany. Our mandate is to invest in innovative technologies and products with the potential to significantly impact Merck KGaA, Darmstadt, Germany's core business areas. From our headquarters in Amsterdam and offices in the US and Israel we invest globally in transformational ideas driven by great entrepreneurs. We take an active role in our portfolio companies and team up with entrepreneurs and co-investors to translate innovation towards commercial success. We have a significant focus on early stage investing and company creation including the creation of spin-offs to leverage Merck KGaA, Darmstadt, Germany's science and technology base.



Science and technology are accelerating at such a pace that we need to recognize as a large corporation that our role is often to monitor, support and influence. M Ventures, Amsterdam, The Netherlands, a subsidiary of Merck KGaA, Darmstadt, Germany is central to our ambitions to push the edge of what's possible in healthcare, life sciences, advanced materials and beyond. Through this venture fund, we join forces with industry visionaries in order to maintain our science and technology leadership for the next generation.

**Dr. Stefan Oschmann**  
Chairman of the Executive Board & CEO  
Merck KGaA, Darmstadt, Germany





We admire entrepreneurs for their ability to turn science, technology and groundbreaking ideas into a product vision that could improve patient's lives, disrupt industries or transform the way we live. We want to play our part in changing the world by provide these startups the exceptional support they need to make their vision a commercial success. We help our companies interface with our parent company, providing unique access to the broad expertise and infrastructure of a leading science and technology company.



**Jasper Bos**  
Senior Vice President and Managing Director M Ventures

# Our Fund

## Investment Focus:

Our primary focus is on the development of novel therapeutics and platforms. In our investments we look for unmet need and clinical impact, novel proprietary science and understanding of mechanism, management and board experience and capital efficiency in the program.

## Invest Globally:

We invest in North America, Europe, Israel and Asia/Pacific with approximately USD 800 million under management in committed capital and more than 40 portfolio companies. We continue our strategy of making larger focused investments and anticipate total investments up to USD 30 million per company over its life.

## Invest Across Healthcare Sector:

We make equity investments in Biotechnology/Biopharma life sciences companies. NVF is stage agnostic and engages in seed investments as well as later-stage investments. We typically lead or co-lead an investment and play an active role on company boards.

Total  
number of jobs created  
> 1000

Total  
dollars under management  
approximately \$800 million

Biotechnology/  
Biopharma

Click here

18  
Phase 1 and 2 clinical programs



WHAT WE DO

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NOVO SEEDS

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# IDENTIFYING, BUILDING AND INVESTING IN EXCEPTIONAL STARTUPS

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# What we do

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We identify, build and invest in innovative startup companies founded on strong science, with the ultimate goal of developing products that can transform patient treatment.

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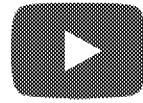
Novo Seeds



Watch later



Share



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STRATEGY

## From startup to exit

Collaborating with outstanding researchers, academic institutions, entrepreneurs and leaders in the biotech and pharma industry, we provide capital, network and know-how to transform promising life-science discoveries into successful biotech startups.

With this platform, we strive to be the preferred early-stage investor and partner of the European life science industry.

Covering the spectrum from early-stage discoveries to clinical-stage companies, we focus on two main areas:

- company creation and building biotech startups in the Nordic region;
- early-stage investments in promising biotech and medtech companies in the rest of Europe

WHAT WE DO

We aim to develop strong and competitive companies that we finance all the way to a commercial exit.

In 2018, we made six investments ranging from EUR 250,000 to EUR 12.5 million in new companies, and we currently have 25 active portfolio companies. In the coming years, we will continue to increase our investments activities in both the Nordics and other parts of Europe.

## COMPANY CREATION

# Seeding great ideas

Through our hands-on approach, we ensure that promising projects and startup companies have the optimal conditions for success.

*READ THE INTERVIEW*

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*Novo Seeds*

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Acesion Pharma

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Afyx

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AMRA

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Antag Therapeutics

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Avilex Pharma

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BioPhero

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Biosyntia

CAMEL-IDS

CorWave

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Entasis Therapeutics

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Forendo Pharma

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Galecto Biotech

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HepaRegeniX

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Hoba Therapeutics

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Inthera Bioscience

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IO Biotech

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Lysogene

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Macrophage pharma

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MinervaX

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NMD Pharma

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NorthSea Therapeutics

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Polyphor

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Procarta Biosystems

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Reapplix

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Syndesi Therapeutics

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KEY FIGURES

25

current portfolio companies.

2000

projects and companies reviewed since 2007.

4

exits since 2007.

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**Novo Holdings A/S**

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2900 Hellerup

Denmark

+45 3527 6500

CVR# 24257630

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IDENTIFYING, BUILDING AND INVESTING IN  
EXCEPTIONAL STARTUPS

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## NOVO VENTURES

# PRIVATE AND PUBLIC VENTURE INVESTING IN EUROPE AND THE US

2900 Hellerup  
Denmark  
+45 3527 6500  
ventures@novo.dk

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San Francisco

Address:

**Novo Ventures (US) Inc.\***

501 2nd Street, Suite 300

San Francisco, CA 94107

USA

+1 (415) 552-6686

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**Novo Ventures (US) Inc.\***  
200 Clarendon Street, Floor 45

Boston, MA 02116  
USA

*\*Novo Ventures (US) Inc. is a separate legal entity that provides certain consultancy services to Novo Holdings A/S, mainly within the areas of identifying, analysing and negotiating various investment opportunities among life science and biotech companies in the US as well as certain follow-up activities related thereto, such as board memberships, financial control and reporting efforts.*

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**NOVO VENTURES**

## What we do

We are a life science venture capital investor, delivering knowledge, network, and capital to companies.

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## STRATEGY

## Our approach to venture investments

We strive to invest in companies that develop innovative drugs, medical devices and diagnostics that can potentially improve the health and welfare of people around the world.

We focus on generating and realizing strong financial returns from our portfolio of venture companies. We invest in both private and public companies from an open evergreen fund with Novo Holdings as the only investor. This funding structure enables us to assume a long-term perspective.

With people on the ground in Copenhagen, London, San Francisco and Boston, we are well positioned in the major global life science hubs and can quickly respond to new and exciting investment opportunities wherever they emerge.

We primarily invest in biotechnology and medical technology. Within biotech we primarily invest in companies with clinical stage compounds. In medtech, we invest in commercial stage companies.

We work actively with the companies we invest in by serving on the Boards of Directors. Companies can also draw on our extensive network, as well as our commercial and scientific expertise within the life sciences.

Over the past ten years, Novo Ventures has invested DKK 10 billion in 146 companies and successfully exited 52 companies – primarily through divestitures to large pharmaceutical and medical device companies, and through IPOs.

In the years to come, we will continue to grow the amount we invest in both private and public companies.

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## INVESTMENT TIMELINE



*Novo Ventures*  
September 2018

# Morphic Therapeutics

*LEARN MORE*

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## NOVO VENTURES INVESTMENT PORTFOLIO

Aligos

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Anokion

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Arcellix

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Avalyn

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Bolt Biotherapeutics

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Cianna Medical

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Cirius

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Entasis Therapeutics

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Epsilon-3 Bio

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F2G Limited

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Galera Therapeutics

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Inozyme

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Inventiva

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Karus Therapeutics

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MDLIVE

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Milestone Pharmaceuticals

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Minerva Surgical

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Morphic Therapeutics

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Nkarta

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Outpost Medicine

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PanOptica

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Reviral

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Rgenix

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SI-BONE

<https://www.novoholdings.dk/investments/ventures/>

Spruce Biosciences

Stargazer

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Tarveda Therapeutics

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Unchained Labs

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Unum Therapeutics

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Vantia Therapeutics

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Verona Pharma

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Viewpoint

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**RELATED STORIES**

# Key figures

Over the past 10 years

€ 1.6 bn

invested.

146

investments.

52

successful exits.

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## NEWS

PARTNERS / Pfizer Ventures

# PFIZER VENTURES

Pfizer Ventures (PV), the venture capital arm of Pfizer Inc., was founded in 2004 and invests for return in areas of current or future strategic interest to Pfizer. PV seeks to remain at the forefront of life science advances, looking to identify and invest in emerging companies that are developing transformative medicines and technologies that have the potential to enter the pipeline and shape the future of our industry.

## OVERVIEW OF OPERATIONS

With a \$600M capital commitment from Pfizer for private investments in 2018, PV invests in private companies at all stages of development, with a strong focus on early stage opportunities. Other investments, including start-ups and spinouts, will also be considered. We actively work with our current portfolio companies throughout their growth cycles, contributing strategic guidance in addition to our capital and providing access to internal Pfizer expertise, whenever appropriate. While primarily U.S. focused, international investments may represent up to 20% of the portfolio. We have the ability to lead or join a syndicate of investors and will seek board representation commensurate with our investment.

## INVESTMENT STRATEGY

- Primarily focused on potentially transformative therapeutics, with an emphasis on Pfizer's core therapeutic areas (Inflammation & Immunology, Internal Medicine, Oncology, Rare Disease and Vaccines).
- Focus also includes neuroscience investments, following Pfizer's decision to continue advancing research in this critical area of unmet medical need through a venture capital strategy.
- Will also consider platform technologies, diagnostics, drug delivery, pharmaceutical services and other technologies that have the potential to transform drug discovery and development.

## KEY POINTS

DISCOVERY TO PRE-CANDIDATE	+
CANDIDATE THROUGH COMMERCIALIZATION	+
CONSUMER HEALTHCARE	
PFIZER VENTURES	—
Our portfolio	



## RECENT INVESTMENTS



VIEW OUR FULL PORTFOLIO

OUR TEAM LOOKS FORWARD TO

- Active investor, working with management to develop product strategy and build shareholder value.
- Bring Pfizer pedigree and perspective to our portfolio companies, with the potential to utilize the network and expertise of Pfizer.
- Streamlined approval process for investment decisions.
- Potential for Pfizer business development relationship whenever appropriate.

### Focus

- Emphasis primarily on therapeutics
- Platforms, tools and technologies with potential to transform drug discovery and development also c

### Geography

- U.S. focused
- Approximately 20% of investments may be outside U.S.

### Investment Type

- Direct investing
- All stages possible, with focus on early stage

### Returns

- Strategic and financial
- Measured over long term

### Funding

- \$600M capital commitment from Pfizer
- Up to \$10M in first investment; reserved allocation for follow-on investments

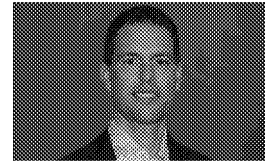
### Syndication

- Invest as member of a syndicate - lead where appropriate
- Syndicate member located near company critical

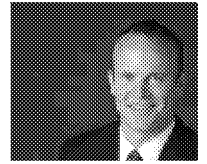
### Collaboration

- Potential for business relationship with

## WORKING WITH YOU



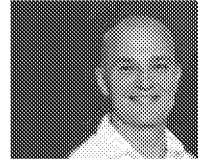
MICHAEL BARAN, MBA,  
PH.D.



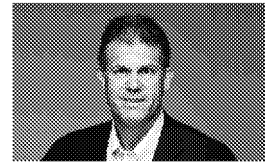
BILL BURKOTH, MBA



BARBARA DALTON, PH.D.



LASZLO KISS, PH.D.



CHRISTOPHER O'DONNELL,  
PH.D.



DENIS PATRICK, PH.D.



NIKOLA TRBOVIC, PH.D.



RANA AL-HALLAQ, PH.D.

Pfizer considered in investment criteria

- Can be transacted in parallel with investment or explored in the future

### **Influence in Development**

- Contribute capital and industry experience to help guide development and company growth
- Scientific advisory board participation when appropriate

### **Control**

- Minority ownership
- Board seats where appropriate

### **Deal Structure**

- Traditional VC investment - circumstances determine
- Product rights not required

## **OUR TEAM IS LOOKING FORWARD TO WORKING WITH YOU**

SEE PFIZER VENTURES CONTACT LIST

### **RELATED ARTICLES**

OUR PURPOSE





*Roche Venture Fund*  
*Connecting innovation to value*

## About us

We are the corporate venture fund of Roche, a global leader in bringing medicines and in vitro diagnostics to the benefit of patients.

We make investments in life science companies aiming to create value by fostering innovation, guiding successful businesses and generating financial return to Roche.

Our commitment to investments is not just about funding - we provide our team's expertise and the promise of long term vision to drive

## Mission

 *The Roche Venture Fund invests to develop commercially successful innovative life science companies.*

## Fast facts

- ◆ A CHF 500M evergreen fund
- ◆ Invest in life science companies in both pharmaceuticals and diagnostics
- ◆ Focus on financial returns
- ◆ Active involvement

## News

24 July 2019

**Freenome Closes \$160 Million Series B Financing to Advance Its Multiomics Blood Testing Platform for Early Cancer Detection**

 more

12 June 2019

**Purigen Biosystems Raises \$26.4 Million Series B Financing to Accelerate Commercialization of Automated Sample Preparation Platform**

 more

22 May 2019

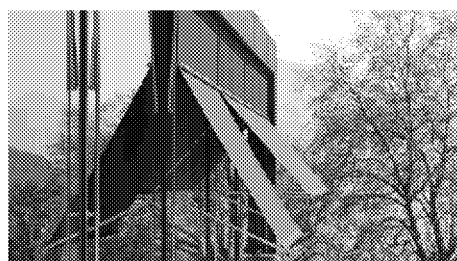
**IDEAYA Announces Pricing of Initial Public Offering**

 more

our shared success together.

↓ **download our flyer**

## *Investing*



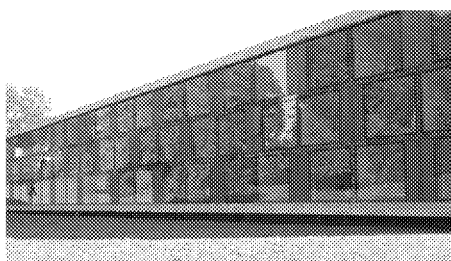
Our dedicated team is self contained with a mandate for independent decision making on new and existing investments.

➤ more

within portfolio companies

- ◆ Team located in Basel, Switzerland and South San Francisco, USA

## *Portfolio*



Our current portfolio includes more than 30 companies. We seek to add value to our companies and create highly valuable business enterprises.

➤ more

25 March 2019

Arch Oncology  
Raises \$50 Million  
Series B Financing  
📄 more

## *Team*



Our team based in Basel, Switzerland and South San Francisco, USA.

➤ more

## OVERVIEW

Sanofi Ventures is the corporate venture capital arm of Sanofi. We have the ability to seed and to lead financings in early-stage companies with innovative ideas and transformative new products and technologies that are of strategic interest to Sanofi. Among these areas are rare diseases, oncology, immunology and inflammation, vaccines, potential cures in other core areas of Sanofi's business footprint, and digital health solutions.

## SITE MAP

[ABOUT \(../ABOUT-US/OVERVIEW.PHP\)](#)

[TEAM \(../TEAM/TEAM.PHP\)](#)

[PORTFOLIO \(../PORTFOLIO/PORTFOLIO.PHP\)](#)

[NEWS \(../NEWS/NEWS.PHP\)](#)

## USEFUL LINKS

[SANOFI WEBSITE](#)

([HTTP://WWW.SANOVI.US/L/US/EN/INDEX.JSP](http://www.sanofi.us/l/us/en/index.jsp))

[SANOFI PARTNERS](#)

([HTTPS://WWW.SANOVI.COM/EN/SCIENCE-AND-INNOVATION/PARTNERING](https://www.sanofi.com/en/science-and-innovation/partnering))

[CONTACT \(../CONTACT/CONTACT.PHP\)](#)

[APPLY FOR FUNDING \(../CONTACT/CONTACT.PHP\)](#)

[LEGAL NOTICE \(../HELP/LEGAL-NOTICE.PHP\)](#)

CONTACT

SHARE

[LOCATIONS \(../CONTACT/CONTACT.PHP\)](#)



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SANOVI VENTURES © 2019



**CONNECTED**  
Integral part of global biotech ecosystem

## Bringing pharma rigor to biotech creativity and innovation

SR One is a leading global biotech venture capital firm founded in 1985 by GlaxoSmithKline (GSK). We back brilliant teams to develop transformative medicines, from lab bench to patient bedside. We take a hands-on approach to leverage our portfolio companies' drug discovery experience, our extensive key opinion leader and entrepreneur network and GSK's scientific, product development and commercial insights

## TEAM





## WHAT WE DO

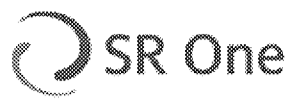
Principia Biopharma Raises \$122 million in IPO

[Read full article](#)



## CASE STUDIES





# PORTFOLIO

Geography ▼

Status ▼

Stage ▼


Reset All


[SEE MORE >](#)


# TRENDING

2019 2018 2017 2016 2015

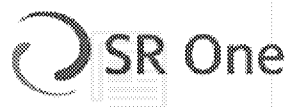
 Pandion Therapeutics Appoints Rahul Kakkar, MD, as Chief Executive Officer  
07/16/2019 [READ MORE...](#)

 Nimbus Therapeutics and Celgene Expand All-in-One Immunotherapy in Oncology  
07/08/2019

 Bicycle Therapeutics Announces Positive Topline Results from Oxurion's Phase I Trial Using a Novel Bicycle-based Plasma Kallikrein Inhibitor for the Treatment of Diabetic Macular Edema  
06/30/2019 [READ MORE...](#)

 Morpheic Announces Pricing of Upsized Initial Public Offering  
06/26/2019





09/20/2019



09/20/2019



1 of 37



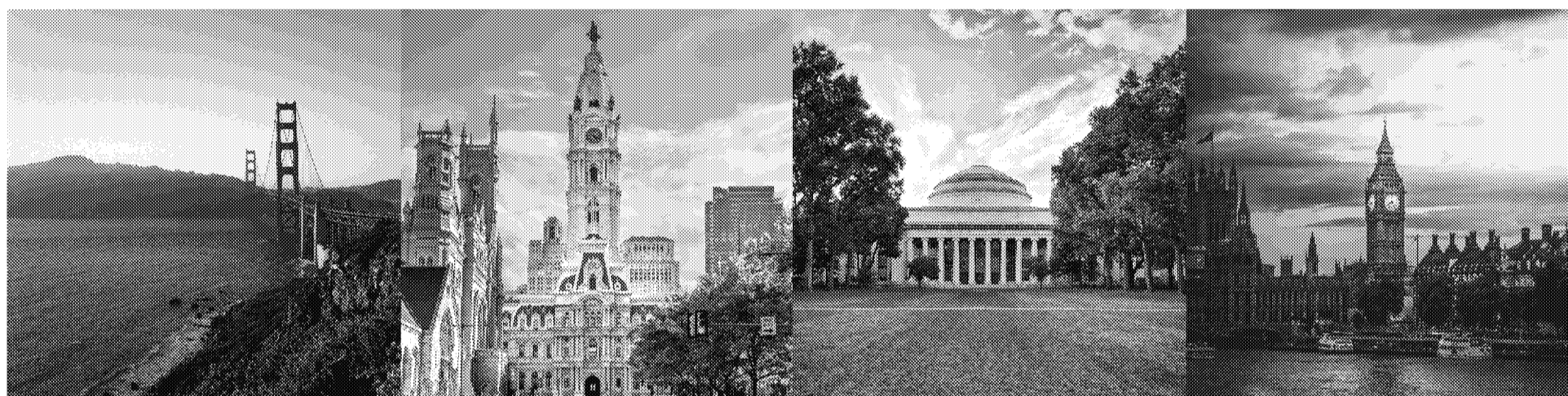
# CONTACT

SAN FRANCISCO, CA

PHILADELPHIA, PA

CAMBRIDGE, MA

LONDON, U.K.



This website and the contact information contained therein is not intended for reporting adverse events. If you have a question about a GSK product or want to report a side effect, please contact the [GSK Response Center](#).

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TAKEDA VENTURES, INC.



Contact Us | Worldwide  
Text Size | Reduce size | Increase size

## Takeda Ventures, Inc.

Takeda Ventures, Inc. (TVI) is the corporate venture arm of Takeda Pharmaceutical Company Limited (TPC) a world-class pharmaceutical company and the largest in Japan. TVI (formerly Takeda Research Investment, Inc.), was founded in 2001 with the vision to extend Takeda's reach into the Global scientific community and forge strategic relationships that complement and expand internal R&D capabilities. The change in name to Takeda Ventures, Inc. in 2011 reflects an intention to further leverage TVI's venture networks to engage with new scientific and business avenues for Takeda, using strategic venturing to enable staged-entry into new spaces in a fully-informed manner. Our aim to encourage and support therapeutic innovation in the biopharmaceutical sector, as well as academic centers of excellence, through early stage capital investment and the provision of access to the resources of a multinational pharmaceutical company.

### TVI Team

- **Michael Martin, Ph.D.**  
*Head of Takeda Ventures*
- **David A. Shaywitz, MD, Ph.D.**  
*Senior Partner*
- **Robbie Woodman, Ph.D.**  
*Senior Partner*
- **Sarah L. Cole, Ph.D.**  
*Partner*
- **Jayson Punwani, Ph.D.**  
*Partner*
- **Yoko Sugimoto**  
*Executive Administrative Assistant*

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Company Overview

GILEAD SCIENCES, INC. (NASDAQ Global Select Market: GILD)

333 LAKESIDE DR, FOSTER CITY, California - CA 94404, UNITED STATES

+1 650 574-3000

http://www.gilead.com

Sector (ICB)

Subsector (ICB)

CUSIP 375556103

SEDOL 2369174

SIC Code 2836

Auditor

Employees 11,000

Ernst & Young  
Fiscal Year End: 12/31/18

Financial Summary				
	Last Twelve Months as of 06/30/19	12/31/18 (A)	12/31/19 (E)	12/31/20 (E)
<b>Sales (MM)</b>	22,357	22,127	22,294	22,525
Growth	(3.6)	(15.2)	0.8	1.0
<b>Gross Profit (MM)</b>	17,744	17,274	-	-
Margin	79.4	78.1	86.7	86.0
<b>EBITDA (MM)</b>	10,886	10,305	13,083	12,387
Margin	48.7	46.6	58.7	55.0
<b>EBIT (MM)</b>	9,463	8,876	11,591	11,229
Margin	42.3	40.1	52.0	49.9
<b>Net Income (MM)</b>	5,955	5,459	8,918	8,758
Margin	26.6	24.7	40.0	38.9
<b>EPS</b>	4.64	4.15	7.01	6.97
Growth	(20.6)	(45.9)	68.9	(0.6)
<b>Free Cash Flow</b>	5,424	5,444	-	-

Currency: USD Source: Worldscope, IBES

**Business Description**

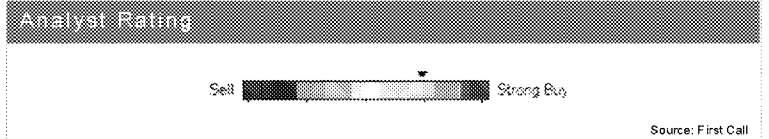
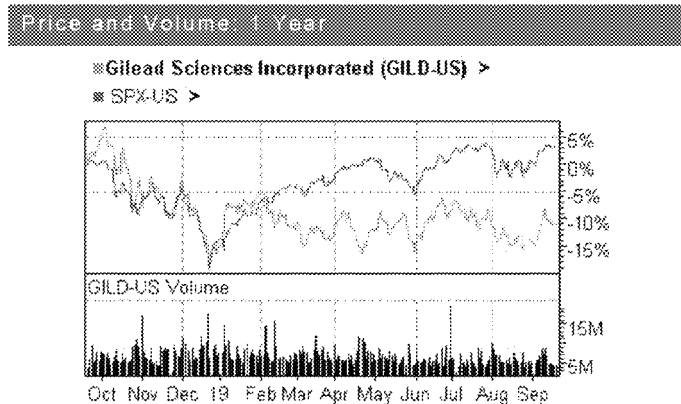
Gilead Sciences, Inc. is a research-based biopharmaceutical company that discovers, develops and commercializes medicines in areas of unmet medical need. The Company's portfolio of products and pipeline of investigational drugs includes treatments for Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS), liver diseases, cancer, inflammatory and respiratory diseases and cardiovascular conditions. Its products for HIV/AIDS patients include Descovy, Odefsey, Genvoya, Stribild, Complera/Eviplera, Truvada, Emtriva, Tybost and Vitekta. Its products for patients with liver diseases include Vemlidy, Epclusa, Harvoni, Sovaldi, Viread and Hepsera. It offers Zydelig to patients with hematology/oncology diseases. Its products for patients with various cardiovascular diseases include Letairis, Ranexa and Lexiscan. Its products for various inflammation/respiratory diseases include Cayston and Tamiflu. It had operations in more than 30 countries, as of December 31, 2016.

Market Data			
<b>Price (03:34 PM*)</b>	66.57	<b>Change</b>	▲ 0.61(0.92%)
<b>Volume</b>	5,021,653	<b>52 Wk Range</b>	79.61 - 60.32
<b>Consolidated Market Cap**</b>	83,535 (MM)	<b>Dividend Yield</b>	0.00%
<b>1 Year Total Return</b>	-8.54%	<b>Beta (Historical)</b>	0.0
<b>Float as % of Shares Outstanding</b>	99%		

\*Time stamp based on security's exchange (US), USD \*\*Prices as of 09/19/19, USD

Key Ratios				
	Last Twelve Months as of 06/30/19 *	12/31/18 (A)	12/31/19 (E)	12/31/20 (E)
<b>Enterprise Value/Sales</b>	3.7	3.5	3.7	3.7
<b>Enterprise Value/EBITDA</b>	7.6	7.5	6.3	6.7
<b>Enterprise Value/EBIT</b>	8.7	8.7	7.1	7.3
<b>Total Debt/Enterprise Value</b>	0.3	0.4	-	-
<b>Total Debt/EBITDA</b>	2.4	2.7	2.0	2.1
<b>EBITDA/Interest Expense</b>	10.6	9.6	12.8	12.1
<b>EBITDA-Capital Expenditure/Interest Expense</b>	9.8	8.7	12.0	11.3
<b>EBIT/Interest Expense</b>	9.3	8.2	11.3	11.0
<b>Price/Earnings</b>	14.2	15.0	9.4	9.5
<b>PEG</b>	-	-	2.0	4.5
<b>Price/Sales</b>	3.7	3.6	3.7	3.7
<b>Price/Cash Flow</b>	9.1	8.8	12.0	8.7
<b>Price/Book Value</b>	3.7	3.7	3.6	3.4
<b>Return On Assets</b>	10.5	9.4	13.4	14.7
<b>Return On Equity</b>	26.9	26.1	53.2	35.9
<b>Return On Invested Capital</b>	25.5	12.3	-	-

\*EV and Price Multiples calculated using price as of 09/19/19 Source: Worldscope, IBES



### Current Long-Term Issuer Credit Ratings

Provider	Rating	Date	Outlook	Date
Moody's (Local)	A3	08/28/17	STA	08/28/17
S&P (Local)	A	01/13/16	STABLE	01/13/16
S&P (Foreign)	A	01/13/16	STABLE	01/13/16

### Historical Long-Term Issuer Credit Ratings

Rating History			Outlook History		
Date	Provider	Rating	Date	Provider	Outlook
08/28/17	Moody's (Local)	A3	08/28/17	Moody's (Local)	STA
01/13/16	S&P (Local)	A	01/13/16	S&P (Local)	STABLE
01/13/16	S&P (Foreign)	A	01/13/16	S&P (Foreign)	STABLE
03/23/11	S&P (Local)	A-	03/23/11	S&P (Local)	STABLE
03/23/11	S&P (Foreign)	A-	03/23/11	S&P (Foreign)	STABLE

### Capital Structure

<b>Consolidated Market Cap*</b>	83,535	<b>Total Shareholders Equity</b>	22,616
<b>- Cash and Short Term</b>	27,230	<b>Total Capital</b>	48,835
<b>+ Short Term Debt</b>	1,999	<b>Debt to Equity</b>	115.33
<b>+ Long Term Debt</b>	24,084	<b>Debt to Capital</b>	53.41
<b>+ Preferred Stock</b>	0		
<b>+ Minority Interest</b>	135		
<b>= Enterprise Value</b>	<b>82,523</b>		

\*Price as of 09/19/19, USD in millions Date of filing 06/30/19

### Directors

Name	Title
Daniel O'Day	Chairman of the Board, Chief Executive Officer
John F. Cogan	Lead Independent Director
Jacqueline K. Barton	Independent Director
Kelly A. Kramer	Independent Director
Kevin E. Lofton	Independent Director
Harish M. Manwani	Independent Director
Richard James Whitley	Independent Director
Gayle E. Wilson	Independent Director
Per Wold-Olsen	Independent Director

### Officers

Name	Title
Daniel O'Day	Chairman of the Board, Chief Executive Officer
Robin L. Washington	Chief Financial Officer, Executive Vice President
Brett Alan Pletcher	Executive Vice President, Chief Compliance Officer, General Counsel
Jyoti Mehra	Executive Vice President of Human Resources
Andrew Dickinson	Executive Vice President - Corporate Development and Strategy
Gregg H. Alton	Chief Patient Officer
Johanna Mercier	Chief Commercial Officer

### Ownership Breakdown

Investor Type	Investors	% Shares Outstanding
Investment Managers	2,730	81.11
Brokerage Firms	56	2.11
Strategic Entities	27	0.61
Holding Companies	3	0.00
Corporations	8	0.13
Individuals	16	0.48
Government Agency	0	0.00
<b>Total - All Holders</b>	<b>2,813</b>	<b>83.83</b>

### Top 5 Shareholders

Investor Name	% Shares Outstanding	Current Position	Value (\$MM)	Position Date
The Vanguard Group, Inc.	8.06	102,062,449	6,895.34	06/30/19
Capital Research Global Investors	6.45	81,748,687	5,522.94	06/30/19
BlackRock Institutional Trust Company, N.A.	5.14	65,084,792	4,397.13	06/30/19
State Street Global Advisors (US)	4.54	57,484,173	3,883.63	06/30/19
Capital World Investors	1.72	21,725,581	1,467.78	06/30/19

### Upcoming Events

Event	Event Name	Date/Time
\$	Q3 2019 Gilead Sciences Inc Earnings Release	10/23/19 / NTS
\$	Q4 2019 Gilead Sciences Inc Earnings Release	02/03/20 / NTS
\$	Q1 2020 Gilead Sciences Inc Earnings Release	04/30/20 / NTS

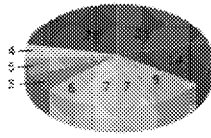
Time displayed in Eastern Daylight Time

### Past Events

Event	Event Name	Date/Time
📅	Dividend For GILD.OQ	09/12/19 / NTS
📅	Dividend For GILD34.SA	09/12/19 / NTS
📅	Gilead Sciences Inc at Morgan Stanley Healthcare Conference	09/10/19 / 10:00 AM

Time displayed in Eastern Daylight Time

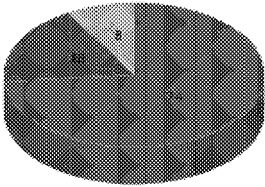
**Business Segment as of 12/31/18**



- Genvoys
- Truvada
- Epclusa
- Opdivo
- Descovy
- Harnoni
- Aripiprazole
- Biktarvy
- Letamovud
- Parvexa & Other

Revenues

**Geographic Segment as of 12/31/18**



- United States
- Europe
- Other International

Revenues

**Key Competitors**

Data Not Available.

**Mergers & Acquisitions**

Rank Date	Target Name	Acquirer Name	Ranking Value inc. Net Debt(mil)
08/28/19	HIFIBiO	Investor Group	67.0
07/14/19	Galapagos NV	Gilead Sciences Inc	1,100.0
05/22/19	Allovir Inc	Investor Group	120.0
12/20/18	Agenus Inc	Gilead Sciences Inc	30.0
07/19/18	Gadeta	Kite Pharma Inc	0.0

Source: Thomson Financial

**Equity Issues**

Data Not Available.

**Bonds Issues**

Issue Date	Issuer	Proceeds Amount + Overallotment Sold All Market(mil)	Issue Type	Description
09/14/17	Gilead Sciences Inc	999.7	Investment Grade Corporate	1.850% Global Notes due '19
09/14/17	Gilead Sciences Inc	750.0	Investment Grade Corporate	Global FRNs due '19
09/14/17	Gilead Sciences Inc	500.0	Investment Grade Corporate	Global FRNs due '19
09/15/16	Gilead Sciences Inc	1,737.5	Investment Grade Corporate	4.150% Global Notes due '47
09/15/16	Gilead Sciences Inc	1,249.7	Investment Grade Corporate	2.950% Global Notes due '27

**Loans Issues**

Close Date	Borrower	Tranche Amount	Loan Yield Type	Initial Spread
09/09/17	Gilead Sciences Inc	3,000.0	Investment Grade	LIBOR +87.500bps
09/08/17	Gilead Sciences Inc	2,500.0	Investment Grade	LIBOR +100.000bps
09/08/17	Gilead Sciences Inc	2,500.0	Investment Grade	LIBOR +125.000bps
09/08/17	Gilead Sciences Inc	1,000.0	Investment Grade	LIBOR +87.500bps
05/27/16	Gilead Sciences Inc	2,500.0	Investment Grade	LIBOR +100.000bps

**News**

Date	Headline	Source
09/11/19 07:15 AM	NASDAQ: GILD Investor Notice: Lawsuit by Consumers against Gilead Sciences, Inc. announced by Shareholders Foundation	ACW
09/10/19 06:23 PM	Hot Shot's Secret Introduces LX4 Lubricity Extreme	PrimeZone
09/09/19 02:10 PM	BUZZ-Direct rises on \$10 mln milestone payment from Gilead	Reuters
09/09/19 09:29 AM	DURECT Earns \$10 Million Milestone Payment for Further Development of a Long-Acting Injectable HIV investigational Product Utilizing DURECT's SABER® Technology	PR Newswire
09/09/19 07:53 AM	BRIEF-Gilead Sciences And The Elton John Aids Foundation Launch Radian Initiative	Reuters
09/09/19 07:34 AM	GILEAD SCIENCES AND THE ELTON JOHN AIDS FOUNDATION LAUNCH RADIAN INITIATIVE TO ADDRESS HIV IN	Reuters

Time displayed in Eastern Daylight Time

Date	Headline	Source
09/09/19 07:30 AM	EASTERN EUROPE AND CENTRAL ASIA (EECA) Gilead Sciences and the Elton John AIDS Foundation Launch RADIANT Initiative to Address HIV in Eastern Europe and Central Asia (EECA)	Business Wire
09/05/19 08:00 AM	Lygos Upgrades Technology Capabilities to Accelerate Microbial Cell Factory Development Timelines	Business Wire
09/02/19 02:02 AM	BRIEF-Japan Tobacco Inc - Transfer Date Of Marketing Approvals Of 6 Anti-Hiv Drugs To Gilead Sciences Kk Set For Dec. 1	Reuters
09/02/19 02:02 AM	JAPAN TOBACCO INC - TRANSFER DATE OF MARKETING APPROVALS OF 6 ANTI-HIV DRUGS TO GILEAD SCIENCES KK SET FOR DEC. 1	Reuters

Time displayed in Eastern Daylight Time

Embargoed Research		
Date	Title	Contributor
09/14/19	GILD: Forensic Stock Earnings & Valuation	New Constructs, LLC
09/13/19	Positioning into Year End: Thoughts on AMGN, GILD, VRTX, BIB, AMRN	Jefferies
09/12/19	Gilead Sciences, Inc.(GILD) Zacks Company Report	Zacks Equity Research
09/09/19	Video: "The Feedback Loop" - Ideas, New and Old, Edition: Biotech Sentiment; GILD, VRTX Upside Cases; NBIX Rx Analyses; ICPT NASH Pricing Setup; CNST, OVID Reward/Risk; Upcoming RBC Events	RBC Capital Markets
09/08/19	Gilead Sciences Inc - Cortellis Company Detailed Pipeline Report	Clarivate Analytics

Significant Developments			
Date	Headline	Topic	
08/28/19 03:08 PM	FDA Warns Patients, Health Care Professionals About Rare Instances Of Serious Liver Injury In Some Patients With Advanced Liver Disease	Products	Aug 28 (Reuters) - Abbvie Inc <ABBV.N>:FDA IN BRIEF: FDA WARNS PATIENTS AND HEALTH CARE PROFESSIONALS ABOUT RARE INSTANCES OF SERIOUS LIVER INJURY OR FAILURE WITH CERTAIN HEPATITIS C TREATMENTS IN SOME PATIENTS WITH ADVANCED LIVER DISEASE.FDA - GOT REPORTS THAT USE OF MAVYRET, ZEPATIER, VOSEVI FOR CHRONIC HEPATITIS C RESULTED IN RARE CASES OF WORSENING LIVER FUNCTION, LIVER FAILURE.FDA - HEALTH CARE PROFESSIONALS SHOULD CONTINUE TO PRESCRIBE MAVYRET, ZEPATIER OR VOSEVI AS INDICATED.FDA - HEALTH CARE PROFESSIONALS SHOULD DISCONTINUE USE OF MAVYRET, ZEPATIER OR VOSEVI IN PATIENTS WITH SIGNS AND SYMPTOMS OF WORSENING LIVER FUNCTION.
08/26/19 11:54 AM	Alberta Provides Access To Biktarvy For The Treatment Of HIV	Regulatory	Aug 26 (Reuters) - Gilead Sciences Inc <GILD.O>:ALBERTA PROVIDES ACCESS TO BIKTARVY® FOR THE TREATMENT OF HIV.GILEAD SCIENCES CANADA - EFFECTIVE AUG 22, PROVINCE OF ALBERTA WILL PROVIDE ELIGIBLE PATIENTS WITH ACCESS TO BIKTARVY TABLETS.
08/07/19 08:01 AM	Assembly Biosciences Announces Appointment Of John Mchutchison As President And Chief Executive Officer	Officer Changes	Aug 7 (Reuters) - Assembly Biosciences Inc <ASMB.O>:ASSEMBLY BIOSCIENCES ANNOUNCES APPOINTMENT OF JOHN MCHUTCHISON, AO, MD, AS PRESIDENT AND CHIEF EXECUTIVE OFFICER.ASSEMBLY BIOSCIENCES - JOHN MCHUTCHISON SUCCEEDS DEREK SMALL, CO-FOUNDER OF CO, WHO WILL CONTINUE AS A BOARD MEMBER AND SENIOR ADVISOR.ASSEMBLY BIOSCIENCES INC - MCHUTCHISON MOST RECENTLY SERVED AS CHIEF SCIENTIFIC OFFICER AND HEAD OF RESEARCH AND DEVELOPMENT AT GILEAD SCIENCES.
08/06/19 08:00 AM	Ontario Provides Access To Biktarvy For The Treatment Of HIV	Regulatory	Aug 6 (Reuters) - Gilead Sciences Inc <GILD.O>:ONTARIO PROVIDES ACCESS TO BIKTARVY® FOR THE TREATMENT OF HIV.GILEAD SCIENCES INC - EFFECTIVE JULY 31, ONTARIO DRUG BENEFIT PROGRAM WILL PROVIDE ELIGIBLE PATIENTS WITH ACCESS TO BIKTARVY.
07/30/19 04:02 PM	Gilead Sciences Declares Cash Dividend Of \$0.63 Per Share Of Common Stock For Q3	Dividends	July 30 (Reuters) - Gilead Sciences Inc <GILD.O>:GILEAD SCIENCES INC - DECLARED A CASH DIVIDEND OF \$0.63 PER SHARE OF COMMON STOCK FOR Q3.
07/30/19 04:01 PM	Gilead Sciences Posts Q2 EPS Of \$1.47	Other Pre-Announcement	July 30 (Reuters) - Gilead Sciences Inc <GILD.O>:GILEAD SCIENCES ANNOUNCES SECOND QUARTER 2019 FINANCIAL RESULTS.QTRLY PRODUCT SALES OF \$5.6 BILLION.QTRLY NON-GAAP DILUTED EPS OF \$1.82 PER SHARE.QTRLY DILUTED EPS OF \$1.47 PER SHARE.QTRLY NON-GAAP DILUTED EPS OF \$1.82 PER SHARE.REVISED FULL YEAR 2019 GUIDANCE - QTRLY TOTAL REVENUES WERE \$5.7 BILLION IN 2019 COMPARED TO \$5.6 BILLION IN 2018.TOTAL QUARTER SALES FOR Q2 OF 2019 WERE \$5.6 BILLION COMPARED TO \$5.5 BILLION FOR SAME PERIOD IN 2018.QTRLY TOTAL REVENUES \$5.685 BILLION VERSUS \$5.648 BILLION.QTRLY TOTAL REVENUES WERE \$5.7 BILLION IN 2019 COMPARED TO \$5.6 BILLION IN 2018.NOW SEES 2019 PRODUCT SALES\$21,600 MILLION - \$22,100 MILLION.HIV PRODUCT SALES WERE \$4.0 BILLION FOR Q2 OF 2019 COMPARED TO \$3.7 BILLION FOR SAME PERIOD IN 2018.CHRONIC HEPATITIS C VIRUS (HCV) PRODUCT SALES WERE \$842 MILLION FOR Q2 OF 2019 COMPARED TO \$1.0 BILLION FOR SAME PERIOD IN 2018.Q2 EARNINGS PER SHARE VIEW \$1.72. REVENUE VIEW \$5.53 BILLION -- REFINITIV IBES DATA.GILEAD - SEES 2019 DILUTED EPS IMPACT OF ACQUISITION-RELATED, UP-FRONT COLLABORATION & LICENSING, STOCK-BASED COMPENSATION & OTHER EXPENSES \$3.90 - \$4.00 PER SHARE.FY2019 REVENUE VIEW \$22.06 BILLION -- REFINITIV IBES DATA.
07/23/19 04:00 PM	Gilead Announces Latest Data In Ongoing HIV Cure Research Program	Products	July 23 (Reuters) - Gilead Sciences Inc <GILD.O>:GILEAD ANNOUNCES LATEST DATA IN ONGOING HIV CURE RESEARCH PROGRAM.GILEAD SCIENCES INC - NEW STUDIES EVALUATE AGENTS WITH POTENTIAL ROLE IN ELIMINATING HIV VIRAL RESERVOIR.GILEAD SCIENCES - PHASE 1 AND PRECLINICAL STUDY RESULTS DEMONSTRATE THAT TLR7 AGONISTS VESATOLIMOD (GS-9620) AND GS-986 CAN INDUCE IMMUNE ACTIVATION.GILEAD SCIENCES INC - GS-986 WAS WELL-TOLERATED WITH NORMAL COMPLETE BLOOD COUNT AND MAINTENANCE OF VIRAL SUPPRESSION.GILEAD SCIENCES INC - VESATOLIMOD WAS WELL-TOLERATED AT ALL DOSES, WITH NO DRUG-RELATED GRADE 3 OR 4 ADVERSE EVENTS, NO RELATED SERIOUS ADVERSE EVENTS.
07/19/19 08:30 AM	Gilead Sciences Licenses Respiratory, Herpes Antiviral Research Programs From Novartis	Strategic Combinations, Mergers / Acquisitions	July 19 (Reuters) - Gilead Sciences Inc <GILD.O>:GILEAD SCIENCES LICENSES RESPIRATORY AND HERPES ANTIVIRAL RESEARCH PROGRAMS FROM NOVARTIS.GILEAD SCIENCES INC - GILEAD WILL ACQUIRE EXCLUSIVE GLOBAL RIGHTS TO DEVELOP AND COMMERCIALIZE NOVEL SMALL MOLECULES AGAINST THREE UNDISCLOSED TARGETS.GILEAD-NOVARTIS TO RECEIVE UPFRONT PAYMENT & IS ELIGIBLE TO RECEIVE UP TO \$291 MILLION IN MILESTONE PAYMENTS UPON ACHIEVEMENT OF CERTAIN MILESTONES.GILEAD SCIENCES - NOVARTIS IS ALSO ELIGIBLE TO RECEIVE ROYALTIES ON ANNUAL NET SALES UNDER AGREEMENT.
07/17/19 08:52 AM	Gilead Sciences Under Transition Agreement With Mchutchison, Co To Pay \$1.1 Mln To Mchutchison	Officer Changes	July 17 (Reuters) - Gilead Sciences Inc <GILD.O>:GILEAD SCIENCES SAYS UNDER TRANSITION AGREEMENT WITH MCHUTCHISON, CO TO PAY MCHUTCHISON LUMP SUM PAYMENT OF \$1.1 MILLION - SEC FILING.

Time displayed in Eastern Daylight Time

Date	Headline	Topic
07/17/19 08:41 AM	Gilead Sciences says Gregg Alton Will Serve As Non-Executive Senior Advisor To Co Through End Of Year	Officer Changes
<p>July 17 (Reuters) - Gilead Sciences Inc &lt;GILD.O&gt;:GILEAD SCIENCES INC - GREGG ALTON WILL SERVE AS A NON-EXECUTIVE SENIOR ADVISOR TO COMPANY THROUGH END OF YEAR - SEC FILING.GILEAD SCIENCES INC - ALTON WILL RECEIVE A REDUCED BASE SALARY FOR HIS SERVICES.</p> <p>Time displayed in Eastern Daylight Time</p>		

**Premium Commentary**

Date	Headline	Source
07/15/19 02:00 PM	RTRS - Reuters Insider - Breakingviews TV: Gilead growth	Reuters
07/15/19 11:00 AM	BREAKINGVIEWS-Gilead finds shrewd \$5.1 bn salve to biotech risk	Reuters

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**Gilead Sciences, Inc. (GILD)**

NasdaqGS - NasdaqGS Real Time Price. Currency in USD

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**65.36** -0.37 (-0.56%)

As of 12:04PM EDT Market open

Buy

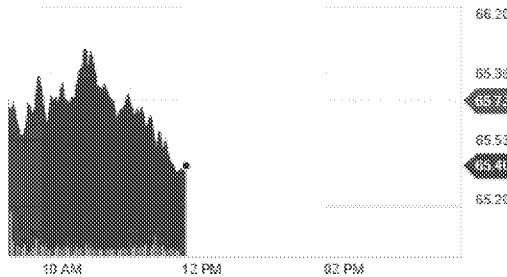
Sell

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1D 5D 1M 6M YTD 1Y 5Y Max

Full screen



Trade prices are not sourced from all markets.

Previous Close	65.73	Market Cap	82.763B
Open	65.99	Beta (3Y Monthly)	1.18
Bid	65.50 x 800	PE Ratio (TTM)	14.16
Ask	65.51 x 1800	EPS (TTM)	4.61
Day's Range	65.33 - 66.03	Earnings Date	Oct 23, 2019 - Oct 28, 2019
52 Week Range	60.32 - 79.61	Forward Dividend & Yield	2.52 (3.79%)
Volume	1,296,633	Ex-Dividend Date	2019-09-12
Avg. Volume	6,129,168	1y Target Est	80.45

**Analyst Recommendation** HOLD by Argus Research

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# Eli Lilly's Venture Arm Spins Out With \$200M Fund

*By Brian Gormley*

Aug 3, 2009 7:27 pm ET

Lilly Ventures, the venture capital arm of Eli Lilly & Co., has spun out from its parent in an effort to compensate its members more like a traditional venture firm.

As part of the spinout, completed May 1, Lilly Ventures secured \$200 million from its corporate parent to invest in new companies and to support its existing portfolio.

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NEWS

# AstraZeneca commmits an additional \$100 million to venture capital arm MedImmune Ventures

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MedImmune Ventures closes investment in Australian company, NeuProtect Pty Ltd...

AstraZeneca today announced that it has committed an additional \$100 million to its venture capital arm, MedImmune Ventures, increasing the total capital under management to \$400 million. MedImmune Ventures is an evergreen venture capital fund that focuses on equity investments in private companies in the areas of biopharmaceuticals, medical and healthcare technology.

*“With the additional funding from AstraZeneca, we look forward to expanding our investment activities globally and across therapy areas. We believe that in the current financial environment, there is a growing role for corporate venture capital funds such as MedImmune Ventures,”* said Ron Laufer, Senior Managing Director, MedImmune Ventures.

Simon Lowth, Chief Financial Officer, AstraZeneca said: *“We continue to support MedImmune Ventures strategy that combines commitment to advance science and technology in the life science industry while generating financial returns expected of venture capital funds.”*

Additionally, AstraZeneca also announced that MedImmune Ventures has co-led the second round of financing for NeuProtect Pty Ltd, an Australian life science company specialised in the reduction of cardiac remodelling post myocardial infarction. Ron Laufer said: *“We are delighted to co-lead with Starfish Ventures a new round of financing for NeuProtect Pty Ltd, our first investment in an Australian company.”*

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Simon Lowth

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

Filed on May 24, 2016

Published in the *Official Gazette* on November 8, 2016

GILEAD SCIENCES, INC.,

Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 48**



# Gilead Sciences Inc

## SEC CIK #0000882095

[SEC.report \(https://sec.report/\)](https://sec.report/) / [CIK \(/CIK/\)](#) / [Gilead Sciences Inc \(/CIK/0000882095\)](#)

**Gilead Sciences Inc** is a registered with the U.S. Security and Exchange Commission. This page includes all SEC filing details as well as a list of any documents (S-1, Prospectus, Current Reports, 8-K, 10K, Annual Reports) registered by Gilead Sciences Inc.

### Company Details

IRS Number (EIN)	943047598 ( EIN # 94-3047598)
Reporting File Number	000-19731
State of Incorporation	DELAWARE
Fiscal Year End	12-31
Date of Edgar Filing Update	2019-05-09
SIC	2836 [BIOLOGICAL PRODUCTS (NO DIAGNOSTIC SUBSTANCES)]
Business Address	333 LAKESIDE DR FOSTER CITY CA 94404
Business Phone	6505743000
Mailing Address	333 LAKESIDE DR FOSTER CITY CA 94404
Legal Entity Identifier	549300WTZWR07K8MNV44 ( <a href="https://lei.report/LEI/549300WTZWR07K8MNV44">https://lei.report/LEI/549300WTZWR07K8MNV44</a> ) [GILEAD SCIENCES, INC.]

### Documents Filed



([/CIK/0000882095.rss](#))

Form	Title	Date
4	Security Sale/Purchase Record (/Document/0001127602-19-027574/)	2019-08-29 16:42:13
SC 13D/A	Acquisition Statement [Amended] (/Document/0001104659-19-047927/)	2019-08-29 13:56:51
8-K	Current Report (/Document/0001410578-19-000939/)	2019-08-27 16:27:52
4	Security Sale/Purchase Record (/Document/0001127602-19-027052/)	2019-08-20 15:13:00
4	Security Sale/Purchase Record (/Document/0001127602-19-026569/)	2019-08-13 18:48:00
10-Q	Quarterly Report (/Document/0000882095-19-000020/)	2019-08-06 16:26:19
8-K	Current Report (/Document/0000882095-19-000017/)	2019-07-30 16:07:37
4	Security Sale/Purchase Record (/Document/0001127602-19-025274/)	2019-07-26 17:41:06
4	Security Sale/Purchase Record (/Document/0001127602-19-025217/)	2019-07-25 18:37:28
SC 13D	Acquisition Statement (/Document/0001104659-19-041473/)	2019-07-23 17:11:57
8-K	Current Report (/Document/0001104659-19-040899/)	2019-07-18 11:46:07
8-K	Current Report (/Document/0001104659-19-040673/)	2019-07-17 08:35:47
8-K	Current Report (/Document/0001104659-19-040672/)	2019-07-17 08:34:48
CT ORDER	Confidential treatment order (/Document/9999999997-19-006128/)	2019-07-12 15:43:59
CT ORDER	Confidential treatment order (/Document/9999999997-19-006127/)	2019-07-12 15:41:18
3	Security Ownership Statement (/Document/0001127602-19-024357/)	2019-07-10 17:11:45
4	Security Sale/Purchase Record (/Document/0001127602-19-023303/)	2019-07-01 19:48:02
4	Security Sale/Purchase Record (/Document/0001127602-19-023301/)	2019-07-01 19:43:05
4	Security Sale/Purchase Record (/Document/0001127602-19-023299/)	2019-07-01 19:40:09
4	Security Sale/Purchase Record (/Document/0001127602-19-022379/)	2019-06-20 16:52:50
CT ORDER	Confidential treatment order (/Document/9999999997-19-005379/)	2019-06-07 12:43:57
8-K	Current Report (/Document/0001104659-19-032209/)	2019-05-29 08:41:17
4	Security Sale/Purchase Record (/Document/0001127602-19-018210/)	2019-05-10 18:55:09
4	Security Sale/Purchase Record (/Document/0001127602-19-018192/)	2019-05-10 17:40:30
4	Security Sale/Purchase Record (/Document/0001127602-19-018190/)	2019-05-10 17:36:52
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4	Security Sale/Purchase Record (/Document/0001127602-19-018184/)	2019-05-10 17:30:51
4	Security Sale/Purchase Record (/Document/0001127602-19-018182/)	2019-05-10 17:27:42
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4	Security Sale/Purchase Record (/Document/0001127602-19-018178/)	2019-05-10 17:20:28
4	Security Sale/Purchase Record (/Document/0001127602-19-018175/)	2019-05-10 17:17:49
8-K	Current Report (/Document/0001104659-19-028215/)	2019-05-09 16:27:25

4	Security Sale/Purchase Record (/Document/0001127602-19-017792/)	2019-05-08 18:52:43
4	Security Sale/Purchase Record (/Document/0001127602-19-017789/)	2019-05-08 18:45:01
4	Security Sale/Purchase Record (/Document/0001127602-19-017787/)	2019-05-08 18:42:09
4	Security Sale/Purchase Record (/Document/0001127602-19-017785/)	2019-05-08 18:39:40
10-Q	Quarterly Report (/Document/0000882095-19-000014/)	2019-05-07 19:16:59
SC 13G	Ownership Acquisition Statement (/Document/0001104659-19-026802/)	2019-05-03 15:31:08
4	Security Sale/Purchase Record (/Document/0001127602-19-017100/)	2019-05-02 18:48:00
4	Security Sale/Purchase Record (/Document/0001127602-19-017097/)	2019-05-02 18:45:18
8-K	Current Report (/Document/0000882095-19-000011/)	2019-05-02 16:05:15
8-K	Current Report (/Document/0001104659-19-025972/)	2019-05-01 15:13:44
4	Security Sale/Purchase Record (/Document/0001127602-19-016247/)	2019-04-25 18:51:05
4	Security Sale/Purchase Record (/Document/0001127602-19-016245/)	2019-04-25 18:48:36
4	Security Sale/Purchase Record (/Document/0001127602-19-015848/)	2019-04-18 19:04:41
10-K/A	Annual Report [Amended] (/Document/0000882095-19-000008/)	2019-04-17 20:26:39
4	Security Sale/Purchase Record (/Document/0001127602-19-015335/)	2019-04-12 18:28:18
4	Security Sale/Purchase Record (/Document/0001127602-19-014815/)	2019-04-04 19:31:04
4	Security Sale/Purchase Record (/Document/0001127602-19-014356/)	2019-04-02 20:10:11
4	Security Sale/Purchase Record (/Document/0001127602-19-013911/)	2019-04-01 19:19:30

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(/CIK/0000882095/42#documents) | 43 (/CIK/0000882095/43#documents) | 44  
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(/CIK/0000882095/46#documents) | 47 (/CIK/0000882095/47#documents) |

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<b>GILEAD SCIENCES INC of DELAWARE</b>	0000882095 (/CIK/0000882095)
Gilead Capital Partners LP of DELAWARE (/CIK/0001732872)	0001732872 (/CIK/0001732872)
Gilead Capital LP of DELAWARE (/CIK/0001689368)	0001689368 (/CIK/0001689368)
GILEAD COMPANY (/CIK/0000752956)	0000752956 (/CIK/0000752956)

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

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Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 49**

# Gilead Sciences

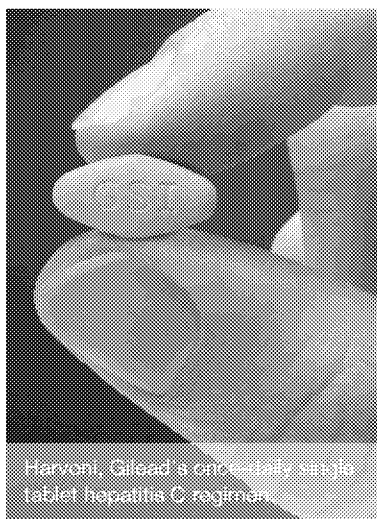
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## Company Overview

Gilead Sciences, Inc. is a research-based biopharmaceutical company that discovers, develops and commercializes innovative medicines in areas of unmet medical need. With each new discovery and investigational drug candidate, we seek to improve the care of patients living with life-threatening diseases around the world. Gilead's therapeutic areas of focus include HIV/AIDS, liver diseases, hematology and oncology, inflammatory and respiratory diseases and cardiovascular conditions.

Our portfolio of 24 marketed products contains a number of category firsts, including complete treatment regimens for HIV and chronic hepatitis C infection available in once-daily single pills. Gilead's portfolio includes Harvoni® (ledipasvir 90 mg/sofosbuvir 400 mg) for chronic hepatitis C, which is a complete antiviral treatment regimen in a single tablet that provides high cure rates and a shortened course of therapy for many patients.



### 30 Years of Growth

Since its founding in Foster City, California, in 1987, Gilead has become a leading biopharmaceutical company with a rapidly expanding product portfolio, a growing pipeline of investigational drugs and 8,900 employees in offices across six continents. Millions of people around the world are living healthier lives because of innovative therapies developed by Gilead.

Today, our research and development effort includes more than 400 ongoing and planned clinical studies evaluating compounds with the potential to become the next generation of effective medicines.

Gilead's 2016 annual revenues were \$30.4 billion and the company was ranked #2 in the 2016 *Barron's* 500 rankings. Gilead was also ranked #1 in Business Insider's list of the top companies to work for based on how meaningful employees find their work.

### Key Moments in Our History

- 1987** Gilead founded
- 1990** AmBisome® approved (Europe)
- 1991** Nucleotides in-licensed from IOCB Rega
- 1996** Vistide® approved
- 1999** Tamiflu® approved; NeXstar acquired
- 2001** Viread® approved
- 2002** Hepsera® approved
- 2003** Emtriva® approved; Triangle Pharmaceuticals acquired
- 2004** Truvada®, Macugen® approved
- 2006** Ranexa®, Atripla® approved; Corus, Paylo, Myogen acquired
- 2007** Letairis® approved; Cork, Ireland, manufacturing facility acquired from Nycomed
- 2008** Lexiscan®, Viread® for hepatitis B approved
- 2009** CV Therapeutics acquired
- 2010** Cayston® approved; CGI Pharmaceuticals acquired
- 2011** Complera® approved; Arresto BioSciences, Calistoga Pharmaceuticals acquired
- 2012** Truvada® for PrEP, Stribild® approved; Pharmasset acquired
- 2013** Sovaldi® approved; YM BioSciences acquired
- 2014** Zydelig®, Tybost®, Vitekta®, Harvoni® approved
- 2015** Genvoya® approved; EpiTherapeutics acquired
- 2016** Vemlidy®, Odefsey®, Descovy®, Epclusa® approved; Nimbus Apollo acquired

# Marketed Products

Following is a summary of Gilead's product portfolio. For safety information on these products see full Prescribing Information, including **BOXED WARNINGS** for certain products, on Gilead.com.

## HIV/AIDS



Atripla (efavirenz 600 mg/emtricitabine 200 mg/tenofovir disoproxil fumarate 300 mg) is indicated for use alone as a complete regimen or in combination with other antiretroviral agents for the treatment of HIV-1 infection in adult and pediatric patients 12 years of age and older. Atripla combines three medicines in a single pill: Viread (tenofovir disoproxil fumarate), Emtriva (emtricitabine), manufactured by Gilead, and Sustiva® (efavirenz), manufactured by Bristol-Myers Squibb Company. (First U.S. approval, 2006; EU approval, 2007. Bristol-Myers Squibb Company commercializes the product in the United States, Western Europe and Canada; Merck & Co., Inc. commercializes the product in the rest of the world.)



Complera (emtricitabine 200 mg/rilpivirine 25 mg/tenofovir disoproxil fumarate 300 mg) is indicated for use as a complete regimen for the treatment of HIV-1 infection in adult patients with no antiretroviral treatment history and with HIV-1 RNA less than or equal to 100,000 copies/mL at the start of therapy, and in certain virologically-suppressed (HIV-1 RNA <50 copies/mL) adult patients on a stable antiretroviral regimen at start of therapy in order to replace their current antiretroviral treatment regimen. For prescribing considerations, please see the full Prescribing Information for Complera. Complera combines three medicines in a single pill: Viread (tenofovir disoproxil fumarate), Emtriva (emtricitabine), manufactured by Gilead, and Edurant® (rilpivirine), manufactured by Janssen R&D Ireland. (First U.S. and EU approval, 2011; marketed as Eviplera® in Europe. Janssen R&D Ireland commercializes the product in select markets.)



Descovy (emtricitabine 200 mg/tenofovir alafenamide 25 mg) is indicated in combination with other antiretroviral agents for the treatment of HIV-1 infection in adults and pediatric patients 12 years of age and older. Descovy is not indicated for use as pre-exposure prophylaxis (PrEP) to reduce the risk of sexually acquired HIV-1 in adults at high risk. (U.S. and EU approval, 2016.)



Emtriva (emtricitabine) 200 mg is a once-daily oral nucleoside analog reverse transcriptase inhibitor (NRTI) used in combination with other antiretroviral agents for the treatment of HIV-1 infection. (U.S. and EU approval, 2003. Japan Tobacco Inc. commercializes the product in Japan.)



Genvoya (elvitegravir 150 mg/cobicistat 150 mg/emtricitabine 200 mg/tenofovir alafenamide 10 mg) is indicated as a complete regimen for the treatment of HIV-1 infection in adult and pediatric patients 12 years of age and older who are antiretroviral treatment-naïve or to replace the current antiretroviral regimen in those who are virologically-suppressed on a stable antiretroviral regimen for at least six months with no history of treatment failure and no known substitutions associated with resistance to the individual components of Genvoya. Genvoya combines four medicines in a single pill: Vitekta (elvitegravir), Tybost (cobicistat), Emtriva (emtricitabine) and tenofovir alafenamide. (U.S. and EU approval, 2015. Japan Tobacco Inc. will commercialize the product in Japan.)



Odefsey® (emtricitabine 200 mg/rilpivirine 25 mg/tenofovir alafenamide 25 mg) is indicated as a complete regimen for the treatment of HIV-1 infection in patients 12 years and older who have no antiretroviral (ARV) treatment history with HIV-1 RNA  $\leq$ 100,000 copies/mL; or to replace a stable ARV regimen in patients who are virologically-suppressed (HIV-1 RNA <50 copies/mL) for  $\geq$ 6 months with no history of treatment failure and no known resistance to any component of Odefsey. Odefsey combines three medicines in a single pill: Emtriva (emtricitabine), tenofovir alafenamide and Edurant (rilpivirine) (Janssen Sciences Ireland UC). Odefsey is the smallest pill of any single tablet regimen for the treatment of HIV.



Stribild (elvitegravir 150 mg/cobicistat 150 mg/emtricitabine 200 mg/tenofovir disoproxil fumarate 300 mg) is indicated as a complete regimen for the treatment of HIV-1 infection in adults who have no ARV treatment history or to replace the current ARV regimen in adults who are virologically-suppressed (HIV-1 RNA <50 copies/mL) on a stable ARV regimen for  $\geq$ 6 months with no history of treatment failure and no known resistance to any component of Stribild. Stribild combines four medicines in a single pill: Vitekta (elvitegravir), Tybost (cobicistat), Emtriva (emtricitabine) and Viread (tenofovir disoproxil fumarate). (U.S. approval, 2012; EU approval, 2013. Japan Tobacco Inc. commercializes the product in Japan.)

## HIV/AIDS (continued)



Truvada (emtricitabine 200 mg/tenofovir disoproxil fumarate 300 mg), a combination of Emtriva (emtricitabine) and Viread (tenofovir disoproxil fumarate), is indicated in combination with other antiretroviral agents for the treatment of HIV-1 infection in adult and pediatric patients 12 years of age and older. (U.S. approval, 2004; EU approval, 2005. Japan Tobacco Inc. commercializes the product in Japan.) Once-daily Truvada is also indicated in combination with safer sex practices for pre-exposure prophylaxis (PrEP) to reduce the risk of sexually acquired HIV-1 infection in adults at high risk. (U.S. approval, 2012; EU approval, 2016.) For prescribing considerations, please see the full Prescribing Information for Truvada.



Tybost (cobicistat) 150 mg is a CYP3A inhibitor indicated to increase systemic exposure of atazanavir or darunavir (once daily dosing regimen) in combination with other antiretroviral agents in the treatment of HIV-1 infection. (U.S. approval, 2014; EU approval, 2013.)



Viread (tenofovir disoproxil fumarate) 300 mg is a once-daily oral nucleotide reverse transcriptase inhibitor (NtRTI) indicated in combination with other antiretroviral agents for the treatment of HIV-1 infection in adult and pediatric patients 2 years of age and older. (First U.S. approval, 2001; first EU approval, 2002. Japan Tobacco Inc. commercializes the product in Japan.) Viread is also indicated for the treatment of chronic hepatitis B virus (HBV) infection in adults and pediatric patients 12 years of age and older. (U.S. and EU approval, 2008.)



Vitekta (elvitegravir) 85 mg and 150 mg is an integrase strand transfer inhibitor indicated as part of combination antiretroviral therapy for the treatment of HIV-1 infection in treatment-experienced adults. Vitekta should be coadministered with an HIV protease inhibitor and ritonavir and in combination with other antiretroviral drugs. (U.S. approval, 2014; EU approval, 2013.)

## Liver Diseases



Eplusa (sofosbuvir 400 mg/velpatasvir 100 mg) is indicated for the treatment of adult patients with chronic hepatitis C virus (HCV) genotype 1, 2, 3, 4, 5, or 6 infection without cirrhosis or with compensated cirrhosis and in combination with ribavirin for those with decompensated cirrhosis. Eplusa is the first once-daily single tablet regimen approved for the treatment of patients with HCV genotype 2 and 3, without the need for ribavirin. (U.S. and EU approval, 2016.)



Harvoni (ledipasvir 90 mg/sofosbuvir 400 mg) is indicated for the treatment of chronic hepatitis C (CHC) genotypes 1, 4, 5 and 6 infection in adults and in patients co-infected with HIV. Harvoni efficacy has been established in patients with HCV genotypes 1, 4, 5 and 6, with a treatment duration of 12 or 24 weeks depending on prior treatment history, cirrhosis status and baseline viral load. Eight weeks of treatment with Harvoni can be considered for treatment-naïve genotype 1 patients without cirrhosis who have baseline HCV viral loads below 6 million IU/mL. Harvoni combines the NS5A inhibitor ledipasvir with Sovaldi (sofosbuvir). (First U.S. and EU approval, 2014.)



Sovaldi (sofosbuvir) 400 mg is an HCV nucleotide analog NS5B polymerase inhibitor indicated for the treatment of CHC infection as a component of a combination antiviral treatment regimen. Sovaldi efficacy has been established in subjects with HCV genotype 1, 2, 3 or 4 infection, including those with hepatocellular carcinoma meeting Milan criteria (awaiting liver transplantation) and those with HCV/HIV-1 co-infection. (U.S. approval, 2013; EU approval, 2014.)



Hepsera (adefovir dipivoxil) 10 mg is indicated for the treatment of chronic HBV infection in patients 12 years of age and older. (U.S. approval, 2002; EU approval, 2003. GlaxoSmithKline Inc. commercializes the product in China, Japan and Saudi Arabia.)



Vemlidy (tenofovir alafenamide, TAF) 25mg is indicated for the treatment of chronic HBV infection in adults with compensated liver disease. (U.S. approval, 2016; EU approval, 2017.)



Viread (tenofovir disoproxil fumarate) 300 mg is indicated for the treatment of chronic HBV infection in adults and pediatric patients 12 years of age and older. (U.S. and EU approval, 2008. Japan Tobacco Inc. commercializes the product in Japan.) As previously mentioned, Viread is also indicated in combination with other antiretroviral agents for the treatment of HIV-1 infection in adults and pediatric patients 2 years of age and older.



## Hematology/Oncology

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Zydelig (idelalisib) 150 mg is indicated in combination with rituximab for the treatment of patients with relapsed chronic lymphocytic leukemia (CLL) for whom rituximab alone would be considered appropriate therapy due to other co-morbidities. Zydelig is also indicated for the treatment of relapsed follicular B-cell non-Hodgkin lymphoma (FL) in patients who have received at least two prior systemic therapies and for the treatment of relapsed small lymphocytic lymphoma (SLL) in patients who have received at least two prior systemic therapies. (U.S. and EU approval, 2014.)

## Cardiovascular

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Letairis (ambriksentan) 5 mg and 10 mg is indicated for the treatment of pulmonary arterial hypertension (PAH) (WHO Group 1) to improve exercise ability and delay clinical worsening; and in combination with tadalafil to reduce the risks of disease progression and hospitalization for worsening PAH and to improve exercise ability. Studies establishing effectiveness included predominantly patients with WHO Functional Class II-III symptoms and etiologies of idiopathic or heritable PAH (64%) or PAH associated with connective tissue diseases (32%). (First U.S. approval, 2007; EU approval, 2008. GlaxoSmithKline Inc. commercializes the product as Volbris® outside the United States.)



Lexiscan (regadenoson injection) 0.4 mg is a pharmacologic stress agent indicated for radionuclide myocardial perfusion imaging in patients unable to undergo adequate exercise stress. (U.S. approval, 2008; EU approval, 2010, as Rapiscan®. Astellas Pharma, Inc. commercializes the product in the United States and Canada. Rapiscan Pharma Solutions, Inc. commercializes the product in Europe and select other markets.)



Ranexa (ranolazine extended-release tablets) 500 mg and 1000 mg is indicated for the treatment of chronic angina. (First U.S. approval, 2006; EU approval, 2008. Menarini Group commercializes the product in Europe and select other markets.)

## Inflammation/Respiratory

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Cayston (aztreonam for inhalation solution) 75 mg/vial is indicated to improve respiratory symptoms in cystic fibrosis patients with *Pseudomonas aeruginosa*. Safety and effectiveness have not been established in pediatric patients below the age of 7 years, patients with FEV<sub>1</sub> <25% or >75% predicted, or patients colonized with *Burkholderia cepacia*. Cayston is administered with the Altera® Nebulizer System, a portable, drug-specific delivery device using the eFlow® Technology Platform developed by PARI Pharma GmbH. (EU approval, 2009; U.S. approval, 2010.)



Tamiflu (oseltamivir phosphate) 75 mg is an influenza neuraminidase inhibitor indicated for the treatment of uncomplicated acute illness due to influenza infection in patients 2 weeks of age and older who have been symptomatic for no more than 2 days. Tamiflu is also indicated for the prophylaxis of influenza in patients 1 year and older. (First U.S. approval, 1999; EU approval, 2002. Developed by Gilead, Tamiflu is commercialized worldwide by F. Hoffmann-La Roche Ltd.)

## Other

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AmBisome (amphotericin B) liposome for injection 50 mg/vial is indicated for empirical therapy for presumed fungal infection in febrile neutropenic patients; for the treatment of Cryptococcal Meningitis in HIV-infected patients; treatment of patients with Aspergillus, Candida, and/or Cryptococcus species refractory to amphotericin B deoxycholate, or in patients where renal impairment or unacceptable toxicity precludes the use of amphotericin B deoxycholate; and visceral leishmaniasis. For leishmaniasis, relapse rates were high in immunocompromised patients. (EU approval, 1990; U.S. approval, 1997. Astellas Pharma, Inc. commercializes the product in the United States and Canada. Dainippon Sumitomo Pharma Co., Ltd. commercializes the product in Japan.)

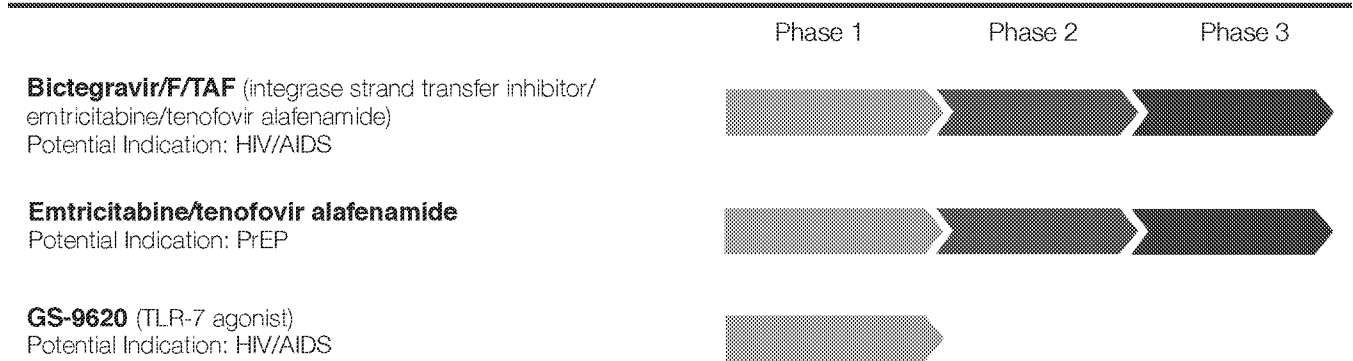


Macugen (pegaptanib sodium injection) 0.3 mg is indicated for the treatment of neovascular (wet) age-related macular degeneration. (U.S. approval, 2004; EU approval, 2006. The product is commercialized in the United States by Valeant Pharmaceuticals International, and outside the United States by Pfizer Inc.)

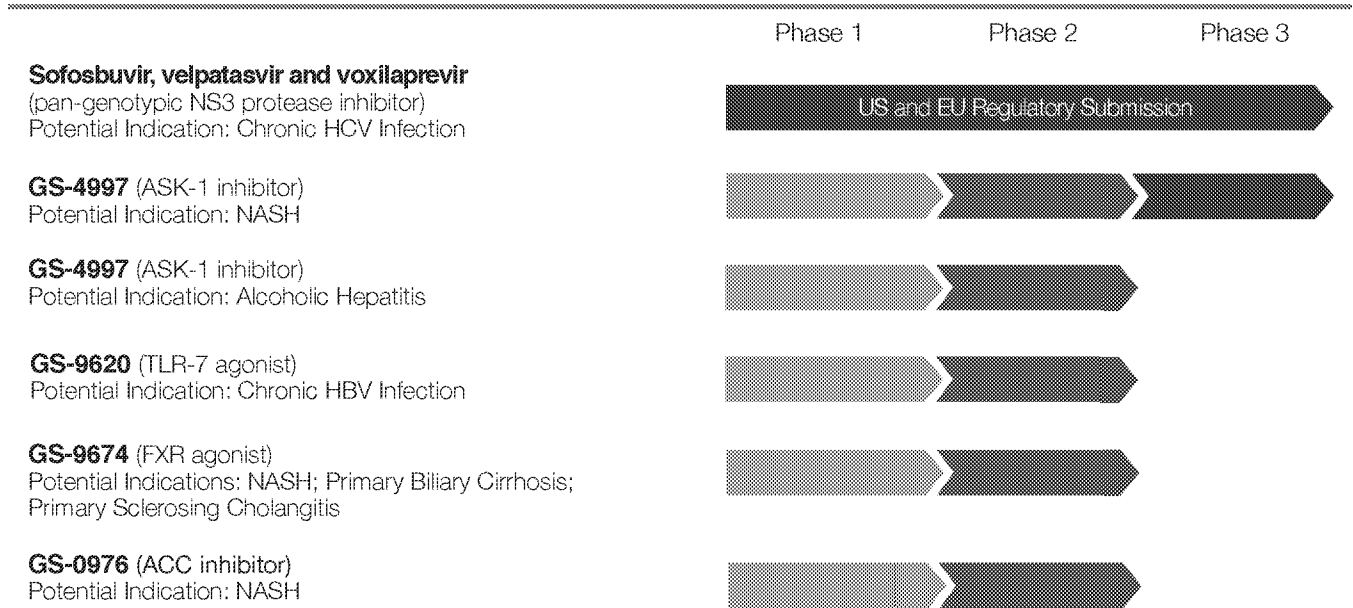
# Research

Gilead's research and development program identifies and evaluates investigational compounds that show potential to advance the treatment of life-threatening diseases in areas of unmet medical need. Safety and efficacy of the following compounds have not been established.

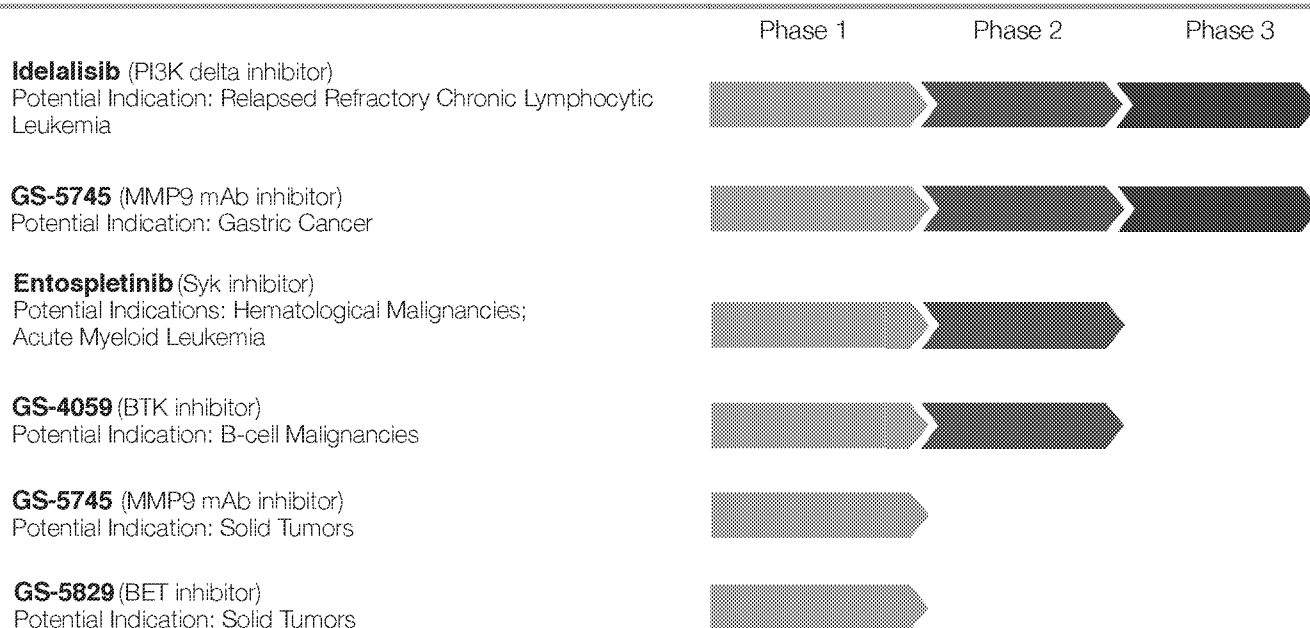
## HIV/AIDS



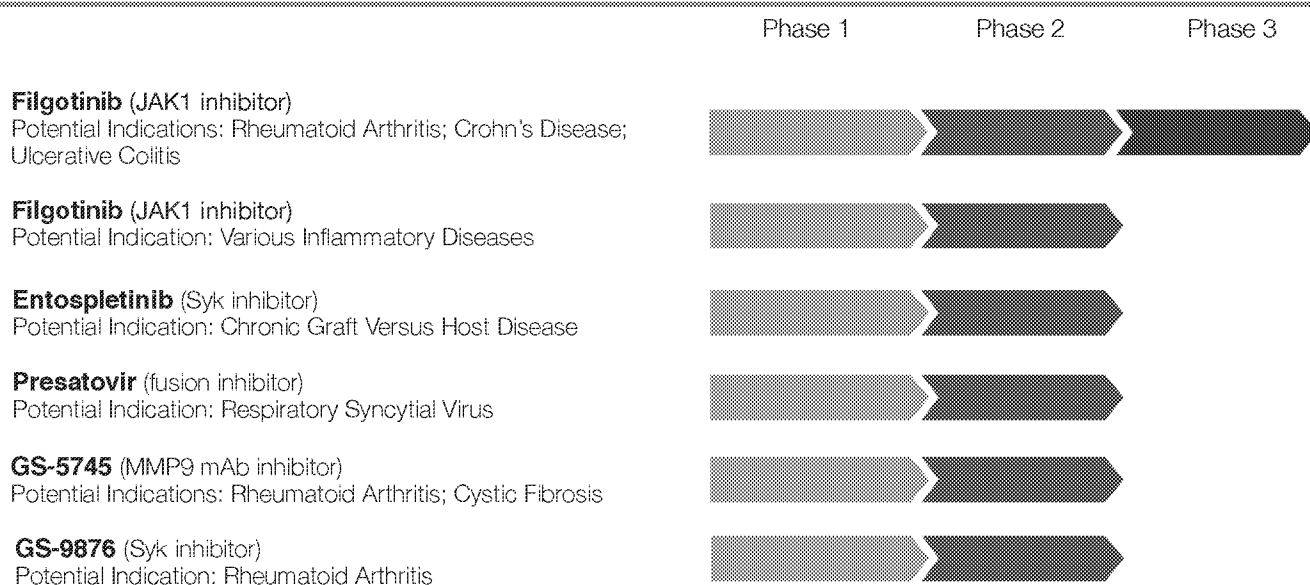
## Liver Diseases



## Hematology/Oncology



## Inflammation/Respiratory



## Other



# Responsibility

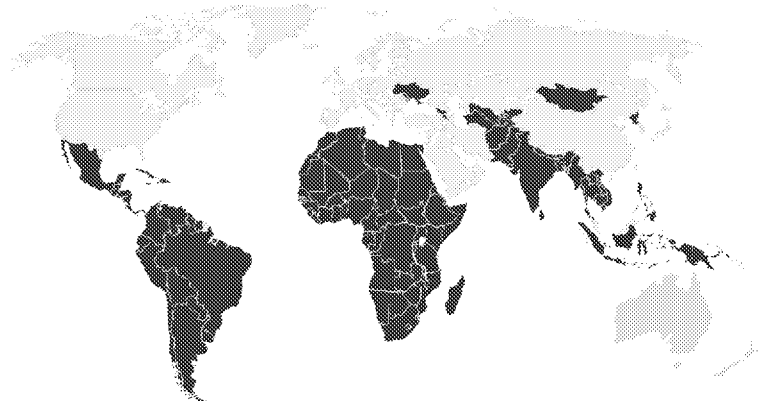
As Gilead grows as a company, we strive to play our part in expanding global access to our medications and to provide support to the communities in which we operate.

## Global Access Programs

Gilead recognizes the urgent need for access to our medications worldwide, particularly in developing countries where the AIDS epidemic and other health challenges are devastating communities. We operate access programs to provide our HIV and viral hepatitis medications at substantially reduced prices in 134 low- and middle-income countries. We also coordinate

and support educational activities for medical and clinical workers to ensure proper use of our medicines. As a result, approximately 10 million patients in the developing world are receiving Gilead's therapies for HIV/AIDS. Gilead is also working with regional partners and generic manufacturers to scale up distribution of discounted hepatitis C medicines in low- and middle-income countries, adopting a systematic country-by-country approach that initially prioritizes those with the highest disease burden.

Access Operations & Emerging Markets Geography



## Partnerships with Generic Manufacturers and Medicines Patent Pool

Gilead has signed non-exclusive licenses with multiple generic manufacturers, granting them rights to produce high-quality, low-cost generic versions of certain Gilead medicines for HIV/AIDS and chronic hepatitis B and C. Partners have also been granted rights to produce generic versions of new Gilead therapies once they receive U.S. regulatory approval. Gilead was the first pharmaceutical company to sign an agreement with the Medicines Patent Pool, which is working to increase global access to high-quality, low-cost antiretroviral therapy through the sharing of patents. The Patent Pool has been granted similar licensing terms for Gilead HIV medicines as our generic manufacturing partners.

## Fighting Visceral Leishmaniasis in the Developing World

We have worked closely with the World Health Organization (WHO) and non-governmental organizations since 2011 to provide AmBisome at a preferential price for the treatment of visceral leishmaniasis (VL) in resource-limited settings. VL is the second-largest parasitic killer in the world after malaria, responsible for approximately 40,000 deaths each year. In 2016, Gilead renewed its agreement with WHO, committing \$20 million in funding and drug donations over five years to expand access to diagnostics and treatment for VL.

## Patient Access in the United States

In the United States, Gilead has put in place comprehensive patient access programs, reflecting feedback from community groups and patient advocates, to help people who are uninsured or underinsured access our medicines. This includes providing our medicines to eligible patients at no charge and offering a co-pay coupon program for patients with private insurance, regardless of income.

## Screening, Diagnosis and Linkages to Care

Gilead is actively involved in several community partnerships that focus on expanding screening programs, encouraging patients to take an active role in their treatment and linking them to prompt, appropriate medical care. In 2010, Gilead launched the FOCUS Program, which partners with healthcare providers, government agencies and community organizations across the United States to develop replicable model programs to routinize HIV screening and linkage to care. Gilead is now supporting partner organizations to apply the FOCUS model to screening and linkage to care for hepatitis C, with the goal of identifying replicable programs that can be applied broadly. Gilead is also helping to strengthen community-level public health efforts to expand screening programs for hepatitis B. In the United States, this work focuses on Asian American communities, where hepatitis B hits the hardest and significant stigma and misconceptions about the disease persist.

## The Gilead Foundation

The Gilead Foundation, a non-profit organization established in 2005, seeks to improve the health and well-being of underserved communities in the United States and internationally. The Foundation's giving focuses on expanding access to HIV and hepatitis education, outreach, prevention and health services.

## Strength Through Partnership

Collaborations with partners in science, academia, business and local communities are central to our work. Partnerships enhance our ability to develop innovative medicines and deliver them to people as efficiently as possible.

# Leadership

The following individuals comprise Gilead's Senior Management Team. See Gilead.com for biographies and a listing of members of the company's Board of Directors.

- **John F. Milligan, PhD**  
President and Chief Executive Officer
- **John C. Martin, PhD**  
Executive Chairman
- **Gregg H. Alton**  
Executive Vice President, Commercial and Access Operations ALA, Corporate and Medical Affairs
- **Norbert W. Bischofberger, PhD**  
Executive Vice President, Research and Development and Chief Scientific Officer
- **Andrew Cheng, MD, PhD**  
Executive Vice President, Clinical Research and Development Operations
- **William A. Lee, PhD**  
Executive Vice President, Research
- **John McHutchison, MD**  
Executive Vice President, Clinical Research
- **Jim Meyers**  
Executive Vice President, Worldwide Commercial Operations
- **Brett Pletcher**  
Executive Vice President and General Counsel
- **Martin Silverstein, MD**  
Executive Vice President, Strategy
- **Robin L. Washington**  
Executive Vice President and Chief Financial Officer
- **Katie L. Watson**  
Executive Vice President, Human Resources
- **Taiyin Yang, PhD**  
Executive Vice President, Pharmaceutical Development and Manufacturing
- **Kevin Young CBE**  
Chief Operating Officer

## Growing Worldwide Footprint

We have operations in the following locations:

### North America

- Foster City, CA (Corporate Headquarters)
- Fremont, CA
- Oceanside, CA
- San Dimas, CA
- Branford, CT
- Miami, FL
- Seattle, WA
- Alberta, Canada
- Ontario, Canada
- Mexico City, Mexico

### South America

- Argentina
- Brazil

### Asia

- China
- Hong Kong
- India
- Japan
- Korea
- Singapore
- Taiwan

### Africa

- South Africa

### Australia

- Australia/New Zealand

### Europe

- Stockley Park, UK
- Cambridge, UK
- London, UK
- Austria
- Belgium
- Czech Republic
- Denmark
- Finland
- France
- Germany
- Greece
- Ireland
- Israel
- Italy
- Netherlands
- Norway
- Poland
- Portugal
- Russia
- Slovakia
- Spain
- Sweden
- Switzerland
- Turkey

### Middle East

- United Arab Emirates

## More Information

For more information about Gilead, its products or community involvement, please contact Gilead at +1 (650) 574-3000 or [public\\_affairs@gilead.com](mailto:public_affairs@gilead.com).

Follow Gilead on Twitter (@GileadSciences).

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

Filed on May 24, 2016

Published in the *Official Gazette* on November 8, 2016

GILEAD SCIENCES, INC.,

Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 50**

**FILED UNDER SEAL**

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BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

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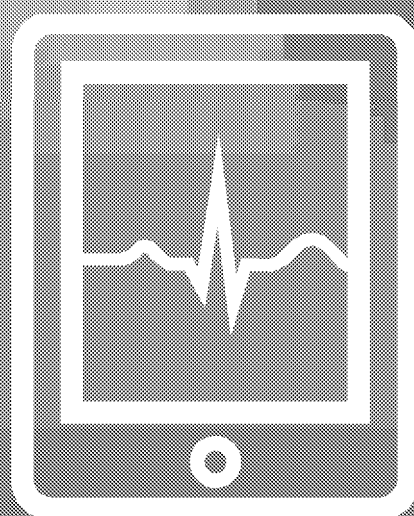
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**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 51**





## BIOPHARM INSIGHT

# Gilead Sciences, Inc. Company Report June 2019

### Report Overview

This report looks at data surrounding material catalysts expected to occur in the upcoming year for Gilead Sciences, Inc. along with additional details on this company and their drug pipeline.



## Sep 28, 2018: Actinium actively discussing partnerships for clinical development of new conditioning product for pairing with CAR-Ts, CEO says

Actinium Pharmaceuticals (NYSEAMERICAN:ATNM) is actively looking for development partners for its new lymphodepletion product, lomab-ACT, for use with CAR-T cell therapies, said CEO Sandesh Seth. The New York City-based company is pursuing partnerships imminently with either pharmaceutical companies or academic institutions developing CAR-T cell therapies, Seth said. The CEO added that partnerships could be developed both with US or international firms or institutions. Some companies have already expressed interest in partnerships, Seth said, declining to provide details on the nature of those discussions. Seth said lomab-ACT could be used in combination with any CAR-T therapy, independently of their target or indication. Gilead Sciences' (NASDAQ:GILD), Novartis' (NYSE:NOVN) and Celgene (NASDAQ:CELG) all have CAR-T assets with sales potential ranging from USD 991m to 2.5bn. Actinium has a market cap of USD 82m and has not disclosed partnering plans for lomab-ACT. CAR-T cell therapies currently use chemotherapy conditioning to deplete lymphocytes and create an adequate environment for CAR-T cells to thrive. Seth added that chemotherapy has been associated with increased risk of cytokine release syndrome (CRS) in CAR-T therapy and the risk of toxicity should be lower with lomab-ACT.

The lomab-ACT development was announced earlier this month at the CAR-TCR Summit in Boston. Seth said this is a second generation, lower dose product following lomab-B (apamistamab-I-131), Actinium's antibody-radio conjugate. Lomab-B is currently in a pivotal Phase III study for myeloablation prior to bone marrow transplant in acute myeloid leukemia (AML) patients over 55 (NCT02665065). The CEO said about 500 patients have already received lomab-B in doses 5 to 20 times higher than lomab-ACT, which suggests a good safety profile and a possibility of moving lomab-ACT directly into clinical development without the need for further preclinical tests. Lomab-B is still recruiting patients for its pivotal study and Seth said he expects top line results in 2H19. With an expected enrollment of 150 patients, the trial has already recruited 25 to 50% of the total number, Seth added. Since the company already has experience in manufacturing the product, it is ready to deliver lomab-ACT to a partner at any moment, Seth said. The CEO said that Actinium works with CROs in all clinical trials and is expecting to have a potential increase in the need for CROs in 2019, but at this moment cannot provide specific details.

by Mariana Lenharo in New York

## Top Drugs by 2017E &amp; 2022E Sales Projections (USDm)

Trade Name	2017E	Trade Name	2022E
Harvoni	4370	Biktarvy	6156
Genvoya	3674	Genvoya	3773
Epclusa	3510	ELM	2937
STI-A1014	3510	Odefsey	2230
Truvada	3134	Yescarta	1433
Atripla	1806	Epclusa	1073
ELM	1218	STI-A1014	985
Odefsey	1106	Vemlidy	651
Stribild	1053	Selonsertib	601.5
Viread	1046	Truvada	589
Complera	966	Harvoni	525
Sovaldi	964	Filgotinib	446
Letairis	887	Vosevi	392
Ranexa	717	Ambisome	383
Ambisome	366	Stribild	314
Vosevi	293	Complera	231
Zydelig	149	Atripla	201
Vemlidy	122	Zydelig	162
Yescarta	7	Letairis	75
		Ranexa	73
		Sovaldi	62.5
		Viread	61.5
		Cayston	57
		KITE-585	30
		GS-5745	16

## Licensing Agreements

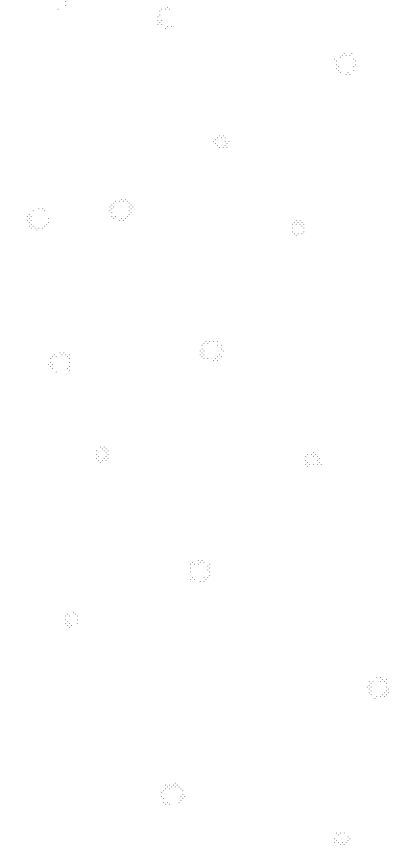
Date	Trade Name	Licensee(s)	Licensor	Description
05/08/2019		Gilead Sciences, Inc.	Goldfinch Biopharma Inc.	Gilead Sciences, Inc. (Nasdaq: GILD) and Goldfinch Bio, Inc., a biotechnology company focused on developing precision therapies for patients with kidney diseases, announced a strategic collaboration to discover, develop and commercialize a pipeline of innovative therapeutics for diabetic kidney disease (DKD) and certain orphan kidney diseases.
04/16/2019	Insitro Human Platform ; NASH Program	Gilead Sciences, Inc.	Insitro, Inc.	Gilead Sciences Inc. and insitro announced that the companies have entered into a strategic collaboration to discover and develop therapies for patients with nonalcoholic steatohepatitis (NASH).
01/06/2019	NASH Program	Gilead Sciences, Inc.	Yuhan Corporation	Gilead Sciences, Inc. and Yuhan Corporation announced that the companies have entered into a licensing and collaboration agreement to co-develop novel therapeutic candidates for the treatment of patients with advanced fibrosis due to nonalcoholic steatohepatitis (NASH).
12/20/2018	AGEN1223; AGEN1423; AGEN2373	Gilead Sciences, Inc.	Agenus, Inc.	Gilead Sciences, Inc. (NASDAQ: GILD) and Agenus Inc. announced the companies have entered into an immunology (I-O) partnership focused on the development and commercialization of up to five novel immunology therapies.
12/19/2018	TGF-beta 1 Program	Gilead Sciences, Inc.	Scholar Rock LLC	Gilead Sciences, Inc. and Scholar Rock Holding Corporation announced that the companies have entered into a strategic collaboration to discover and develop highly specific inhibitors of transforming growth factor beta (TGFβ) activation for the treatment of fibrotic diseases.
10/31/2018		Gilead Sciences, Inc.	Tango Therapeutics, Inc.	Gilead Sciences, Inc. and Tango Therapeutics, Inc., a company focused on the discovery and development of novel cancer therapies announced a global strategic collaboration to discover, develop and commercialize a pipeline of innovative targeted immunology treatments for patients with cancer.
09/12/2018	ARCUS Genome Editing Technology	Gilead Sciences, Inc.	Precision Biosciences Inc.	Gilead Sciences (Nasdaq: GILD) and Precision BioSciences announced that the companies have entered into a strategic collaboration to develop therapies targeting the in vivo elimination of hepatitis B virus (HBV) with Precision's proprietary genome editing platform, ARCUS.
09/04/2018	Trianni Transgenic Mouse Platform	Gilead Sciences, Inc.	Trianni, Inc.	Gilead Sciences, Inc. (NASDAQ: GILD) and Trianni, Inc. ("TRIANNI") announced that the companies have entered into a license agreement that grants Gilead the use of the Trianni transgenic human monoclonal antibody discovery platform to support the company's drug discovery efforts
08/22/2018	Momelotinib	Sierra Oncology	Gilead Sciences, Inc.	Sierra Oncology, Inc., a clinical stage drug development company focused on advancing targeted therapeutics for the treatment of patients with significant unmet needs in hematology and oncology, announced it has acquired the drug candidate momelotinib from Gilead Sciences. Momelotinib has been investigated in two completed Phase 3 trials for the treatment of myelofibrosis and has demonstrated a potentially differentiated therapeutic profile encompassing anemia-related benefits, as well as achieving substantive spleen and constitutional symptom control.

06/06/2018	TheraT Platform ; Vaxwave Platform	Gilead Sciences, Inc.	Hookipa Biotech	<p>Hookipa Biotech AG ("Hookipa"), a clinical-stage biotech company pioneering an innovative class of active immunization therapies for oncology and infectious diseases and Gilead Sciences, Inc., ("Gilead"), a research-based biopharmaceutical company that discovers, develops and commercializes innovative medicines in areas of unmet medical need, today announced that they have entered into a research collaboration and license agreement that grants Gilead exclusive rights to Hookipa's TheraT® and Vaxwave® arenavirus vector-based immunization technologies for two major chronic infectious disease indications, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).</p>
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Apr 16, 2019: Gilead and insitro Announce Strategic Collaboration to Discover and Develop Novel Therapies for Nonalcoholic Steatohepatitis

Gilead Sciences Inc. and insitro announced that the companies have entered into a strategic collaboration to discover and develop therapies for patients with nonalcoholic steatohepatitis (NASH). Under the terms of the three-year collaboration, insitro’s proprietary platform will be utilized to create disease models for NASH and discover targets that have an influence on clinical progression and regression of the disease. The insitro Human (ISH) platform applies machine learning, human genetics and functional genomics to generate and optimize unique in vitro models and drive therapeutic discovery and development. The ISH platform will provide insights into disease progression, suggest candidate targets, and predict patient responses to potential therapeutic interventions. Gilead can advance up to five targets identified through this collaboration and will be responsible for chemistry and development against these targets. “Gilead is committed to researching and developing treatments for patients living with NASH, particularly those with advanced fibrosis who have the greatest unmet need,” said John McHutchison, AO, MD, Chief Scientific Officer and Head of Research and Development, Gilead Sciences. “We are excited about the opportunity to partner with insitro to tackle the scientific challenges associated with this complex disease. Through this collaboration we will utilize deep learning to explore the scientific underpinnings of the biology and clinical spectrum of NASH, with the goal of accelerating the development of highly effective treatment options for patients with this disease.” “NASH is a progressive liver disease that can lead to fibrosis, cirrhosis, and liver cancer and will soon be the predominant cause of liver transplantation in the U.S.,” said Daphne Koller, Ph.D., CEO and founder of insitro. “We are excited to work with Gilead, a leader in liver disease, in bringing to bear novel tools toward identifying new therapeutics for NASH and helping the many patients in need around the world.” Under the terms of the agreement, insitro will receive an upfront payment of \$15 million, with additional near-term payments up to \$35 million based on operational milestones. insitro will be eligible to receive up to \$200 million for the achievement of preclinical, development, regulatory and commercial milestones for each of the five Gilead targets; and up to low double-digit tiered royalties on net sales. For programs where insitro opts in, it will have the right to co-develop and co-detail in the U.S., receive a profit share in China and receive milestone payments and royalties on other ex-U.S. sales.



Mar 28, 2019: Gilead and Galapagos Report Updated Safety Information for Filgotinib in Rheumatoid Arthritis (RA)

Gilead Sciences, Inc. (NASDAQ: GILD) and Galapagos NV (Euronext & NASDAQ: GLPG) also announced interim safety information from four studies of the investigational compound filgotinib for the treatment of rheumatoid arthritis (RA). The data include 24 week results of the ongoing Phase 3 FINCH 1, 2, and 3 trials, and updated Week 156 safety data from the Phase 2b DARWIN 3 long term extension study in patients with RA. Week 24 safety data from the FINCH 1, 2, and 3 studies are aggregated and summarized in the table below. Data from 3,452 patients are reported, including 2,088 patients who received filgotinib.

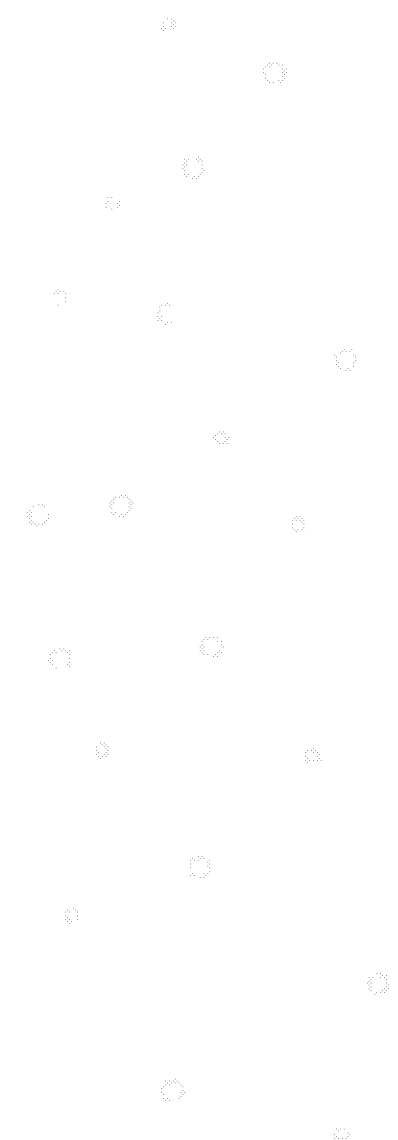
	Adalimumab+ MTX40mg EOWN=325No. (%)	Placebo/csDMARDN= 1039No. (%)	Filgotinib 100 mg+MTX/csDMARDN=840No. (%)	Filgotinib200 mgN=210No. (%)
		Filgotinib 200 mg+MTX/csDMARDN=1038No. (%)	Filgotinib 100 mg+MTX/csDMARDN=840No. (%)	Filgotinib 200 mg+MTX/csDMARDN=210No. (%)
Number of Events		FilgotinibTotalN=2088No. (%)		
(1.2)Herpes zoster	8 (2.5)	13 (1.5)	13 (1.3)	10 (1.0)
(1.1)Death	3 (1.4)	29 (1.4)	4 (0.4)	1 (0.5)
(0.2)MalignancyexcludingNMSC	2 (0.6)	5 (0.6)	6 (0.6)	1 (0.5)
(0.1)MACE	0 (0)	1 (0.1)	0 (0)	1 (0.1)
(0.1)DVT/PE	12 (0.6)	3 (0.3)	0 (0)	1 (0.1)
(0.2)MalignancyexcludingNMSC	3 (0.3)	0 (0)	4 (0.3)	1 (0.1)
(0.1)MACE	1 (0.1)	0 (0)	0 (0)	1 (0.1)
(0.2)MalignancyexcludingNMSC	5 (0.5)	1 (0.3)	5 (0.2)	2 (0.2)
(0.1)MACE	2 (0.2)	1 (0.5)	1 (0.3)	1 (0.1)

other week; csDMARD, conventional synthetic disease-modifying antirheumatic drug; DVT, deep venous thrombosis; PE, pulmonary embolism; NMSC, non-melanoma skin cancer; MACE, major adverse cardiac events Treatment-emergent eventsµ Excludes one retinal vein occlusion@ All events The Phase 2b DARWIN 3 long term extension trial initially enrolled 739 patients, who received filgotinib 100 mg twice daily, 100 mg or 200 mg once daily. Safety data are summarized in the table below. Results represent treatment through 156 weeks or longer, and comprise 2,203 patient-years of exposure (PYE) to filgotinib.

	Number of Events	(Events per 100 Patient-Years)PYE=2,203	Number of Events	(Events per 100 Patient-Years)PYE=2,203
(1.2)Herpes zoster	34	(1.5)	2	(0.1)
(0.2)Malignancy excluding NMSC	5	(0.2)	11	(0.5)
(0.1)DVT, deep venous thrombosis; PE, pulmonary embolism; NMSC, non-melanoma skin cancer; MACE, major adverse cardiac events	3	(0.1)		

"The growing body of evidence from both the DARWIN 3 long-term extension trial combined with the results of the FINCH 1, 2, and 3 trials, represent a larger safety database in a broader population of RA patients, spanning from those who are treatment-naive to those who have failed biologics," said John McHutchison, AO, MD, Chief Scientific Officer, Head of Research and Development, Gilead Sciences. "The available safety data from the FINCH and DARWIN 3 studies, which together included more than 2,700 patients receiving filgotinib, suggest that filgotinib has the potential to deliver a much needed option for treating people living with RA," said Dr. Walid Abi-Saab, Chief Medical Officer, Galapagos. Filgotinib is an investigational agent and not approved anywhere globally. Its efficacy and safety have not been established. About the FINCH program The FINCH Phase 3 program is investigating the efficacy and safety of 100 mg and 200 mg filgotinib once daily, in RA patient populations ranging from early stage to biologic-experienced patients. FINCH 1 is a 52-week, randomized, placebo- and adalimumab-controlled trial in combination with methotrexate (MTX) enrolling 1,759 adult patients with

moderately to severely active RA who have had inadequate response to MTX. The primary endpoint is ACR20 at week 12. The trial includes radiographic assessment at weeks 24 and 52. FINCH 2 was a 24-week, randomized, placebo-controlled trial in 449 patients who were receiving conventional disease-modifying anti-rheumatic drugs (cDMARD), and had a prior inadequate response to one or more biological therapies. The primary endpoint was ACR20 at week 12. FINCH 3 is a 52-week, randomized trial in 1,252 MTX-naïve patients to study filgotinib in combination with MTX, as well as monotherapy. The primary endpoint is ACR20 at week 24. Radiographic progression is also being assessed. About the DARWIN 3 program DARWIN 3 is an ongoing multi-center, open-label, long-term follow-up safety and efficacy trial of subjects who completed either DARWIN 1 or DARWIN 2, which were double-blind, placebo-controlled Phase 2b trials for 24 weeks of treatment in patients with moderate to severe RA who showed an inadequate response to methotrexate. DARWIN 1 (594 patients) evaluated filgotinib as an addition to methotrexate, as once- and twice-daily administration (once-daily and twice-daily dosing, respectively) at three daily dose levels. DARWIN 2 (283 patients) evaluated filgotinib as once-daily monotherapy administration (once-daily dosing) at three dose levels. Both DARWIN 1 and DARWIN 2 achieved the primary endpoints (ACR20). More information about clinical trials with filgotinib can be accessed at: [www.clinicaltrials.gov](http://www.clinicaltrials.gov). About the Galapagos – Gilead Collaboration Galapagos and Gilead entered into a global collaboration for the development and commercialization of filgotinib in inflammatory indications. The FINCH studies are among several clinical trials of filgotinib in inflammatory diseases, including the EQUATOR Phase 2 program in psoriatic arthritis, the TORTUGA study in ankylosing spondylitis, the DIVERSITY Phase 3 trial in Crohn’s disease (also small bowel and fistulizing Crohn’s disease Phase 2 studies) and the Phase 3 SELECTION trial in ulcerative colitis.



Mar 28, 2019: Gilead and Galapagos Announce Filgotinib Meets Primary and Key Secondary Endpoints in the Phase 3 FINCH 1 Rheumatoid Arthritis Study

Gilead Sciences, Inc. (NASDAQ: GILD) and Galapagos NV (Euronext & NASDAQ: GLPG) announced Week 24 results of FINCH 1, an ongoing, randomized, double-blind, placebo- and active-controlled Phase 3 study of filgotinib, an investigational, oral, selective JAK1 inhibitor, in adults with moderately-to-severely active rheumatoid arthritis. FINCH 1 evaluated filgotinib versus adalimumab or placebo, on a stable background dose of methotrexate in patients with prior inadequate response to methotrexate. The study achieved its primary endpoint for both doses of filgotinib in the proportion of patients achieving an American College of Rheumatology 20 percent response (ACR20) compared to placebo at Week 12. The proportion of patients achieving ACR50 and ACR70 response was also significantly greater for filgotinib compared with placebo at Week 12, for both doses. Patients receiving filgotinib 100 mg or 200 mg had a statistically significant reduction in the Health Assessment Questionnaire Disability Index (HAQ-DI) at Week 12 compared with those receiving placebo. The proportions of patients achieving clinical remission (DAS28(CRP) ≤ 2.6) and low disease activity (DAS28(CRP) = 3.2) at Week 12 were significantly higher for patients in both filgotinib arms compared with placebo. When comparing low disease activity rates at Week 12, filgotinib 200 mg was non-inferior to adalimumab. Filgotinib 100 mg and 200 mg also significantly inhibited the progression of structural damage at Week 24 as assessed by change from baseline in modified total Sharp score (mTSS) compared with placebo. Top-line FINCH 1 efficacy† data are summarized in the table below.

	Placebo+MTX(n=475)&ACR20 (%)	Adalimumab 40 mg+MTX(n=325)&	Filgotinib200 mg+MTX(n=475)&	Filgotinib100 mg+MTX(n=480)&
ACR20 (%)	36.3	76.6	69.8	70.8
ACR50 (%)	18.5	49.9	47.2	49.9
ACR70 (%)	23.4	19.8	26.3	35.1
DAS28(CRP) ≤ 2.6 (Clinical remission) (%)	23.8	14.2	6.7	49.7
DAS28(CRP) = 3.2 (Low disease activity) (%)	23.7	38.8	43.4	49.7
HAQ-DI change	-0.56	9.3	-0.69	-0.61
mTSS change	0.13	0.17	-0.42	0.16

†All efficacy time points assessed at Week 12 except mTSS which was assessed at Week 24. &Number of patients randomized to each treatment group and who received at least one dose of study drug. ACR20/50/70 represents American College of Rheumatology 20%/50%/70% improvements. p 0.001, compared with placebo. \$ p 0.001, non-inferiority to adalimumab. £ p 0.01, non-inferiority to adalimumab. ¥ p 0.01, superiority to adalimumab.

Comparison not adjusted for multiplicity. The safety profile of filgotinib in FINCH 1 is consistent with prior studies up to Week 24. Serious adverse events occurred in 4.4 percent, 5.0 percent, 4.3 percent and 4.2 percent of the patients in the filgotinib 200 mg, filgotinib 100 mg, adalimumab and placebo groups, respectively. There were five deaths, two patients were assigned to the placebo group, two to the filgotinib 200 mg group and one to the filgotinib 100 mg group. Five patients with a malignancy were also reported -- three receiving placebo, one receiving adalimumab and one receiving filgotinib 100mg, respectively. Three venous thrombotic events were observed (two in the placebo group, one in the filgotinib 200 mg group), and there were four adjudicated major adverse cardiovascular events, two in the placebo, one in the adalimumab and one in the filgotinib 100 mg groups. The proportion of patients with herpes zoster was similar across treatment groups.



(filgotinib 200 mg = 0.4 percent, filgotinib 100 mg = 0.4 percent, adalimumab = 0.6 percent, placebo = 0.4 percent), as was the rate of serious infections (filgotinib 200 mg = 1.7 percent, filgotinib 100 mg = 1.7 percent, adalimumab = 2.5 percent, placebo = 0.8 percent). "These FINCH 1 data add to the favorable results obtained previously in the FINCH 2 study in patients with a prior inadequate response to biologic agents and reinforce the evidence supporting the potential of filgotinib to address unmet treatment needs in patients with rheumatoid arthritis," said John McHutchison, AO, MD, Chief Scientific Officer, Head of Research and Development, Gilead Sciences. "Across the FINCH program, the data continue to support filgotinib's potential as a JAK1 specific inhibitor that may provide clinically meaningful responses combined with a favorable safety profile in a wide range of people living with rheumatoid arthritis, including those in the early stages of disease and those who have tried standard therapies without success." "Many patients living with rheumatoid arthritis are in need of new treatment options that are effective, well-tolerated, and convenient. We are excited about the strong efficacy and tolerability results with both doses of filgotinib," said Dr. Walid Abi-Saab, Chief Medical Officer, Galapagos. "We are particularly pleased with the results filgotinib shows on clinically meaningful endpoints such as clinical remission, ACR70 and radiographic progression, as well as with the encouraging safety profile." Detailed findings from FINCH 1 will be submitted for presentation at a future scientific conference. Filgotinib is an investigational agent and not approved anywhere globally. Its efficacy and safety have not been established. About FINCH 1 FINCH 1 is an ongoing 52-week randomized, double-blind, placebo- and active-controlled study, enrolling 1,759 adult patients with moderately to severely active RA who have an inadequate response to MTX. Eligible patients were randomized (3:3:2:3) to receive filgotinib 200 mg (n=477), filgotinib 100 mg (n=480), adalimumab (n=325) or placebo (n=477) in addition to a stable dose of MTX. The primary endpoint of the study is the proportion of patients who achieve an American College of Rheumatology 20 percent improvement response (ACR20) at Week 12. At Week 24, all patients in the placebo arm who did not discontinue study drug were reassigned (1:1) to either filgotinib 100 mg or 200 mg. More information about clinical trials with filgotinib can be accessed at: [www.clinicaltrials.gov](http://www.clinicaltrials.gov). About the Galapagos – Gilead Collaboration Galapagos and Gilead entered into a global collaboration for the development and commercialization of filgotinib in inflammatory indications. The FINCH studies are among several clinical trials of filgotinib in inflammatory diseases, including the EQUATOR Phase 2 program in psoriatic arthritis, the TORTUGA study in ankylosing spondylitis, the DIVERSITY Phase 3 trial in Crohn's disease (also small bowel and fistulizing Crohn's disease Phase 2 studies) and the Phase 3 SELECTION trial in ulcerative colitis.

### Mar 28, 2019: Gilead and Galapagos Announce Filgotinib Meets Primary Endpoint in the Phase 3 FINCH 3 Study in Methotrexate-Naïve Rheumatoid Arthritis Patients

Gilead Sciences, Inc. and Galapagos NV announced Week 24 results of FINCH 3, an ongoing, randomized, double-blind, active-controlled Phase 3 study of filgotinib, an investigational, oral, selective JAK1 inhibitor, in adults with moderately-to-severely active rheumatoid arthritis. FINCH 3 evaluated filgotinib in combination with methotrexate and as monotherapy in MTX-naïve patients. The study achieved its primary endpoint in the proportion of patients achieving an American College of Rheumatology 20 percent response (ACR20) at Week 24. The proportion of patients achieving the primary endpoint of ACR20 response at Week 24 was significantly higher for filgotinib 200 mg plus MTX and filgotinib 100 mg plus MTX compared with MTX alone. The proportion of patients achieving ACR50, ACR70, and clinical remission (DAS28(CRP) 2.6) at Week 24 was also significantly higher for patients receiving once-daily filgotinib 100 mg or 200 mg plus MTX compared with patients receiving MTX alone. Additionally, those who received filgotinib experienced greater reduction in the Health Assessment Questionnaire Disability Index (HAQ-DI) compared with those receiving MTX alone at Week 24. Filgotinib 200 mg monotherapy inhibited the progression of structural damage at Week 24 compared with MTX alone as assessed by modified total Sharp score (mTSS). Top-line FINCH 3 efficacy data are summarized in the table below:

	Filgotinib 200 mg monotherapy (n=210) &	Filgotinib 200 mg+ MTX (n=416) &	Filgotinib 100 mg+ MTX (n=207) &
ACR20 (%)	57.0	81.0	80.2
ACR50 (%)	58.1	80.2	78.1
ACR70 (%)	45.7	43.8	40.1
ACR70 (%)	40.1	40.0	40.0
DAS28(CRP) 2.6 (Clinical remission) (%)	26.0	54.1	42.5
DAS28(CRP) 2.6 (Clinical remission) (%)	26.0	42.5	42.4
HAQ-DI change	29.1	-0.94	-0.90
HAQ-DI change	29.1	-0.94	-0.89
mTSS change	-0.79	0.20	0.22
mTSS change	-0.79	0.20	-0.04

0.52 ^Efficacy assessed at Week 24 for all endpoints&Number of patients randomized to each treatment group and who received at least one dose of study drugACR20/50/70 represents American College of Rheumatology 20%/50%/70% improvements. p 0.001, compared with MTX p 0.05 compared with MTX p 0.01, compared with MTXComparison not adjusted for multiplicityThe safety profile of filgotinib in FINCH 3 is consistent with prior studies up to Week 24. Serious adverse events occurred in 4.1 percent, 2.4 percent, 4.8 percent, and 2.9 percent of patients receiving filgotinib 200 mg plus MTX, filgotinib 100 mg plus MTX, filgotinib 200 mg monotherapy and MTX alone, respectively. There was one venous thrombotic event (in the MTX group), five cases of adjudicated major adverse cardiovascular events (two in the filgotinib 200 mg plus MTX group, one in the filgotinib 200 mg group and two in the MTX group) and one malignancy (in the MTX group). There was one death, reported in the filgotinib 200 mg plus MTX group. Serious infections occurred in 1.0 percent, 1.0 percent, 1.4 percent and 1.0 percent of the patients in the filgotinib 200 mg plus MTX, filgotinib 100 mg plus MTX, filgotinib 200 mg monotherapy and MTX groups, respectively. The proportion of patients reporting herpes zoster was 0.5 percent in each of the treatment groups."The FINCH 3 data clearly demonstrate improved efficacy when filgotinib is compared with the use of MTX alone in rheumatoid arthritis patients with earlier stages of disease," said John McHutchison, AO, MD, Chief Scientific Officer, Head of Research and Development, Gilead Sciences. "These data add to the body of evidence from our broader FINCH clinical study program, reinforcing the potential for filgotinib to address important therapeutic needs in people with rheumatoid arthritis." "Additional effective and tolerable treatment options are still needed for people newly diagnosed with rheumatoid arthritis or in the early stages of the disease. This complements the FINCH 1 and FINCH 2 data, underlining the potential of filgotinib as a treatment option across a wide range of patient populations suffering from rheumatoid arthritis." said Dr. Walid

Abi-Saab, Chief Medical Officer, Galapagos. Detailed findings from FINCH 3 will be submitted for presentation at a future scientific conference.

Filgotinib is an investigational agent and not approved anywhere globally. Its efficacy and safety have not been established.



## Mar 06, 2019: Gilead Presents New Data on Biktarvy® (Bictegravir, Emtricitabine and Tenofovir Alafenamide) and TAF-Based Regimens for the Treatment of HIV-1 in Children, Older Adults and Women

Gilead Sciences, Inc. announced 48-week results from a Phase 2/3 study (Study GS-US-380-1474) evaluating the efficacy and safety of Biktarvy® (bictegravir 50 mg/emtricitabine 200 mg/tenofovir alafenamide 25 mg tablets, BIC/FTC/TAF), a once-daily single tablet regimen, in virologically suppressed adolescents and children at least 6 years of age who are living with HIV. Through Week 48, Biktarvy maintained high rates of virologic suppression with a low incidence of study drug-related adverse events and no treatment-emergent resistance. The data were presented at the 2019 Conference on Retroviruses and Opportunistic Infections (CROI) in Seattle. "These findings indicate that Biktarvy, an oral single-tablet regimen that can be taken with or without food, has the potential to be an effective and well-tolerated treatment option for some children and adolescents living with HIV," said Aditya H. Gaur, MD, Clinical Director, Department of Infectious Diseases at St. Jude Children's Research Hospital and lead study investigator. "Importantly, Biktarvy was not associated with any cases of treatment-emergent resistance through 48 weeks of treatment, a result observed consistently to date across the Biktarvy clinical research programs and a significant consideration for children and adolescents who are facing the prospect of long-term treatment." Biktarvy is indicated in the U.S. as a complete regimen for the treatment of HIV-1 infection in adults who have no antiretroviral treatment history. Biktarvy is also indicated to replace the current antiretroviral regimen in those adults who are virologically suppressed on a stable antiretroviral regimen for at least three months. Virologically suppressed adults must have no history of treatment failure and no known substitutions associated with resistance to the individual components of Biktarvy. Biktarvy carries a Boxed Warning in its U.S. product label regarding the risk of post-treatment acute exacerbation of hepatitis B. See below for Important Safety Information. Studies of Biktarvy and other TAF-based regimens in specific populations presented at the conference included:

**Oral 2571: Biktarvy Single-Tablet Regimen in Adolescents & Children: Week 48 results**  
The 48-week, single-arm, open-label trial enrolled 50 virologically suppressed adolescents aged 12 to 18 years old and weighing  $\geq 35$  kg and 50 virologically suppressed children aged 6 to 12 years old and weighing  $\geq 25$  kg. All study participants had an undetectable viral load (HIV-1 RNA  $\leq 50$  c/mL) for at least six months before screening and CD4 cell counts of  $\geq 200$  cells/ $\mu$ L. Patients received a full adult strength Biktarvy tablet once daily. At Week 48, 98 percent (n=74/75) of patients maintained an undetectable viral load, as defined by the US FDA snapshot algorithm. The remaining one patient had a reported HIV-1 RNA level of 85 c/ml at Week 48, but re-suppressed and achieved an undetectable viral load within two weeks. No participant in the study developed treatment-emergent resistance. Abdominal discomfort (grade 1) was the only study drug-related adverse event (AE) reported in more than one patient (2 percent; n=2). In addition to efficacy and safety, the study evaluated the impact of the Biktarvy tablet on adherence in this patient population. All participants reported that the size and shape of the Biktarvy tablet was acceptable and the taste was palatable. The median percent adherence to Biktarvy, measured by pill count, was 99 percent. The efficacy and safety profile of Biktarvy in adolescents and children has not been established; its use in these populations is investigational.

**Poster 2586: 96 Week Efficacy and Safety of Biktarvy in Treatment-Naïve Adults and Adults  $\geq 50$  Years**  
A post-hoc analysis of data from two randomized, double-blind, Phase 3 studies (Studies 1489 and 1490) evaluated Biktarvy in treatment-naïve adults aged 50 and older (n=96/634), at Week 96. Treatment with Biktarvy resulted in high rates of virologic suppression regardless of age. Biktarvy was well tolerated in both the overall and the 50 year and older patient subgroups. There was no clinically significant impact on bone mineral density and renal laboratory parameters in patients aged 50 and older, a population at higher risk for comorbidities.

**Poster 0519: Tenofovir Alafenamide vs Tenofovir DF in Women: Pooled Analysis of 7 Clinical Trials**  
A pooled analysis of data from 779 women in seven randomized, double-blind clinical trials (two in treatment-naïve adults and five in virologically suppressed adults) evaluated the efficacy and safety of TAF-based versus TDF-based regimens for antiretroviral treatment initiation or switch through Week 96. All participants who initiated or switched to TAF-based regimens, including Biktarvy, were compared with those who initiated or continued TDF-based regimens. Women who initiated or switched to TAF-based regimens had significantly improved bone and renal safety parameters compared to those who initiated or continued TDF-based regimens, with similar rates of virologic suppression. Discontinuations due to AEs were low in both groups. "Gilead's ongoing investment in HIV treatment research and development is focused on bringing the latest innovations and the potential for successful, long-term treatment to as many people living with HIV as possible," said John McHutchison, AO, MD, Chief Scientific Officer and Head of Research and Development,

Gilead Sciences. "Results from these studies in specific populations presented at CROI demonstrate that Biktarvy has the potential to be appropriate for use in a broad range of patients who are new to therapy or switching therapies, including young people and aging adults, as well as women who have been traditionally underrepresented in HIV clinical trials." Biktarvy does not cure HIV infection or AIDS.

**IMPORTANT U.S. SAFETY INFORMATION AND INDICATION FOR BIKTARVY**  
**BOXED WARNING: POST TREATMENT ACUTE EXACERBATION OF HEPATITIS B**  
 Severe acute exacerbations of hepatitis B have been reported in patients who are coinfecting with HIV-1 and HBV and have discontinued products containing emtricitabine (FTC) and/or tenofovir disoproxil fumarate (TDF), and may occur with discontinuation of Biktarvy. Closely monitor hepatic function with both clinical and laboratory follow-up for at least several months in patients who are coinfecting with HIV-1 and HBV and discontinue Biktarvy. If appropriate, anti-hepatitis B therapy may be warranted.

**Contraindications** Coadministration: Do not use Biktarvy with dofetilide or rifampin.

**Warnings and precautions** Drug interactions: See Contraindications and Drug Interactions sections. Consider the potential for drug interactions prior to and during Biktarvy therapy and monitor for adverse reactions. Immune reconstitution syndrome, including the occurrence of autoimmune disorders with variable time to onset, has been reported. New onset or worsening renal impairment: Cases of acute renal failure and Fanconi syndrome have been reported with the use of tenofovir prodrugs. In clinical trials of Biktarvy, there have been no cases of Fanconi syndrome or proximal renal tubulopathy (PRT). Do not initiate Biktarvy in patients with estimated creatinine clearance (CrCl) 30 mL/min. Patients with impaired renal function and/or taking nephrotoxic agents (including NSAIDs) are at increased risk of renal-related adverse reactions. Discontinue Biktarvy in patients who develop clinically significant decreases in renal function or evidence of Fanconi syndrome. Renal monitoring: Prior to or when initiating Biktarvy and during therapy, assess serum creatinine, CrCl, urine glucose, and urine protein in all patients as clinically appropriate. In patients with chronic kidney disease, also assess serum phosphorus. Lactic acidosis and severe hepatomegaly with steatosis: Fatal cases have been reported with the use of nucleoside analogs, including FTC and TDF. Discontinue Biktarvy if clinical or laboratory findings suggestive of lactic acidosis or pronounced hepatotoxicity develop, including hepatomegaly and steatosis in the absence of marked transaminase elevations.

**Adverse reactions** Most common adverse reactions (incidence  $\geq$ 5%; all grades) in clinical studies through week 96 were diarrhea (6%), nausea (6%), and headache (5%).

**Drug interactions** Prescribing information: Consult the full prescribing information for Biktarvy for more information on Contraindications, Warnings, and potentially significant drug interactions, including clinical comments. Enzymes/transporters: Drugs that induce P-gp or induce both CYP3A and UGT1A1 can substantially decrease the concentration of components of Biktarvy. Drugs that inhibit P-gp, BCRP, or inhibit both CYP3A and UGT1A1 may significantly increase the concentrations of components of Biktarvy. Biktarvy can increase the concentration of drugs that are substrates of OCT2 or MATE1. Drugs affecting renal function: Coadministration of Biktarvy with drugs that reduce renal function or compete for active tubular secretion may increase concentrations of FTC and tenofovir and the risk of adverse reactions.

**Pregnancy and lactation** Pregnancy: There is insufficient human data on the use of Biktarvy during pregnancy. An Antiretroviral Pregnancy Registry (APR) has been established. Available data from the APR for FTC shows no difference in the rates of birth defects compared with a US reference population. Lactation: Women infected with HIV-1 should be instructed not to breastfeed, due to the potential for HIV-1 transmission.

**Dosage and administration** Dosage: 1 tablet taken once daily with or without food. Renal impairment: Not recommended in patients with CrCl 30 mL/min. Hepatic impairment: Not recommended in patients with severe hepatic impairment. Prior to or when initiating: Test patients for HBV infection. Prior to or when initiating, and during treatment: As clinically appropriate, assess serum creatinine, CrCl, urine glucose, and urine protein in all patients. In patients with chronic kidney disease, assess serum phosphorus.

**INDICATION** Biktarvy is indicated as a complete regimen for the treatment of HIV-1 infection in adults who have no antiretroviral (ARV) treatment history or to replace the current ARV regimen in those who are virologically suppressed (HIV-1 RNA 50 copies per mL) on a stable ARV regimen for  $\geq$ 3 months with no history of treatment failure and no known resistance to any component of Biktarvy.

## Mar 06, 2019: Gilead Presents Data on Biktarvy® (Bictegravir, Emtricitabine and Tenofovir Alafenamide) in Virologically Suppressed Adults, Including Those With Pre-Existing NRTI Resistance

Gilead Sciences, Inc. announced data from two studies evaluating the resistance profile of Biktarvy® (bictegravir 50 mg/emtricitabine 200 mg/tenofovir alafenamide 25 mg tablets, BIC/FTC/TAF) in virologically suppressed adults switching from dolutegravir/abacavir/lamivudine (DTG/ABC/3TC) or a boosted protease inhibitor (PI)-based regimen for the treatment of HIV-1. The studies found high rates of virologic suppression with Biktarvy in treatment-experienced adults, regardless of pre-existing resistance to nucleoside reverse transcriptase inhibitors (NRTIs). The data were presented at the 2019 Conference on Retroviruses and Opportunistic Infections (CROI) in Seattle. Biktarvy is indicated in the U.S. as a complete regimen for the treatment of HIV-1 infection in adults who have no antiretroviral treatment history. Biktarvy is also indicated to replace the current antiretroviral regimen in those adults who are virologically suppressed on a stable antiretroviral regimen for at least three months. Virologically suppressed adults must have no history of treatment failure and no known substitutions associated with resistance to the individual components of Biktarvy. Biktarvy carries a Boxed Warning in its U.S. product label regarding the risk of post-treatment acute exacerbation of hepatitis B. See below for Important Safety Information. "Maintaining virologic suppression, even in the setting of resistance to certain classes of HIV medicines, when switching to Biktarvy, speaks to the versatility of Biktarvy," said John McHutchison, AO, MD, Chief Scientific Officer and Head of Research and Development, Gilead Sciences. "These data add to the growing body of evidence supporting Biktarvy as a single tablet regimen that can be used in a wide range of clinical settings." Key abstracts for data presented at the conference included: Poster 2141: Long-Term Biktarvy Switch Efficacy in Patients with Archived Pre-Existing Resistance. Participants in two Phase 3 Biktarvy switch studies (Studies 1844 and 1878) were followed through two years of therapy in the open-label continuation of these studies past the Week 48 primary endpoints. Documented resistance to study drugs was exclusionary; for the purposes of this retrospective analysis, archived preexisting HIV-1 drug resistance was assessed by historical genotypes and retrospective baseline proviral DNA genotyping. Among adults who switched to Biktarvy from DTG/ABC/3TC or a boosted protease inhibitor (PI)-based regimen, high rates of virologic suppression were observed in the overall population (n=561/570; 98 percent) as well as the population with preexisting drug resistance (n=155/159; 97 percent), including those with archived M184V/I (n=42/44; 95 percent). No patients developed treatment-emergent resistance during the course of the study. Poster 3362: High Level of Pre-Existing NRTI Resistance Prior to Switching to Biktarvy. This ongoing, randomized, double-blind Phase 3 study (Study 4030) evaluated 565 virologically suppressed adults who switched 1:1 from a regimen of DTG+F/TAF or DTG+F/TDF to DTG+F/TAF or Biktarvy for 48 weeks. Participants with any documented nucleoside reverse transcriptase inhibitor (NRTI), non-nucleoside reverse-transcriptase inhibitor (NNRTI), and protease inhibitor (PI) resistance were allowed to enroll; patients with documented INSTI resistance were excluded. Archived preexisting HIV-1 drug resistance was assessed by historical genotype and retrospective baseline proviral DNA genotyping. In the study, 14 percent (n=78/565) of participants had NRTI resistance known or suspected at screening. This increased to 24 percent (n=138/565) using historical data combined with additional baseline proviral HIV-1 DNA genotyping. In this pooled, blinded interim analysis, 99 percent (n=557/562) of all participants with any post-baseline visit and 99 percent (n=220/222) of participants with resistance to any class of ARV, including those with archived M184V/I (n=79/81; 98 percent), had undetectable viral load (HIV-1 RNA 50 copies/mL) with no emergent drug resistance. The efficacy and safety profile of Biktarvy in patients with preexisting resistance to its components has not been established; its use in these populations is investigational. Biktarvy does not cure HIV infection or AIDS. **IMPORTANT U.S. SAFETY INFORMATION AND INDICATION FOR BIKTARVY** **BOXED WARNING: POST TREATMENT ACUTE EXACERBATION OF HEPATITIS B** Severe acute exacerbations of hepatitis B have been reported in patients who are coinfecting with HIV-1 and HBV and have discontinued products containing emtricitabine (FTC) and/or tenofovir disoproxil fumarate (TDF), and may occur with discontinuation of Biktarvy. Closely monitor hepatic function with both clinical and laboratory follow-up for at least several months in patients who are coinfecting with HIV-1 and HBV and discontinue Biktarvy. If appropriate, anti-hepatitis B therapy may be warranted. **Contraindications** **Coadministration:** Do not use Biktarvy with dofetilide or rifampin. **Warnings and precautions** **Drug interactions:** See Contraindications and Drug Interactions sections. Consider the potential for drug interactions prior to and during Biktarvy therapy and monitor for adverse reactions. **Immune reconstitution syndrome,** including the occurrence of autoimmune disorders with variable time to onset, has been

reported. New onset or worsening renal impairment: Cases of acute renal failure and Fanconi syndrome have been reported with the use of tenofovir prodrugs. In clinical trials of Biktarvy, there have been no cases of Fanconi syndrome or proximal renal tubulopathy (PRT). Do not initiate Biktarvy in patients with estimated creatinine clearance (CrCl) 30 mL/min. Patients with impaired renal function and/or taking nephrotoxic agents (including NSAIDs) are at increased risk of renal-related adverse reactions. Discontinue Biktarvy in patients who develop clinically significant decreases in renal function or evidence of Fanconi syndrome. Renal monitoring: Prior to or when initiating Biktarvy and during therapy, assess serum creatinine, CrCl, urine glucose, and urine protein in all patients as clinically appropriate. In patients with chronic kidney disease, also assess serum phosphorus. Lactic acidosis and severe hepatomegaly with steatosis: Fatal cases have been reported with the use of nucleoside analogs, including FTC and TDF. Discontinue Biktarvy if clinical or laboratory findings suggestive of lactic acidosis or pronounced hepatotoxicity develop, including hepatomegaly and steatosis in the absence of marked transaminase elevations. Adverse reactions Most common adverse reactions (incidence =5%; all grades) in clinical studies were diarrhea (6%), nausea (5%), and headache (5%). Drug interactions Prescribing information: Consult the full prescribing information for Biktarvy for more information on Contraindications, Warnings, and potentially significant drug interactions, including clinical comments. Enzymes/transporters: Drugs that induce P-gp or induce both CYP3A and UGT1A1 can substantially decrease the concentration of components of Biktarvy. Drugs that inhibit P-gp, BCRP, or inhibit both CYP3A and UGT1A1 may significantly increase the concentrations of components of Biktarvy. Biktarvy can increase the concentration of drugs that are substrates of OCT2 or MATE1. Drugs affecting renal function: Coadministration of Biktarvy with drugs that reduce renal function or compete for active tubular secretion may increase concentrations of FTC and tenofovir and the risk of adverse reactions. Pregnancy and lactation Pregnancy: There is insufficient human data on the use of Biktarvy during pregnancy. An Antiretroviral Pregnancy Registry (APR) has been established. Available data from the APR for FTC shows no difference in the rates of birth defects compared with a US reference population. Lactation: Women infected with HIV-1 should be instructed not to breastfeed, due to the potential for HIV-1 transmission. Dosage and administration Dosage: 1 tablet taken once daily with or without food. Renal impairment: Not recommended in patients with CrCl 30 mL/min. Hepatic impairment: Not recommended in patients with severe hepatic impairment. Prior to or when initiating: Test patients for HBV infection. Prior to or when initiating, and during treatment: As clinically appropriate, assess serum creatinine, CrCl, urine glucose, and urine protein in all patients. In patients with chronic kidney disease, assess serum phosphorus. INDICATION Biktarvy is indicated as a complete regimen for the treatment of HIV-1 infection in adults who have no antiretroviral (ARV) treatment history or to replace the current ARV regimen in those who are virologically suppressed (HIV-1 RNA 50 copies per mL) on a stable ARV regimen for =3 months with no history of treatment failure and no known resistance to any component of Biktarvy.

## Jan 06, 2019: Gilead Sciences and Yuhan Corporation Announce Collaboration and License Agreement to Develop Novel Investigational Treatments for Advanced Fibrosis Due to Nonalcoholic Steatohepatitis

Gilead Sciences, Inc. and Yuhan Corporation announced that the companies have entered into a licensing and collaboration agreement to co-develop novel therapeutic candidates for the treatment of patients with advanced fibrosis due to nonalcoholic steatohepatitis (NASH). Under the agreement, Gilead will acquire global rights to develop and commercialize novel small molecules against two undisclosed targets in all countries, with the exception of the Republic of Korea where Yuhan will retain certain commercialization rights. Yuhan and Gilead will jointly conduct preclinical research, and Gilead will be responsible for global clinical development. Gilead will also be responsible for commercialization worldwide, outside of Yuhan's rights in the Republic of Korea. In connection with this agreement, Yuhan will receive an upfront payment of \$15 million and is eligible to receive up to an additional \$770 million in potential milestone payments upon achievement of certain development and commercial milestones, as well as royalties on future net sales. This agreement builds on the companies' existing commercial collaboration to support the promotion of Gilead's medicines in the Republic of Korea. NASH is a chronic and progressive liver disease characterized by fat accumulation and inflammation in the liver, which can lead to scarring, or fibrosis, that impairs liver function. Individuals with advanced fibrosis due to NASH, defined as bridging fibrosis (F3) or cirrhosis (F4), may face serious consequences, including end-stage liver disease, liver cancer and the need for liver transplantation, and are at a significantly higher risk of liver-related mortality. Currently, patients living with NASH have limited treatment options. "This collaboration builds on our long-term partnership with Yuhan, with a new focus on the investigation of novel approaches to treat patients with advanced fibrosis due to NASH that complement our ongoing research programs," said John McHutchison, MD, AO, Chief Scientific Officer and Head of Research and Development, Gilead Sciences. "We look forward to working with the Yuhan team to advance our work in this area where there is a significant unmet need for patients." "I am very pleased by this collaboration, which significantly expands and deepens our longstanding, trusted partnership with Gilead. We are confident that Gilead's expertise in liver disease will accelerate the development of our novel agents. As a company, we are committed to investigating new therapeutics to improve the lives of patients with NASH," said Mr. Jung Hee Lee, President and CEO of Yuhan.



# BIOPHARM INSIGHT

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

Filed on May 24, 2016

Published in the *Official Gazette* on November 8, 2016

GILEAD SCIENCES, INC.,

Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 52**

# Gilead Sciences, Inc (GILD)

**INITIATION**

Rating	<b>NEUTRAL</b>
Price (16-May-19, US\$)	65.78
Target price (US\$)	70.00
52-week price range (US\$)	79.00 - 60.54
Market cap(US\$ m)	83,643
Enterprise value (US\$ m)	79,597

Target price is for 12 months.

**Evan Seigerman**  
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## Holding for the Dividend; Waiting for Growth

**We Initiate Coverage of Gilead with a Neutral Rating and a \$70 TP:** Gilead remains in a transition period, in the sense of the recent appointment of a new CEO and from a financial perspective with what we believe to be an earnings trough in 2019, accelerating back to growth in 2020. We like Gilead's dividend (current yield of 3.8%) and approach to capital allocation, while still emphasizing the need to fill the later-stage pipeline.

**Low Multiple Warranted:** Current conditions warrant Gilead's low forward P/E multiple relative to peers (9.6x, vs. 12.1x median for Large Cap Biotech, 15.2x for Major Pharma, and 17.7x for the S&P). We could see expansion as the business development strategy comes to light; absent details we are comfortable with current relative valuations. We are Neutral rated on Gilead shares as while we like the base-business, we need more details around how the long-term growth trajectory of the business will improve.

**HIV Business (~75% of 2019E revenues); Main Revenue Driver Led by Flagship Asset Biktarvy:** We are bullish on the HIV franchise and believe that it will drive revenues over the next few years. Our proprietary physician survey positions Biktarvy favorably in both naïve and switch patients.

**Cautiously Optimistic on New CEO's Strategy for Gilead:** On the 1Q19 call we got a hint as to CEO Daniel O'Day's strategy for Gilead. We like his focus on strengthening the pipeline and ensuring commercial excellence, but we need to see execution before we are fully comfortable with his plan for the company.

**Valuation and Risks:** We value GILD shares using a sum-of-the-parts DCF with a WACC of 9.0% and a TVGR of -0.5% analysis supporting our TP of \$70. Risks include: Commercial (reliance on HIV to drive revenues), IP (if Gilead's patents are challenged revenues could be at risk), clinical/developmental (clinical trial failures could impact GILD shares), regulatory (FDA or EMA could reject or delay approval of filgotinib and Descovy for PrEP), and market/external.

Quarterly EPS	Q1	Q2	Q3	Q4
2018A	1.48	1.91	1.84	1.44
2019E	1.76	1.62	1.65	1.68
2020E				

Financial and valuation metrics				
Year	12/18A	12/19E	12/20E	12/21E
EPS (CS adj.) (US\$)	6.67	6.71	6.71	6.82
Prev. EPS (US\$)	-	-	-	-
P/E rel. (%)	54.2	55.7	62.0	67.1
Revenue (US\$ m)	22,127.0	22,132.8	20,782.4	20,926.5
EBITDA (US\$ m)	12,840.0	13,119.7	12,481.5	12,491.2
OCFPS (US\$)	6.42	6.41	7.04	7.18
P/OCF (x)	9.7	10.3	9.3	9.2
EV/EBITDA (current)	6.3	6.1	6.2	6.0
Net debt (US\$ m)	-2,767	-4,046	-6,138	-8,252
ROIC (%)	48.74	50.85	52.11	56.33
Number of shares (m)	1,271.55	IC (current, US\$ m)		18,767.00
Dividend (current, US\$)	2.52	EV/IC (x)		4.31
BV/share (12/18A, US\$ m)	16.4			
Net debt (12/18A, US\$ m)	-2,767.0			
Net debt/tot eq (12/18A, %)	-12.8			

Source: Company data, Refinitiv, Credit Suisse estimates

**DISCLOSURE APPENDIX AT THE BACK OF THIS REPORT CONTAINS IMPORTANT DISCLOSURES, ANALYST CERTIFICATIONS, LEGAL ENTITY DISCLOSURE AND THE STATUS OF NON-US ANALYSTS.** US Disclosure: Credit Suisse does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

# Gilead Sciences, Inc (GILD)

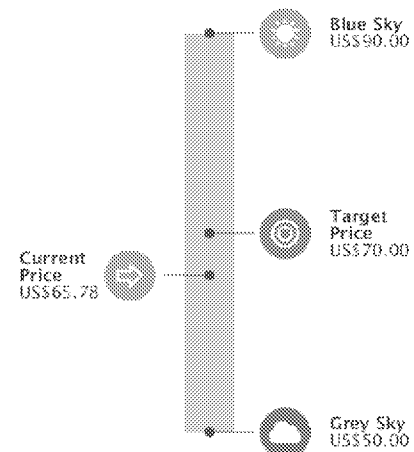
Price (16 May 2019): US\$65.78; Rating: NEUTRAL; Target Price: 70.00; Analyst: Evan Seigerman

Income Statement	12/18A	12/19E	12/20E	12/21E
Revenue (US\$ m)	22,127.0	22,132.8	20,782.4	20,926.5
EBITDA (US\$ m)	12,840	13,120	12,481	12,491
Depr. & amort.	(1,429)	(1,417)	(1,413)	(1,435)
EBIT (US\$)	11,411	11,703	11,069	11,056
Net interest exp	(1,077)	(1,110)	(1,035)	(910)
PBT (US\$)	10,895	10,762	10,533	10,610
Income taxes	(2,162)	(2,186)	(2,107)	(2,175)
Profit after tax	8,733	8,576	8,426	8,435
Minorities	(5)	7	7	7
Associates & other	0	0	0	(0)
Reported net income (US\$)	5,455	7,073	6,841	6,840
Other NPAT adjustments	(3,273)	(1,511)	(1,592)	(1,601)
Adjusted net income	8,728	8,583	8,433	8,442
Cash Flow	12/18A	12/19E	12/20E	12/21E
EBIT	11,411	11,703	11,069	11,056
Net interest	(1,077)	(1,110)	(1,035)	(910)
Change in working capital	(939)	(953)	(30)	(13)
Cash flow from operations	8,400	8,197	8,841	8,891
CAPEX	(924)	(697)	(655)	(659)
Free cash flow to the firm	7,476	7,500	8,187	8,232
Acquisitions	-	-	-	-
Divestments	-	-	-	-
Cash flow from investments	14,355	(697)	(655)	(659)
Net share issue/(repurchase)	(2,611)	(2,402)	(2,400)	(2,424)
Dividends paid	(2,971)	(3,819)	(3,694)	(3,694)
Changes in Net Cash/Debt	28,721	1,279	2,092	2,114
Balance Sheet (US\$)	12/18A	12/19E	12/20E	12/21E
<b>Assets</b>				
Cash & cash equivalents	17,940	19,949	18,550	18,423
Account receivables	3,327	3,335	3,132	3,153
Other current assets	13,755	13,795	13,836	13,878
<b>Total current assets</b>	<b>35,836</b>	<b>38,287</b>	<b>36,640</b>	<b>36,595</b>
Total fixed assets	4,006	4,441	4,809	5,159
Investment securities	-	-	-	-
<b>Total assets</b>	<b>63,675</b>	<b>65,406</b>	<b>63,001</b>	<b>62,180</b>
<b>Liabilities</b>				
<b>Total current liabilities</b>	<b>10,605</b>	<b>10,837</b>	<b>9,308</b>	<b>11,127</b>
<b>Total liabilities</b>	<b>42,141</b>	<b>43,021</b>	<b>39,869</b>	<b>38,325</b>
Shareholder equity	21,534	22,385	23,132	23,855
<b>Total liabilities and equity</b>	<b>63,675</b>	<b>65,406</b>	<b>63,001</b>	<b>62,180</b>
Net debt	(2,767)	(4,046)	(6,138)	(8,252)
Per share	12/18A	12/19E	12/20E	12/21E
No. of shares (wtd avg)	1,308	1,279	1,256	1,238
CS adj. EPS	6.67	6.71	6.71	6.82
Prev. EPS (US\$)				
Dividend (US\$)	2.28	2.52	2.96	3.00
Free cash flow per share	5.72	5.87	6.52	6.65
Earnings	12/18A	12/19E	12/20E	12/21E
Sales growth (%)	(15.2)	0.0	(6.1)	0.7
EBIT growth (%)	(28.8)	2.6	(5.4)	(0.1)
Net profit growth (%)	(25.1)	(1.7)	(1.7)	0.1
EPS growth (%)	(24.5)	0.6	0.0	1.5
EBITDA margin (%)	58.0	59.3	60.1	59.7
EBIT margin (%)	51.6	52.9	53.3	52.8
Pretax margin (%)	49.2	48.6	50.7	50.7
Net margin (%)	39.4	38.8	40.6	40.3
Valuation	12/18A	12/19E	12/20E	12/21E
EV/Sales (x)	3.66	3.60	3.73	3.60
EV/EBITDA (x)	6.3	6.1	6.2	6.0
EV/EBIT (x)	7.1	6.8	7.0	6.8
P/E (x)	9.9	9.8	9.8	9.6
Price to book (x)	4.0	3.8	3.6	3.4
Asset turnover	0.3	0.3	0.3	0.3
Returns	12/18A	12/19E	12/20E	12/21E
ROE stated-return on (%)	26.2	32.5	30.4	29.4
ROIC (%)	48.7	50.9	52.1	56.3
Gearing	12/18A	12/19E	12/20E	12/21E
Net debt/equity (%)	(12.8)	(18.1)	(26.5)	(34.6)
Interest coverage ratio (X)	10.6	10.5	10.7	12.1
Quarterly EPS	Q1	Q2	Q3	Q4
2018A	1.48	1.91	1.84	1.44
2019E	1.76	1.62	1.65	1.68
2020E				

Source: Company data, Refinitiv, Credit Suisse estimates

**Company Background**  
 Gilead Sciences, Inc. is a biopharmaceutical company, which engages in the research, development, and commercialization of medicines in the areas of infectious disease, oncology, immunology, and other areas of unmet medical need.

## Blue/Grey Sky Scenario



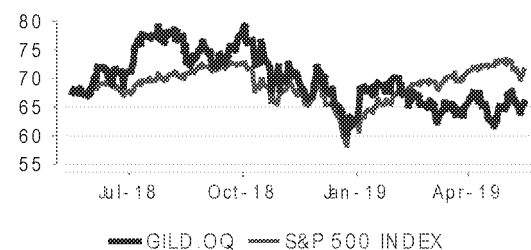
## Our Blue Sky Scenario (US\$) 90.00

In our Blue sky scenario, we model 100% probability of success to Yescarta expansion as well as filgotinib. We also assume some success in mid-stage NASH assets (excluding selonsertib). We maintain our base case third line Yescarta, HIV and HCV sales.

## Our Grey Sky Scenario (US\$) 50.00

In our Grey sky scenario, we model that the CAR-T platform is not successful beyond 3L DLBCL. Filgotinib program is delayed and fails to meet our base-case expectations. Other NASH programs fail. We maintain our base case third line Yescarta, HIV and HCV sales.

## Share price performance



On 16-May-2019 the S&P 500 INDEX closed at 2876.32  
 Daily May17, 2018 - May16, 2019, 05/17/18 = US\$67.6

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## Executive Summary

**A New Day for Gilead: Evolution Back to Earnings Growth?** Gilead is a large cap biotechnology company, focusing on developing and commercializing small molecule drugs to treat infectious disease (HIV and HCV). Beyond infectious disease, the company also has a cell therapy platform from the 2017 acquisition of Kite, to develop novel cancer treatments. Gilead is now at a cross-road in its evolution as a company; gone are the days of \$19B in annual hepatitis-C franchise (HCV) sales, with new growth predicated on pipeline execution and acquisition. We see the beginnings of revenue and earnings growth, but need more clarity on the execution of the company's evolution. Following the 1Q19 earnings call, we have started to get a sense of the new CEO's (Daniel O'Day) strategic vision for Gilead, with an emphasis on pipeline expansion and commercial excellence. Still with shares at a near five-year low, we think that investors need to see action before becoming more comfortable with an upside case for the company. Absent clear growth levers, GILD share could become a 'value trap', where the only upside is driven by the dividend and share repurchases. We are not negative on Gilead, but without quantifiable drivers of share outperformance we rate shares Neutral. Our thesis could change with accretive M&A, clarity on launching filgotinib early without the need for the MANTA trial, and changes to the current HIV market dynamics that favor Gilead. Please see our [industry report](#) for more detail on the Large Cap Biotech sector.

**We are Neutral rated on Gilead shares for three main reasons:** 1) we like the base HIV business, but do not see outsized growth that would significantly alter earnings projections, 2) Cell-therapy is an important platform to have, but sales from Yescarta will likely never generate revenues akin to Sovaldi/Harvoni in 2015, and 3) unlike with Biogen (Underperform), we think that the multiple is somewhat protected from further contraction, with a new strategic vision or acquisition we could see expansion.

**Our One-Year Price Target of \$70 is Based on Our Base-Case DCF analysis,** which assumes a 9.0% WACC, -0.5% terminal growth rate and ~1,291M fully diluted shares outstanding. Our WACC is a 1.0% premium to Bloomberg WACC of 8.0%. Gilead's industry-leading HIV and HCV franchises are mature businesses serving large patient populations, for which Gilead products are the best-in-class standard-of-care. However, declining patient starts in HCV and generic competition in HIV are expected to reduce their overall significance during our forecast period. HIV and HCV sales comprise 87% of projected revenues in 2019, declining to 83% in 2024 and 69% by 2030. Future cash flows are increasingly dependent on Gilead's late-stage pipeline in oncology and inflammatory disease, which we view as highly competitive markets. While we expect some of Gilead's commercial, regulatory and research expertise will benefit these programs, these are new markets for the company, requiring a new strategy under a new CEO. We incorporate these elevated execution risks into our valuation assumptions, via a 9.0% WACC.

**Risks. Upside risks:** **commercial risk** (better-than-expected sales for marketed or soon-to-be marketed assets), **intellectual property (IP) risk** (better-than-expected patent protection for assets, allowing for longer-than-expected exclusive marketing), **clinical/developmental risk** (better-than-expected clinical results for mid- and late-stage assets), and **business development risk** (we currently assume no major M&A in our model and valuation, if Gilead engages in transformative M&A, we could see near-term earnings accretion and/or P/E multiple expansion).

**Downside risks:** **commercial risk** (poorer-than-expected sales for marketed or soon-to-be marketed assets), **IP risk** (if patents are challenged or expire earlier than expected or if generic manufacturers are able to launch sooner), **clinical/developmental risk** (if any of Gilead's late-stage assets fail in clinical trials), **regulatory risk** (if FDA or EMA delay or reject marketing application approvals for any of Gilead's pipeline assets), and **external/market risk** (macro-economic issues, government policy, and other broader market issue can negatively impact Gilead shares).



**Low Multiple, Unlikely to See Further Contraction Relative to Peers; Not Paying for Any Growth.** Gilead shares trade at a warranted forward P/E discount to most large cap biotech peers (9.6x vs. 16.5x) and pharma (14.7x), in our view. Biogen is the only large cap biotech that trades below Gilead (7.8x), given what we believe to be larger structural issues and more downside risk is warranted. From a cash flow valuation perspective, we think that HIV and HCV are fairly valued—even with a dominant-share in HIV (that will likely continue, per our physician checks and proprietary survey). Yescarta and the cell therapy franchise represent interesting innovation; however, we continue to believe that commercialization will remain a challenge (vis-à-vis autologous competitors, emerging novel bispecifics, and potentially allogeneic options). Now that we're past the STELLAR-3 and 4 readouts and are fairly confident that filgotinib will be a leader in the immunology space (following positive data from the FINCH-1, -2, and -3 trials), we see limited downside risk to current trading levels. However, clarity on how the story will evolve back to growth, we do not expect significant multiple expansion in the near term.

**Dividend Yield: Key Reason to Hold Shares Near-Term.** Gilead and Amgen are the only Large Cap Biotech companies to reliably pay a dividend, with a current dividend yield of 3.8% and 3.4%, respectively. Biogen does not currently pay a dividend, with share repurchases as the primary vehicle for capital return to shareholders. Gilead's dividend compares favorably to U.S. Major Pharma peers, with AbbVie the only company paying a higher dividend (5.5%; U.S. Major Pharma mean of 3.4%). We think that Gilead's dividend yield makes it relatively more attractive vs. Biogen or Regeneron. O'Day outlined his intention to keep "an attractive dividend policy," which we view as positive. Even with the current dividend yield, we think that Gilead can engage in M&A.

**Proprietary HIV Survey Suggests Continued Dominance and Preference for Gilead SRTs.** Despite potential generic threats and the recent launch of ViiV's Dovato, our surveyed physicians believe that the efficacy combined with the safety benefit of TAF-based regimen will continue to dominate the treatment landscape. While ViiV's doublet Dovato, (dolutegravir + lamivudine) has comparable efficacy and safety in a clinical trial setting, physicians tend to prefer a three-drug SRT (e.g., Biktarvy) due to a perceived benefit of lower resistance risk. Genericization of the HIV market will likely have some impact on branded sales, but our surveyed physicians continue to favor simpler regimens with better safety/clinical profiles. From a valuation perspective, the HIV business accounts for nearly 80% of our DCF. Sales from these assets comprise the majority of the revenue base for the company. **We detail our survey results later in this report.**

**Cell-Therapy Franchise Has a Good Growth Profile with a Projected 5-year CAGR of 23%; Still with ~\$500M in Estimated 2019 Sales Yescarta Is Not Enough to Re-Rate Shares.** Investor pressure to "do a deal" resulted in the \$12B acquisition of Kite in August 2017, which we believe to be on the expensive side, and may not generate an immediate return for shareholders (unlike the 2011 acquisition of Pharmasset or even the 2002 acquisition of Triangle). The expansion into this important area for the future treatment of cancer is positive, in our view, but we still see headwinds and competitive pressures longer -term. In the current iteration, manufacturing and administering Yescarta are challenging, and will likely prevent more rapid uptake and use. While Gilead has other assets from the Kite platform in development, we are concerned about the recent discontinuation of the BCMA program (as we view multiple myeloma to be a valuable market) and note that many of the other assets are in very early stages of development. We also think that the emergence of novel bispecifics and allogenic CAR-Ts could blunt sales of this current generation of products.

**New CEO Daniel O'Day from Roche Pharmaceuticals Has Experience Running a Successful Commercial Organization; However, the Gilead and Roche Backbones Are Very Different.** Mr. O'Day has knowledge of oncology and rare disease from his time at Roche; but has a limited history of deal making. We believe Gilead needs some 'quick wins' that will translate into commercial success; however, Roche has traditionally taken a

longer, more relaxed approach to trials. We do not doubt that he is an effective leader; we just need to see more translation of strategy into execution. Consistent with commentary we expect an evolution, not a revolution—suggesting he will take his time in getting to know the organization prior to making any major structural changes.

**Strong Strategic Priorities, Yet We Wait for Execution.** From our first glimpse of O'Day on the 1Q19 earnings call, we got the sense that he understands the urgency to fill the later-stage pipeline, submit marketing applications for filgotinib as soon as possible, and focus on commercial delivery. We think that this is the right strategic approach for Gilead, especially with the pipeline (contrasting to Biogen, where management appears to be less aware of the pipeline gaps). We also think prioritizing filgotinib and working with FDA to file ahead of the MANTA data underscore the importance of this asset for the company. Recall, FDA wanted data from the male testicular safety study in patients with ulcerative colitis, despite positive safety data from the robust phase 3 rheumatoid arthritis program. On the commercial front, we think that any efforts to accelerate sales of Yescarta would be seen as a positive. We think the formal separation of Kite as a distinct business unit could help the foster innovation akin to Roche's handling of Genentech.

**Recent Deals Announced under O'Day; Not Yet Enough to Move the Needle.** The recent announcements of a partnership with Novo Nordisk for NASH combination therapy development and with Goldfinch Bio for kidney disease therapies are reflective of O'Day's deal making at Roche. The latter partnership is a small investment for Gilead (\$55M upfront cash, including a \$5M equity investment), and gives the company access to earlier-stage assets in kidney disease. Gilead received exclusive options to license rights to products derived from Goldfinch's Kidney Genome Atlas, reflective of a "big data" approach to drug development. We are still hoping for a larger, later-stage deal that could help drive near-term earnings accretion.

**Filgotinib Could be Source of Revenue Growth for Gilead Following Recent Positive Data from the FINCH-1, -2, and -3 Trials as Potential Best-in-Class; We See Potential Upside if Filing is Possible without MANTA.** With a good clinical profile, which we believe to be supportive of regulatory approval, we think the filgotinib is one of Gilead's "star" pipeline assets. Still with an increasingly crowded space in RA and IBD, we think that the launch would have to be very strong to significantly alter the current revenue base of Gilead. A key debate remains around the necessity of the MANTA trial data set to file—something Gilead is currently engaged with FDA to address. If the data set is not required, we could see a launch in the back-half of 2020, if required this could be pushed out at least one year to later in 2021. Success of filgotinib is mostly priced in, in our view, as we have data from the three pivotal trials in RA, yet we think the general view is that MANTA will be required for filing. Any update suggesting MANTA is not required could drive share upside. Our estimates for end-user sales reach \$1.1B by 2024, slightly below consensus expectations.

## 1Q Results

We would characterize Gilead's 1Q19 as 'good enough' given an earnings beat of \$0.15, but a slight revenue miss of \$20M. Biktarvy far exceeded street expectations, beating consensus by >\$110M (on a stronger than expected launch in Europe). More importantly the 1Q19 call was our first earnings call with the new CEO. We liked his tone and strategic priorities—especially commentary on prioritizing business development. As a whole we need to see execution to become more positive on GILD shares, but if he follows through on expanding the pipeline and is able to accelerate approval of filgotinib we could be more positive on the stock.



## Outlook

**Near-Term Outlook:** Given a strong HIV business and a potentially best-in-class asset with filgotinib, off set with a weaker pipeline and growing cell therapy franchise, we believe that Gilead shares will perform in-line relative to peers and our coverage universe. While we highlight that Gilead has a need to grow both the revenue base and late-stage pipeline, relative to Biogen, we think the need is less urgent. We could see some share upside from HIV (including continued commercial progress with Biktarvy), clarity on the filing plans for filgotinib, and even incremental updates on the cell therapy franchise. We think that another NASH disappointment (ATLAS), worse-than-expected HCV sales, or in ability for the new CEO to execute on his stated goals could drive share downside. Given the current puts and takes for Gilead, we do not see any significant reason for multiple expansion, nor do we see any reason for further contraction. Over the balance of 2019 and into 2020, we expect shares to trade range bound absent any significant strategic shift or immediately accretive M&A.

**Long-Term Outlook:** Longer-term we think that much of Gilead's success or failure, will rest on what drives the next leg of revenue and earnings growth. In our view, 2019 is projected to be a trough year for earnings (at nearly 50% of 2015's EPS), with tepid growth expected over the next few years. We hope that the new CEO clearly articulates and executes on his strategy to change the trajectory of the business. Over time HIV is projected to slow (even with Biktarvy) with Yescarta peaking out around \$1.4B by 2023/2024 in WW revenues—pointing to a need for growth beyond the current business lines. Absent a clear strategy (which will likely include some sort of transaction or transactions), we could see multiple compression longer-term.

**Credit Suisse Relative View to Peers:** Relative to peers, Gilead trades at a discount on a P/E basis (except for Biogen). We forecast its current base-business to be relatively flat longer-term (growth from Biktarvy, off-set by patent expirations and competition in HIV, and continued contraction of the HCV business). From a pipeline perspective, we think Gilead will remain the leader in infectious disease, but lags in NASH and oncology. We project modest growth relative to peers in our universe. We think that Gilead could continue to be viewed as a buyer from weakness (not as bad as Biogen, but not from strength as with Vertex or Amgen). All in our assessment places Gilead middle-to-back of the pack, not as problematic as Biogen but less excitement and upside opportunity as Regeneron (also Neutral rated).

## 2019 Guidance and Consensus Expectations

**Slightly ahead of revenue consensus expectations; below on non-GAAP EPS.** Our Neutral thesis is based on flat top-line revenues of maturing HIV and HCV business. We are near the middle of guidance consistent with our Neutral rating (Figure 1) and slightly ahead of FactSet consensus. Similarly, our product gross margin is the middle of guidance at 86%. We estimate lower R&D and SG&A expenses compared to 2019 guidance after negative data on Gilead's NASH drug selonsertib during 1Q19. Gilead did not update guidance in 1Q earnings despite the failure of selonsertib. We are significantly below consensus expectations for expenses, as the Street's numbers may not be updated to reflect this change. Our tax rate is in line with both consensus and guidance. We estimate a -2% difference in diluted non-GAAP EPS compared to consensus.

**Figure 1: 2019 Estimates vs. Gilead Guidance vs. Consensus**

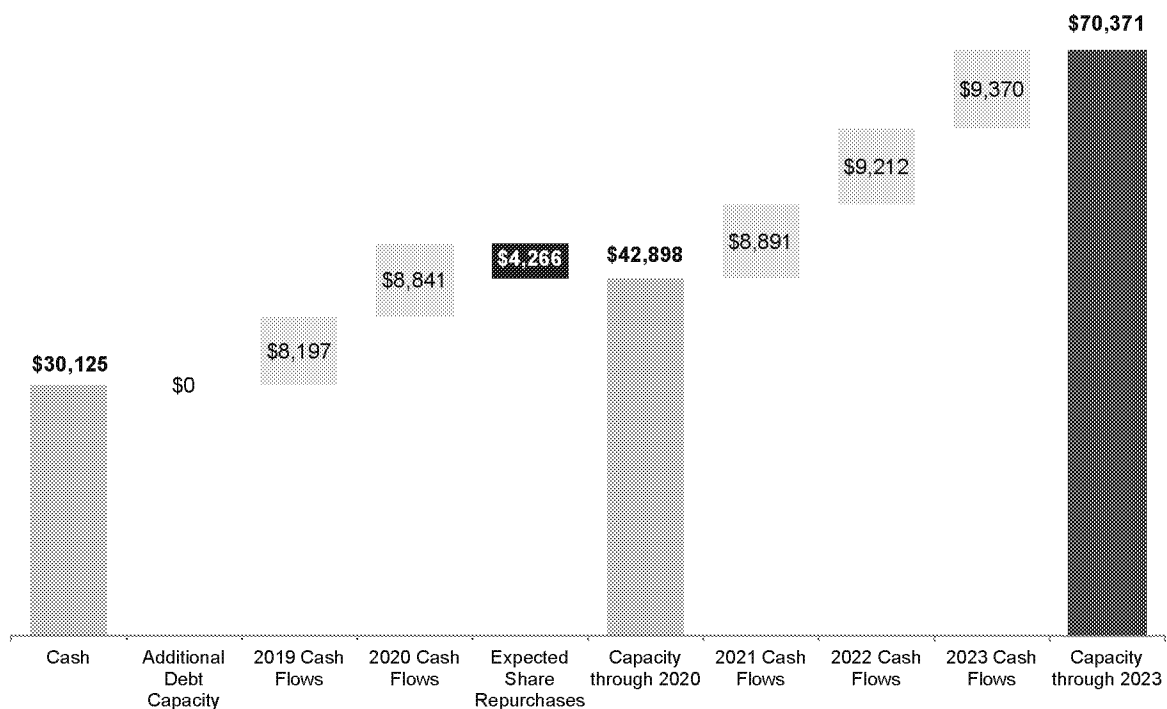
	Guidance	CS	Consensus	CS vs. Cons: Δ	
<b>Revenue</b>	\$21.3-\$21.8B	\$22.1B	\$22.0B	\$112M	+1%
<b>Product Gross Margin</b>	85-87%	86%	85%	+1%	nm
<b>R&amp;D Expenses</b>	\$3.6-\$3.8B	\$3.5B	\$4.0B	(\$407M)	(10%)
<b>SG&amp;A Expenses</b>	\$3.9-\$4.1B	\$3.9B	\$4.1B	(\$220M)	(5%)
<b>Tax Rate</b>	20-21%	20.3%	20.5%	(0.2%)	nm
<b>EPS</b>	not provided	\$6.71	\$6.88	(\$0.16)	(2%)

Source: Company data, Credit Suisse estimates, FactSet

## Deal Capacity

**Capacity to Transact with a Near-Term Need for M&A.** Gilead has significant capacity to acquire with a healthy cash balance of \$30B (see Figure 2 for our analysis of Gilead's deal capacity). We do not expect Gilead to take on additional debt (>\$25B) but the company's cash balance and future cash flows are more than enough to complete a deal even with continued share repurchases. We estimate up to \$43B in capacity by 2020 and \$70B by 2023. Gilead is in a better position vs. Biogen, because Gilead's need to replace revenues is less imminent due to their best-in-class HIV franchise. We view Gilead's base business as facing less near-term headwinds than Biogen. However, the HIV franchise is facing generic competition over the next several years. This threat coupled with the declining HCV franchise, a recent failure in NASH, and lower-than-expected Yescarta sales all signify that Gilead would need to acquire mid-to-late stage assets to bolster pipeline revenue and de-risk their dependence on HIV sales. While we are positive on filgotinib, we would like to see more near-term assets with higher potential. Hence, we see Gilead as a buyer from weakness. This contrasts to Amgen who has already launched a diverse biosimilars business and other pipeline assets to replace the company's maturing base business.

**Figure 2: Deal Capacity 2020 through 2023**



Source: Company data, Credit Suisse estimates

## Three Key Debates

Figure 3: Gilead – Three Key Debates



### I. Expansion into Cell Therapy

BULL	BEAR
<p>⬆️ Yescarta sales are able to grow above Credit Suisse and consensus expectations, driven by increased quicker manufacturing, increased patient demand, and better-than-expected administration center capacity. Gilead is successfully able to expand the PI for Yescarta into earlier lines of therapy for DLBCL and other tumor types. Beyond Yescarta, Gilead develops next-generation cell therapies (e.g., KITE X19 and an allogenic-based CAR platform). Overall, CAR-T remains the preferred treatment for heme-onc patients (vs. emerging bispecifics).</p>	<p>⬇️ Yescarta sales continue to lag, with below-consensus and CS results near-term. Gilead is unable to shorten the manufacturing time, coupled with decreased demand growth and less-than-expected center capacity. Gilead is unable to expand the current PI for Yescarta and does not gain traction in earlier lines of therapy. Further, Gilead is unable to successfully develop other cell therapies, and is forced to write down more of the Kite acquisition. Autologous CAR-T therapy remains niche, with novel bispecifics and allogenic CAR-T platforms taking greater share in heme-onc.</p>
Credit Suisse Take	

↔️ We think that Yescarta sales will continue to be modest making it difficult to justify the \$12B price paid for Kite. Still in the long run we think that cell therapy and novel oncology modalities from the Kite platform could be important for Gilead. While there is competition, we think that Yescarta remains a favorable option, when speaking with physicians. Launch of Bristol/Celgene's JCAR017 is unlikely to hamper sales as there is more than enough capacity for all three assets to co-exist. To the negative, we do not see significant expansion into earlier lines of therapy, as novel bispecifics and allogenic CAR-T therapies are likely to be used in this setting (which could also be a competitive threat in advanced patients). Beyond Yescarta, we see limited success with earlier-stage products, based on the recent write down of the anti-BCMA CAR-T asset.

### II. Durability of the HIV Business

BULL	BEAR
<p>⬆️ Gilead continues to remain the dominant player in the HIV business, with continued strong uptake of TAF-based regimen (namely Biktarvy) in both the US and ROW. Generics are unable to dent sales durability and growth, given physician preference for simple (i.e., single tablet), safe, and efficacious regimens. ViiV's doublet regimen enjoys limited uptake, as physicians continue to prefer a three-drug regimen, to protect against viral resistance. R&amp;D efforts continue to be successful in developing advanced therapeutics, including a potential functional cure.</p>	<p>⬇️ Gilead's market share is heavily impacted by branded competition and generic entrants. While TAF-based regimens still remain important therapies, there is greater-than-expected uptake of ViiV's doublet regimen. Further generic competition in both the US and OUS take greater-than-expected share are payers push patients to less expensive options. R&amp;D efforts produce little, with failures on novel anti-HIV therapies and a functional cure.</p>
Credit Suisse Take	

⬆️ Based on our physician checks and our proprietary survey, we believe that Gilead will remain the dominant player in HIV, led by continued success with Biktarvy and other TAF-based regimen. Generics will likely have limited impact in the US, as physicians prefer patients are treated with the latest, and most efficacious and safe therapies. OUS, genericization of the market will likely be in line with expectations, noting that many European governments may opt for less expensive options. We believe that ViiV's doublet is unable to gain significant share, despite positive data as physicians prefer a three-drug regimen to prevent viral resistance. While we have limited data on development assets in HIV, we think that Gilead remains a leader in virology and understanding of the disease, increasing the likelihood of success of one or more of these assets.

### III. New Leadership

BULL	BEAR
<p>⬆️ Daniel O'Day is able to successfully navigate Gilead to top and bottom-line earnings growth by internal restructuring, acceleration of the cell-therapy franchise, and external M&amp;A. O'Day's leadership is able to help reaccelerate growth by the end of 2019 and into 2020. He is further able to successfully merge his big pharma culture with the biotech culture of Gilead.</p>	<p>⬇️ Daniel O'Day's big-pharma style of leadership clashes with Gilead's biotech mentality and does not deliver reacceleration of revenues and earnings. He does not act quickly enough to restructure the company (i.e., improve the internal R&amp;D engine). Further, the cell therapy franchise continues to struggle, despite experience at Roche in oncology. There is no significant external M&amp;A to help drive growth.</p>
Credit Suisse Take	

↔️ Given O'Day's track record at Roche, we believe that he will be an effective leader for Gilead. We think that he will take his time in learning the organization and understanding what needs to change. We get the sense that he appreciates the urgency to bolster the later-stage pipeline while supporting the current commercial business. With less than a quarter of tenure, we need to see how O'Day executes on the strategy he recently outlined.

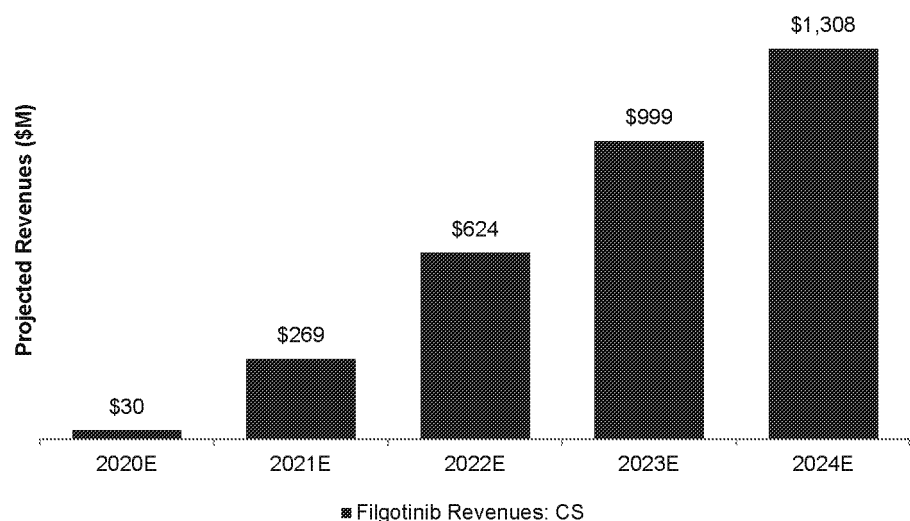
Source: Credit Suisse.

## Filgotinib: A potentially strong competitor in a crowded space

**Filgotinib could be an area of revenue upside away from HIV or HCV for Gilead, with recent positive data in RA (FINCH-1, 2 and 3).** Despite a good clinical profile, that is supportive of regulatory approval, filgotinib in a vacuum will not be enough to move the needle for Gilead, in our view. Indeed, much of the upside from the larger RA indication is priced into the stock (with an estimated ~\$1.4B in peak unadjusted WW sales in RA), see Figure 33. Following the failure of selonsertib in patients with advanced and mid-stage fibrosis and nonalcoholic steatohepatitis (NASH) in both the STELLAR-3, and -4 trials, filgotinib remains the nearest-term investigational asset, with the highest impact potential. We like the large-scale development plan as it could take advantage of JAK efficacy across inflammatory disease (see Figure 34). While the JAK space is crowded (filgotinib could be fourth to market, behind Pfizer’s Xeljanz, Lilly/Incyte’s Olumiant, and AbbVie’s upadacitinib), we think that the assets clinical profile could be differentiated enough to command market share. Overall, data indicates that safety looks better than competitors (namely Lilly/ Incyte’s Olumiant, [PI link](#)); but we caution that we need to see complete data across RA trials to make the full claim regarding safety of filgotinib. We detail our comparative view of safety and efficacy across the class later in this section. **While we are generally positive on the asset in RA and other investigational indications, we are concerned that that Filgotinib will generate enough near-term revenues to accelerate top- and bottom-line growth for the Gilead P&L.**

**More clarity needed on filing timelines, MANTA safety study could be a gating factor.** While the data from the phase 3 FINCH trials (1, 2, and 3) were all positive, we note that Gilead and partner Galapagos have yet to articulate a strategy and path to filings. The key unknown is whether or not FDA will require results from the phase 2 MANTA male testicular safety trial prior to submission. If FDA does not require these data, then we could see filing by 2020 and a launch in 2021. This would be delayed to 2022/2023 if FDA required data from the MANTA trial, as Gilead has yet to disclose when the trail will be complete. **We highlight that recent commentary from the company suggests with the full FINCH-1, -2, and -3 data sets, the company may be able to file for approval in RA ahead of MANTA. We believe this update could better position filgotinib.**

**Figure 33: Filgotinib Adjusted Revenues, CS Estimates**



Source: Credit Suisse estimates

**Additional upside possible from IBD indications: Ulcerative Colitis and Crohn's.** If data from the SELECTION-1 and DIVERSITY-1 trials are positive (data expected in 2Q20 for SELECTION and 3Q20 for DIVERSITY), we expect additional upside given the potential for an additional >\$2B in peak sales (Ulcerative Colitis and Crohn's disease, collectively IBD). Beyond RA and IBD, we expect data from smaller opportunities including Lupus and Sjögren's Syndrome in 3Q19.

**Figure 34: Filgotinib Development Plan**

Phase 3 trials in rheumatoid arthritis and inflammatory bowel diseases									
	Trial	ID	Expected completion*	Phase 1	Phase 2	Phase 3	Status	Est. Launch	Est. Peak Sales
Rheumatoid Arthritis	FINCH1	NCT02889796		Methotrexate inadequate responders (n=1,650)			Data reported Mar '19	2020	\$1.4B
	FINCH2	NCT02873936		Biologic inadequate responders (n=423)			Data reported Sep '18		
	FINCH3	NCT02886728		Methotrexate naïve (n=1,200)			Data reported Mar '19		
	FINCH4	NCT03025308	May '22	Long-term extension, adults with RA (n=2,800)			Enrolling by invitation		
Ulcerative Colitis	SELECTION1	NCT02914522	Dec '19	Biologic experienced and naïve (n=1,300)			Active, not recruiting	2021	\$800M
	SELECTIONLTE	NCT02914535	Oct '22	Long-term extension, adults with UC (n=1,000)			Enrolling by invitation		
Crohn's Disease	DIVERSITY1	NCT02914561	Dec '19	Biologic Experienced and Naïve (n=1,320)			Enrolling	2021	\$1.8B
	DIVERSITYLTE	NCT02914600	Oct '22	Long-term extension, adults with CD (n=1,000)			Enrolling by invitation		
Other inflammatory diseases									
	Trial	ID	Expected completion*	Phase 1	Phase 2	Phase 3	Status		
Psoriatic Arthritis	EQUATOR	NCT03101670		Inadequate responders (n=131)			Completed, initiating Phase 3		
Ankylosing Spondylitis	TORTUGA	NCT03117270		Adults with AS (n=116)			Completed		
Small bowel CD		NCT03046056	3Q 2019	Adults with SBCD (n=100)			Enrolling		
Fistulizing CD	DIVERGENCE2	NCT03077412	2Q 2020	Inadequate responders (n=75)			Enrolling		
Sjögren's Syndrome		NCT03100942	1Q 2019	Adults with SjS (n=152)			Active, not recruiting		
Cutaneous Lupus		NCT03134222	1Q 2019	Adults with CLE (n=47)			Active, not recruiting		
Lupus Nephropathy		NCT03285711	3Q 2020	Adults with LME (n=9)			Active, not recruiting		
Uveitis	HUMBOLDT	NCT03207815	4Q 2020	Adults with uveitis (n=110)			Enrolling		
* Actual or estimated primary completion									
2019 program update calendar									
		1Q 2019	2Q 2019	3Q 2019	4Q 2019	1H 2020	2H 2020	3Q 2020	4Q 2020
Rheumatoid Arthritis	✓	FINCH1 data							
	✓	FINCH3 data							
				FINCH2 manuscript publication					
						File for approval in RA			
Ulcerative Colitis	✓	SELECTION recruited							
Sjögren's Syndrome	✓	Phase 2 recruited							
						Phase 2 data reported			
Psoriatic Arthritis						Initialize Phase 3			
Cutaneous Lupus						Phase 2 data reported			

Source: Company data, Clinicaltrials.gov, Credit Suisse estimates

**Filgotinib Later to Market, but Potentially Best-in-Class Oral JAK for Rheumatoid Arthritis.** We are encouraged by the emerging clinical profile for filgotinib and see it possessing best-in-class potential amongst the leading oral JAK inhibitors. Data from the Finch programs (1, 2, and 3) suggest excellent efficacy in a variety of patient types and when compared to other JAKs (including: AbbVie's upadacitinib, Pfizer's Xeljanz, and Lilly/ Incyte's Olumiant). We provide a complete cross-trial comparison of filgotinib to these assets in the Appendix.

Filgotinib's efficacy also appears better than the market leader Humira, which we view as a positive signal for the ongoing head-to-head FINCH 1 trial against Humira on a stable dose of methotrexate (MTX) (see Figure 35). Filgotinib showed a clear dose response, with higher ACR rates for the 200 mg dose than the 100 mg. On a placebo-adjusted basis, the ACR20 response rates were 26%/20% for the 100mg dose and 35%/35% for the 200mg dose at 12/24 weeks, respectively. For ACR50, the placebo-adjusted rates were 17%/16% for 100 mg and 28%/27% for 200mg, while for ACR70 the placebo-adjusted rates were 8%/12% for 15%/24%. The other FINCH trials (-2 and -3) also demonstrated statistically significant efficacy in patients who had an adequate response to a disease modifying anti-rheumatic drug (DMARD), see Figure 36, and who were naïve to methotrexate, see Figure 37.

**We like the new CEO's strategic priorities, but we await execution.**

**With less than a calendar quarter of tenure, much of Daniel O'Day's strategic vision for Gilead remains unknown.** On a whole we like his tone from the 1Q19 earnings call where he prioritized the following:

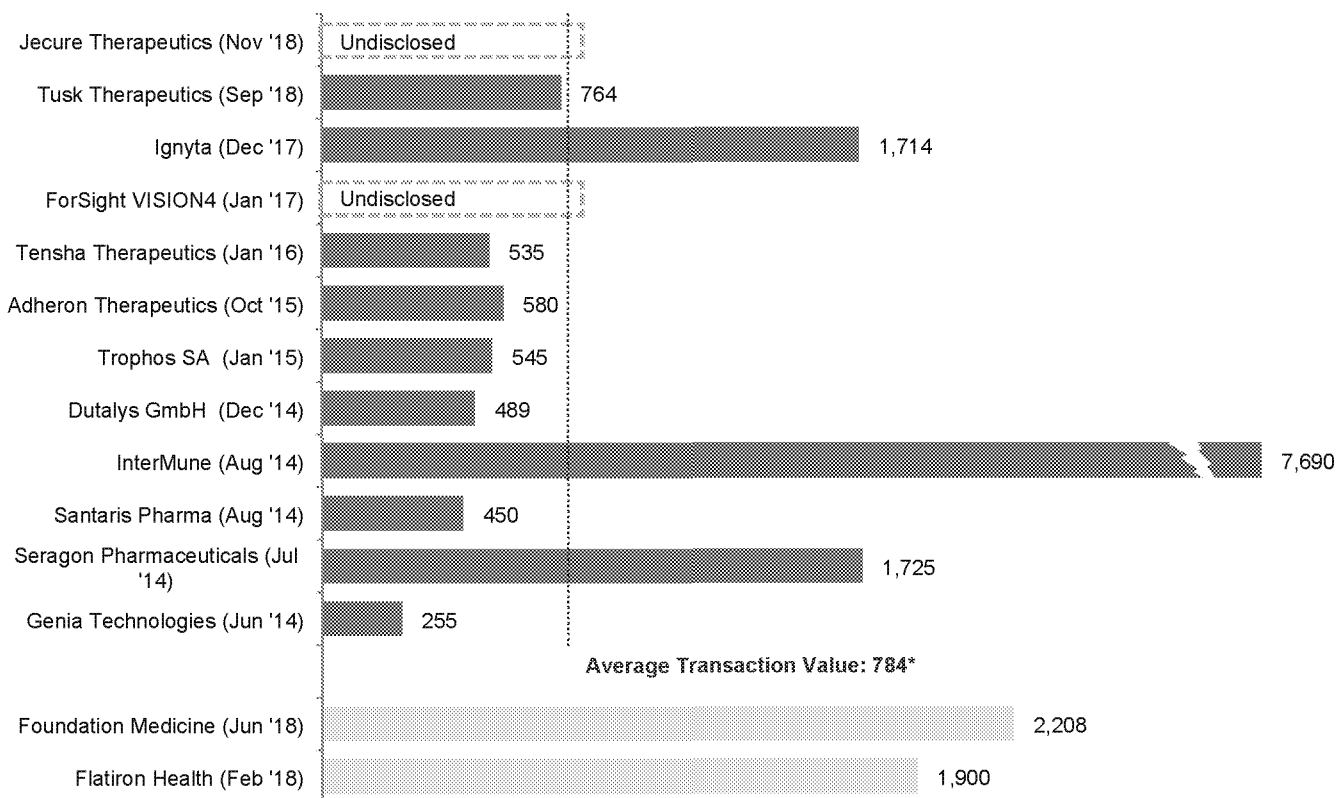
- 1) Strengthening the pipeline, both internal programs and through business development;
- 2) Ensuring optimal commercial delivery, both on currently marketed products and soon to be launched;
- 3) Ensuring that Gilead has "the right people in the right roles and that they are well-equipped for success."

We think that O'Day's openness to business development to strengthen the pipeline is reflective of investors' concerns, especially in light of the STELLAR-3 and -4 failures. Indeed, he prioritized finding opportunities to supplement the portfolio through M&A or partnerships. He wants to balance the dividend policy with the needs to grow the business long-term. We think his decisive action to operate Kite as a separate business unit with its own CEO, is reflective of his time at Roche where he was the CEO of the pharmaceuticals division. Still we await updates from O'Day's interaction with the leadership team and the board to shape the long-term strategy and vision for the company's future.

**While at Roche managing the pharmaceuticals division, O'Day oversaw smaller deals—potentially indicative of his approach towards Business Development.** To get a better sense of what Daniel O'Day may do as CEO, we reviewed the transaction history of Roche while he was CEO of the Pharmaceuticals Division (September 2012-December 2018) and COO of Roche Diagnostics (January 1999-2012); full Roche biography can be found [here](#). We note that Roche's largest acquisition in recent memory, Genentech, was during his tenure in the diagnostics division, and do not directly attribute O'Day as the driving force. Further, it is unlikely that O'Day was a driving force behind Roche's recent proposed acquisition of Spark. SEC filings indicate that formal discussions between Roche (represented by CEO Schwan) and Spark (represented by CEO Marrazzo) started on December 11, 2018—the day following the announcement of O'Day's appointment. Overall, with O'Day as CEO of the Pharmaceutical Division, Roche engaged in approximately 12 therapeutics focused transactions with a median deal size of \$680M. The largest was InterMune in 2014 for \$7.7b (see Figure 50). Roche was unable to successfully acquire Illumina while he was COO of Roche Diagnostics. Our European colleagues indicated that he did help Roche expand into big data with the acquisitions of Foundation Medicine (\$2.2B, announced June 2018) and Flatiron (\$1.9B, announced Feb 2018).

**Figure 50: Roche Transactions - Therapeutics Focused (June 2014- November 2018)**

US\$ in millions



\*Excludes InterMune  
Source: Company data, Credit Suisse estimates, FactSet

**We think that O'Day is unlikely to engage in significant M&A during this first year; indeed his track record at Roche suggests that he has taken a conservative approach to transactions.** Consistent with commentary on the 1Q19 call, we expect much of the remainder of 2019 to focus on developing a long-term vision and strategy for Gilead. We think that incremental updates across the pipeline, including the results of a planned meeting with FDA to determine the path forward for filgotinib in RA will help shape his vision for the company.

**Potential for culture clash between big pharma and nimble biotech?** While we have no specific indication that there will be any culture clash between O'Day and Gilead's current management team, we note that major pharma and biotech have differing approaches to drug development and commercialization. Our European colleagues who have covered Roche for a number of years indicated that, the company had tended to take a conservative approach to trial design (duplicate trials, longer timelines). We get the sense that there is a high level of urgency within Gilead to produce successful trial results that could help secure the next leg of growth for the company. We think that Gilead's lean and nimble mindset could be frustrated by O'Day's background from big pharma. O'Day does have functional experience in oncology and rare disease, the prior aligning to Gilead's expansion into cellular therapies. We note that Roche did not have any major cellular therapy programs as of O'Day's departure, thus he does not have direct experience in developing or commercializing CAR-T therapies.

**Big data could be interesting; however, investors want pipeline success and commercial execution.** O'Day had the luxury of time and resources to invest in big data platforms while at Roche, including Flatiron Health and Foundation Medicines. We believe



that big data will likely still have a role in the future of clinical trials at Gilead; however, we think that in the short term Gilead investors need to see positive pipeline developments. Further, Investors want to see acceleration and expansion of the CAR-T platform, after anemic full first year sales (\$264M in 2018) and a write down of a key asset from the Kite acquisition.

**All in we have a sense of how O'Day managed Roche Pharmaceuticals and Roche Diagnostics; but we do not know how this will translate into running Gilead.** O'Day was a career man at Roche, working at the firm for over 30 years, starting in various US-based commercial/sales roles in 1987. He clearly knows the broader biopharma industry, but lacks perspective from outside of Roche. His background could present to be a challenge in mixing cultures or could help reinvigorate Gilead into an R&D powerhouse with a diversified and promising pipeline. We expect investors to focus closely on O'Day over the next year, trying to gauge how he will alter the strategic course of the company.

## HOLT<sup>®</sup> View on Gilead

We have run our projections through the HOLT valuation framework, which results in \$68 per share, slightly below our target price of \$70.

HOLT is a Credit Suisse proprietary methodology for company analysis and stock selection that delivers an objective, globally consistent view of over 20,000 companies. HOLT uses a performance metric known as Cash Flow Return on Investment (CFROI<sup>®</sup>), which adjusts for accounting distortions to compare economic performance across sectors, regions and time on apples to apples basis. The HOLT valuation methodology is based on a discounted cash flow framework with a number of distinguishing features, including a unique way of calculating the terminal value and the firm's costs of capital.

Based on our forecasts and the HOLT DCF, we get a warranted valuation of \$68 per share, slightly below our target price of \$70, due the inclusion of other long term liabilities in HOLT debt (deducted from EV to get to equity value), which for GILD mainly comprise liabilities from repatriation tax.

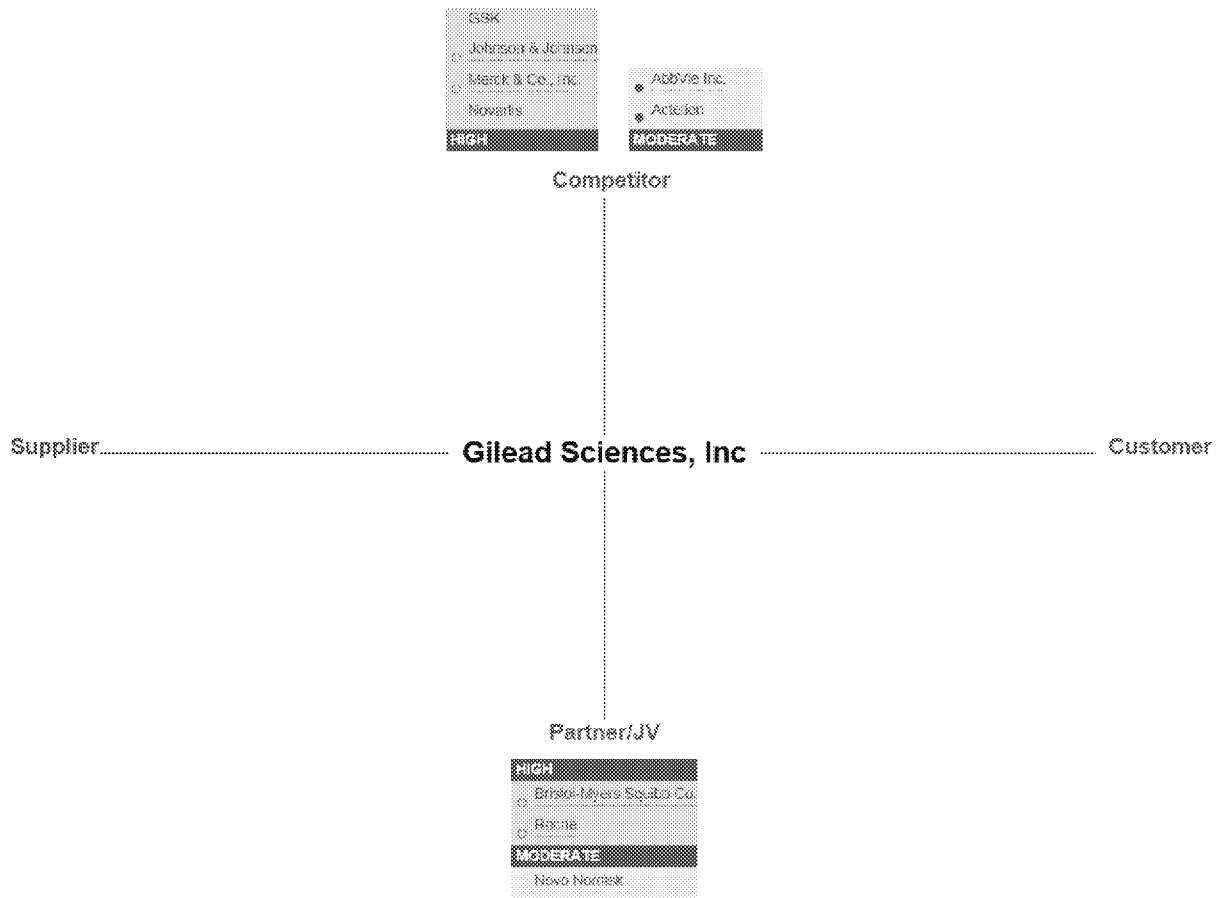
Beyond 2031, the HOLT DCF framework applies a mean reversion methodology to calculate the terminal value, assuming that CFROI and discount rate fade gradually to their long term average of 6%, and asset growth fades to reach average GDP growth of 2.5%.

We have also run a sensitivity analysis, which shows that GILD's valuation is more sensitive to the top line growth, and indicates that to get to our target price; HOLT implies long term sales growth of 0.5% and constant margins.

## CS PEERS Relationships for Gilead

PEERs is a global database that captures unique information about companies within the Credit Suisse coverage universe based on their relationships with other companies – their customers, suppliers and competitors. The database is built from our research analysts’ insight regarding these relationships. Credit Suisse covers over 3,000 companies globally. These companies form the core of the PEERs database, but it also includes relationships on stocks that are not under coverage. See Figure 63.

Figure 63: CS PEERS Relationship Map for Gilead



Source: Company data, Credit Suisse estimates

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

Filed on May 24, 2016

Published in the *Official Gazette* on November 8, 2016

GILEAD SCIENCES, INC.,

Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 53**

## Gilead (GILD)

Neutral

Gilead/Kite Is The Undisputed Leader Of The Cell Therapy Space

### CONCLUSION

In conjunction with this note, we published Piper Jaffray's BioInsights Cell Therapy Compendium where we conducted nearly 30 hours' worth of interviews with C-level management at numerous companies, including Gilead. Following these interviews, it is abundantly clear to us that the majority of the successes and learnings from the current generation of CAR-T products is attributable to Gilead/Kite's efforts and that it is the undisputed leader of the cell therapy space. Further, we expect the company's ongoing studies and collaborations to meaningfully improve cell product characteristics and manufacturing conditions and ultimately result in better patient outcomes. The bottom line is that we believe the cell therapy space is still in its infancy, that there is an enormous opportunity ahead when considering the totality of the next generation approaches, and that Gilead is pushing forward in all areas (auto/allo & liquid/solid) in an aggressive manner.

- Gilead is leaving no stone unturned in its efforts to improve the autologous CAR-T manufacturing process and ultimately, patient outcomes.** While Yescarta has offered lifelines to many patients and the durability from the recent 24-month update of ZUMA-1 was impressive, Gilead is focused on providing further patient benefit through constant innovation. To that end, company is optimizing its autologous manufacturing process by evaluating these four important areas: (1) characterization of the incoming patient apheresis material; (2) evaluation of additives to the cell product process that enhance the potential for greater efficacy or reduced safety risks; (3) characterization of the final product prior to infusion back into the patient; and (4) analysis of the infused product during therapy in order to link the behavior of the cells to patient outcome.
- Optimization studies should improve the Yescarta patient experience.** In addition to the above, the company is also focused on increasing the number of patients who achieve a deep and durable response and enhancing safety by conducting "optimization" studies of Yescarta. To be more specific, these studies will assess the benefits of various combinatorial approaches, bridging chemotherapy, pre-treatment regimens, and earlier intervention with steroids and other agents. Additionally, Yescarta is being evaluated in earlier lines, with potential readouts for 3L DLBCL in 2020 and 2L in 2021.
- Gilead's continuous pursuit of cell therapy innovation includes the development of allogeneic cell therapy products and strategies to conquer solid tumors.** Allogeneic-based cell products are an important focus for Gilead/Kite and are being explored via partnership with Sangamo and its zinc finger editing technology. For solid tumors, the company is excited about the potential for neoantigen TCRs and their partnership with Gadeta whose  $\gamma\delta$  TCR approach could be particularly powerful. Further, they are optimistic towards the potential of the synNotch platform which allows for logic gating and local production of biologics in the hostile tumor microenvironment.

### RISKS TO ACHIEVEMENT OF PT & RECOMMENDATION

Commercial risk of the antiviral franchise and Yescarta and clinical risk of filgotinib.

### COMPANY DESCRIPTION

Gilead is the world leader in antiviral/anti-inflammatory medicines and cellular therapy.

YEAR	REVENUE (US\$ m)						EARNINGS PER SHARE (US\$)					
	Mar	Jun	Sep	Dec	FY	FY RM	Mar	Jun	Sep	Dec	FY	FY P/E
2018A	5,088.0	5,648.0	5,596.0	5,795.0	22,127.0	3.9x	1.48	1.91	1.84	1.44	6.65	9.8x
2019E	5,477.0	5,459.0	5,546.0	5,828.0	22,310.0	3.8x	1.65	1.65	1.70	1.80	6.80	9.6x
2020E	5,698.0	5,765.0	5,807.0	6,180.0	23,445.0	3.6x	1.70	1.75	1.80	2.00	7.25	9.0x

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PRICE: US\$65.15

TARGET: US\$75.00

DCF through 2035, which includes an antiviral franchise that is growing in 2019 and beyond, a continued successful Yescarta launch, and eventually, a successful filgotinib launch.

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Research Analyst, Piper Jaffray & Co.  
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Changes	Previous	Current
Rating	—	Neutral
Price Tgt	—	US\$75.00
FY19E Rev (mil)	—	US\$22,310.0
FY20E Rev (mil)	—	US\$23,445.0
FY19E EPS	—	US\$6.80
FY20E EPS	—	US\$7.25
52-Week High / Low	US\$79.61 / US\$60.32	
Shares Out (mil)	1,310.0	
Market Cap. (mil)	US\$85,346.5	
Avg Daily Vol (000)	7,322	
Book Value/Share	US\$11.90	
Net Cash Per Share	US\$16.70	
Debt to Total Capital	0.7%	
Div (ann)	US\$2.57	
Yield	3.94%	
Fiscal Year End	Dec	

### Price Performance - 1 Year



Source: Bloomberg

## The First Generation Of CAR-T Products Starts With Unselected Patient T Cells

If one analyzes T cell products made from currently approved methods, it is clear that no emphasis is placed on starting with or generating specific T cell types. As many as half of patients relapse after responding to CAR-T treatment, and these responses could be short-lived due to a suboptimal constitution of T cells, with factors like mix of cell phenotypes and cell fitness playing a key role.

The manufacturing protocol for current CAR-T products is simply not advanced enough yet to select for a particular T cell type prior to expansion and does not guide expansion to a specific set of cells either. Products are generated from the mixture T cells collected from a patient's apheresis product and can vary widely due to a patient's pretreatment.

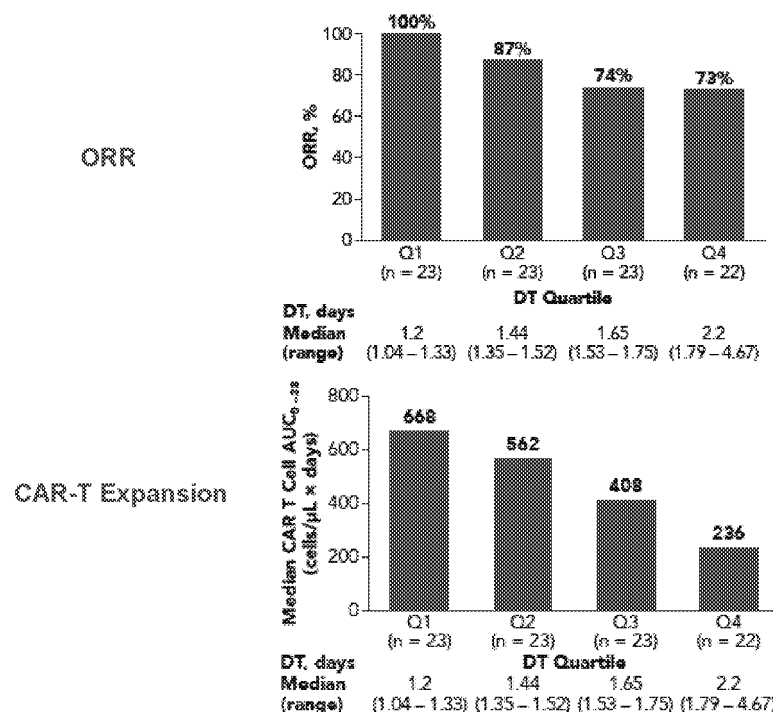
Gilead provided an outcomes analysis for the Yescarta products that were manufactured for the ZUMA-1 trial. For this analysis, the T cell products for a total of 91 patients were analyzed for their *ex vivo* expansion characteristics, pharmacokinetics, and phenotype. The main findings from this study include:

- Response and *in vivo* CAR-T expansion was associated with **shorter doubling time** (or improved cell fitness) during the *ex vivo* expansion protocol.
- A majority of primary treatment failures were associated with T cell products that had a longer doubling times (worse cell fitness; >1.5 days).
- **Naïve T cells** and naïve T cell plus central memory T cells were associated with increased doubling time (or cell fitness), while central memory T cells alone were not. CD4:CD8 T cell ratio was not associated with doubling time.
- Doubling time was NOT associated with ongoing response nor Grade ≥3 neurotoxicities.

Sources: Locke et al., Gilead SITC 2018 poster; Piper Jaffray Research

EXHIBIT 1

### ORR and CAR-T Expansion in ZUMA-1 Sorted By Doubling Time



Key takeaways: By understanding metrics related to the improved T cell products, the field may gain insight into manufacturing processes that can further improve patient outcomes. Thus far, it is clear that T cell fitness, phenotype and *in vivo* expansion are correlated with the starting cell population and performance during *ex vivo* expansion, so the optimization of the starting material, culture conditions or other parameters should lead to fewer relapses and sustained patient responses.

## The Degree Of T Cell Polyclonality and Polyfunctionality Translates To Better Outcomes

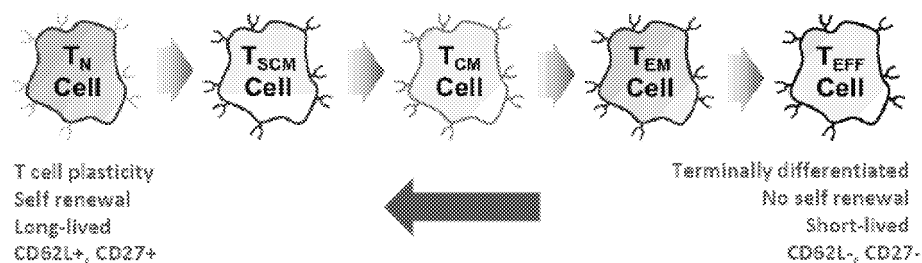
Polyclonality of  $\alpha\beta$ -T cells is important in the defense of natural infection. For example, in infectious disease and with vaccines, polyclonality is associated with increased protective immunity:

- In HIV, analysis of the T cell repertoire in patients who progressed vs. those who were resilient to disease revealed distinct differences in T cell phenotypes. While both patient subsets have T cells directed against HIV, those of progressors are limited to 1-2 effector functions, while the resilient ones are truly polyfunctional with 3 or more effector functions<sup>3</sup>.
- In vaccines, quality of response depends on the T cells exhibiting distinct functional subpopulations which provide responsive and durable immunity<sup>4</sup>.

Polyclonality of  $\alpha\beta$ -T cells is important for cell therapy products. Understanding polyclonality/polyfunctionality in the natural immune response has lent itself to the discovery of different T cell phenotypes; including ones that are vital for an anti-tumor response. In terms of phenotype, they range from T cell plasticity/self-renewal, and long-lived on the left side to terminally-differentiated, no self renewal, and short-lived at the end of the line on the right.

### EXHIBIT 2

#### T Cells Exhibit a Range of Phenotypes



Each cell type exhibits different functionality, including cytokine secretion, cytotoxic activity, and self-renewal capability. It is hypothesized that recapitulating this range of phenotypes and functionality could lead to improved outcomes in therapy.

Several examples to support this hypothesis are illustrated below:

1. In melanoma patients who respond to PD1 therapy, the proliferation of a stem-like TIL subset was found<sup>5</sup>. This suggests that checkpoints achieve long-term response through promotion of this subset vs. reversal of exhaustion.
2. Anecdotally, it has been observed that patients who achieved a response had received T cell products which had a higher proportion of memory stem T cells than the T cell products of patients who didn't respond.
3. A case study in a CLL patient found that 94% of their CAR-T cells at peak response post-infusion were derived from a single clone where the TET2 gene was disrupted<sup>6</sup>. These cells exhibited a central memory phenotype. Recapitulation of this deletion *in vitro* found that CAR-T cells demonstrated enhanced potency.
4. Preclinical studies have found central memory CD8+ T cells to be associated with post-infusion expansion, survival, and persistence<sup>7</sup>. On a related note, another study demonstrated that a CAR-T product generated from purified naïve or central memory T cells was associated with greater expansion and anti-tumor activity compared to a CAR-T product made from a pure effector memory T cell population<sup>8</sup>.

These observations suggest that careful consideration should be made to the subset and composition of T cell products.

Sources: bluebird bio Company Presentation; 3. Poropatich K et al. J Gen. Virol. 92(2):247-268; 2011; 4. Seder RA, et al. Nature Reviews Immunology 8, pages 247--258 (2008); 5. Siddiqui et al. Immunity. 2019 Jan 15;50(1):195-211.e10; 6. Fraietta JA et al. Nature. 2018;558(7709):307-312; 7. Xu Y et al. Blood. 2014;3750-3760; 8. Sommermeyer D, et al. Leukemia. 2016;30:492-500; Piper Jaffray Research

## The Biology Of $\alpha\beta$ -T Cells And Key Features To Be Emulated In A Cell Therapy Product

Evidence from case studies and the post-hoc outcomes analysis of the ZUMA-1 study suggests that polyclonality of  $\alpha\beta$ -T cells is an important consideration for cell therapy products. While this isn't necessarily a new concept in the field given the quote below, the focus of the initial cell therapies has been to get them to market and save lives, as opposed to conducting exploratory analysis of what constitutes *the best* product.

"...using stem cell-like T cells can overcome the limitations of current adoptive T cell therapies, including inefficient T cell engraftment, persistence and ability to mediate prolonged immune attack. Conferring stemness to anti-tumour T cells might unleash the full potential of cellular therapies."

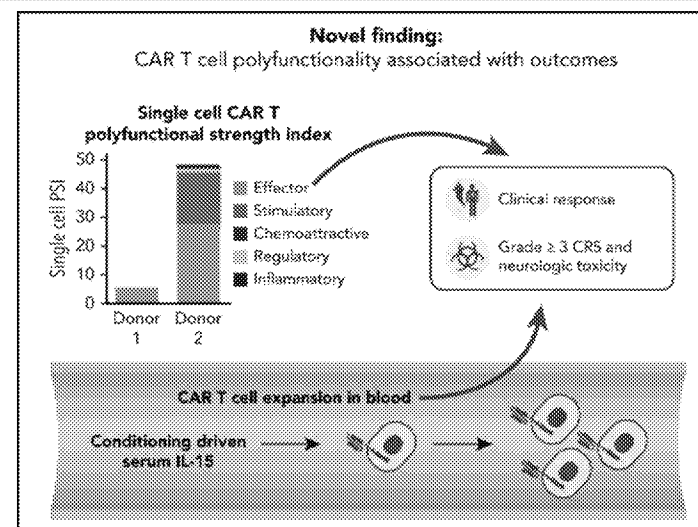
- Nature Reviews 2012

We must also note the distinction between *polyclonality* and *polyfunctionality* and the implications this has for T cell products. While polyclonality suggests polyfunctionality (the differential activity induced by expression of different immune programs between T cell subtypes), one could argue that more attention needs to be spent on the latter. Indeed, in Non-Hodgkin Lymphoma (NHL) patients, polyfunctionality of CAR-T products is associated with clinical responses and toxicities (**right**). Specifically, it was found that products with a diverse cytokine/chemokine milieu (IFN- $\gamma$ , IL-17A, IL-8, and macrophage inflammatory protein 1- $\alpha$ ) afforded better outcomes<sup>10</sup>. With regards to toxicities, CD4+ cells expressing IL-17A were associated with Grade  $\geq 3$  neurotoxicities.

It has become apparent that ratios of different types of cells and their functionality is important for high-quality T cell products. While no "golden" ratio has been defined to date (e.g., 7% stem cells, 20% effector memory cells, etc.), it is generally agreed upon that a mix of different cell types is important. Optimization of the T cell constitution in these products is consequential for the generation of quick-acting and long-term memory responses. For example, some cells such as effector and effector memory produce more cytokines than stem cell variants and are vital for changing the microenvironment/debulking the tumor and for driving initial anti-tumor activity while, effector memory and stem cells are critical for generating durable response. For this reason, significant emphasis should be placed on representing a spectrum of cell phenotypes and functionalities.

EXHIBIT 3

### Polyfunctionality is Associated With *In Vivo* Activity



Sources: 9. Gattinoni L et al. Nat Rev Cancer. 2012 Oct;12(10):671-84; 10. Rossi, JR et al. Blood. Jan 2018, blood-2018-01-828343; Piper Jaffray Research



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## The CAR Construct Can Influence Clonality And Activity Of The Cell Product

CAR signaling and co-stimulatory components influence the phenotype of the CAR-T cell. Given the importance of T cell product clonality in driving better patient outcomes that was just established, we note that preclinical studies have demonstrated that cell phenotype can be governed by the use of different costimulatory domains. This is particularly relevant given that the two commercial products, Yescarta (Gilead) and Kymriah (Novartis) utilize the different CD28 and 4-1BB co-stimulatory domains, respectively, which likely explains observed differences in efficacy/safety between the two. Briefly, the following characteristics have been ascribed to T cell products consisting of each co-stimulatory domain:

- **CD28**: Quick effector function; increase in glucose uptake and aerobic glycolysis; less persistence; enriched **effector memory cells**<sup>11,12</sup>.
- **4-1BB**: Slower, but more sustained, effector function; enhanced oxidative metabolism and anaerobic fatty acid oxidation; higher persistence, **enriched for central memory cells**<sup>11,12</sup>.

In general, the enhanced proliferation and persistence seen with CD28 and 4-1BB in preclinical testing is consistent with the initial results from single-arm clinical trials. In patients treated for hematologic malignancies, CD28 CAR-T cell therapy has been associated with persistence and activity of roughly 30 days. However, with 4-1BB CAR-T cell therapy, CAR T cell expression and cytotoxic activity has been observed out to years post-infusion. Relevant to the discussion above, it has been found that CD28 CAR-T cells express a genetic program that is more effector-like in profile while 4-1BB CAR-T cells express one that is skewed toward memory-like profile<sup>13</sup>.

CD28- and 4-1BB-containing CAR-T cells demonstrate antigen density-dependent effects *in vitro*. In addition to phenotype and polyclonality differences, costimulatory domains could also play a key role in the CAR-T's ability to function in different antigen density conditions. One study found that administration of CD28-CAR-T cells in low antigen conditions was able to eradicate the remaining tumors cells. However, with 4-1BB CAR-T cells, the same conditions led to relapse in mice. These effects were found to be mediated through promotion of CAR-T fratricide by 4-1BB CAR-T cells. **These results suggest that a reduction of target antigen density can increase the probability of CAR-T cell resistance.** Additionally, it was found that 4-1BB cells could compensate for this suboptimal lytic potential through a cooperative killing mechanism. Here, two 4-1BB CAR-T cells binding to the same antigen target provides a higher probability for cancer cell death. We note that this mechanism can be utilized through the use of dual-antigen targeting or combining with immuno-oncology therapy<sup>13</sup>.

Clinical outcomes could be dependent on which costimulatory domain is used. While the full extent of the clinical implications is not understood, it is clear that CD28 and 4-1BB offer slightly different CAR-T products. It is speculated that some cancers, such as DLBCL, can be effectively treated through a CAR-T that hits hard up front and eradicates the tumor, such as one that uses a CD28 domain. Here, CAR-T cell persistence is not as important. However, other indications, such as B-cell ALL, may benefit the most from long-term, persistent CAR-T cell activity, such as that offered by 4-1BB-expressing CAR-Ts. Put simply, further investigation into the pharmacodynamics and indication-specific utilization of CAR-T therapies may allow for the increased likelihood of durable responses.

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11. Zhao Z et al. Cancer Cell. 2015;28:415-428; 12. Kawalekar OU, et al. Immunity. 2016;44:380-390. 13. Sadelain, M. AACR 2019 presentation; Piper Jaffray Research

## Role Of CD4+ Cells In Cell Therapy Is More Controversial Than CD8+ Clonality/Functionality

Are CD4+ T cells needed in a T cell product? CD4+ T cells support the immune response by the generation of cytokines and chemokines that activate/direct other innate immune cells in the microenvironment. For this reason, CD4+ cells have been postulated to play a beneficial role in providing a well-rounded T cell product.

Based on data generated to date, CD4+'s seem to play a role, but the significance is less clear. Numerous academic labs and companies, notably **Juno**, have evaluated the role and specific ratios of CD4+'s in the clinic.

- Work from Carl June's lab has demonstrated quality clinical responses across a range of CD4+:CD8+ ratios. However, the outcomes are not necessarily predictable based on the specific recipe, suggesting tolerability to the specific quantification. The relationship between specific cell ratios and clinical response is unpredictable at this point and is still under investigation.
- Companies such as **Juno/Celgene** manufacture CD4+ and CD8+ cells separately, and then mix fixed doses of the two to make the final product.
- **Gilead** has analyzed CD4+ counts in the ZUMA-1 trial and found that the median CD4+:CD8+ ratio to be 0.87. However, they did not find there to be an association between this ratio and product T cell expansion rate. The relationship between different CD4+:CD8+ ratios and clinical outcomes was not explicitly evaluated. It was also not specified whether a particular ratio skewed CD8+ clonality/polyfunctionality in the product.

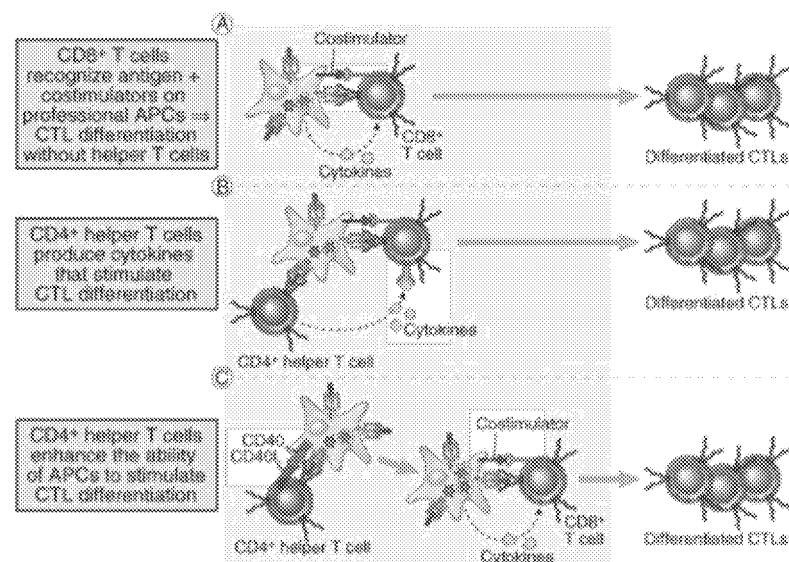
Are CD4+ T cells needed in T cell products? While we have spent a lot of time on the clonality and functionality of CD8+ cells, less is generally agreed upon for the role of CD4+ cells in T cell products. The arguments are as follows:

Sources: Piper Jaffray Research

- **Absolutely need them:** While some say the ratio is not important, they believe the CD4+'s need to be present and they need to be polyfunctional (in the same way CD8+ cells are desired to be polyfunctional), which makes them more effective at helping the cytotoxic CD8+'s. To date, effective therapies span a wide range of the ratio, but as of today, there is no well understood or optimal ratio for making the *best* product.
- **Don't need them:** Some would argue that if you have the correct spectrum of CD8+ T cells, you don't need the CD4+ population. In this case, the immune system is thought to have been kick-started by the CD8+ T cell diversity and should be able to elicit recruitment of the natural immune response.

### EXHIBIT 4

#### Role of CD4+ Helper Cells



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## New Scrutiny During Manufacturing Will Likely Improve Outcomes For Cell Therapy

As more has been learned about cell therapy, future products will continue to improve. Given the mounting preclinical and clinical case study evidence which suggests T cell clonality is particularly relevant to outcomes, such as the previously discussed ZUMA-1 analysis, companies are applying significant resources to understanding and optimizing their manufacturing processes. Broadly, we believe this continued iteration of cell therapy manufacturing will benefit outcomes for patients in the following two ways:

1. Numerous companies are working on *ex vivo* expansion surrogates to project clinical outcomes. A significant achievement in product control would be the development of a robust assay, such as doubling time in the ZUMA-1 analysis, which can predict quality of clinical response with each product prior to infusion. If so, T cell product characteristics *ex vivo* can be used to ensure that only products likely to generate quality response will be infused into patients.
2. Careful consideration is given to monitor T cell characteristics, including clonality and exhaustion. A common theme we've heard is that you want to limit *ex vivo* manipulation as much as possible. This is the case because the longer cells are in culture, the greater the chance they drift toward a more differentiated and exhausted state. For this reason, companies are using markers to track cell phenotype. For example, CD27 can be used as a memory stem cell marker, which has been correlated to activity *in vivo*. However, if a product carries a significant exhaustive marker burden, such as CD1, LAG3, TIM3, and/or PD1, then the product would likely no result in the optimal response as it indicates proliferation is low and transduction efficiency could be impaired.

From our perspective, the “ideal” T cell therapy is starting to take shape. It is clear that many manufacturers of T cell products would be “unhappy” if they cannot find a T stem cell population in the final product and while there is not consensus on a magic number in terms of T cell subtype composition, it matters, so we believe the companies who can master the optimization of cell therapy manufacturing will have an edge in the space.

Based on our numerous conversations, we find the following themes to be important for optimizing cell therapy manufacturing:

- **The cell product should exhibit a range of cell phenotypes**, and these don't have to be exact ratios as long as they demonstrate diverse activity and functionality. The exact makeup of CD4/CD8+ cells is not established, either.
- **This sounds great – but it's not easy to control cell fate *ex vivo***. Establishing a range of cell phenotypes is a particularly challenging feat as memory stem cells are very early on in differentiation and are present at roughly ~10% in adult blood and de-differentiating technology is not feasible here.
- Thus, **expertise in and optimization of the expansion protocol are critical** (i.e., cytokines, antibodies, stimulatory signals) to protect and expand the stem cell population present in the apheresis product.
- **The *ex vivo* expansion process needs to be as “natural” and efficient as possible** in order to generate the desired outcomes. Tedious monitoring and the expertise in the most relevant markers to track this is needed to ensure a quality T cell product.
- **Antigen specificity and diversity** will be critical for heterogeneous tumors.

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Sources: Piper Jaffray Research

## Key Factors Contributing To Limited Efficacy Of Cell Therapy Approaches In Solid Tumors

There are numerous potential explanations for the limited efficacy that the current generation of cell therapy products has had in solid tumors:

1. The requirement of a tumor-specific antigen – currently, there is not a specific, single lineage-dependent antigen to target like CD19 on B cells.
2. The high degree of heterogeneity of solid tumors – while driver antigens are helpful, a "holistic umbrella approach" such as neoantigens, may be needed to target solid tumors efficiently. One may have to cover most of these antigens in order to improve the chance at a CR due to interpatient variability with respect to specific targets driving the cancer.
3. The immuno-suppressive tumor microenvironment (TME) – mechanisms of T cell permissiveness in the TME are not clear, but play a key role in T cell therapy activity. Questions remain on what the most important mechanisms here may be.

### EXHIBIT 5

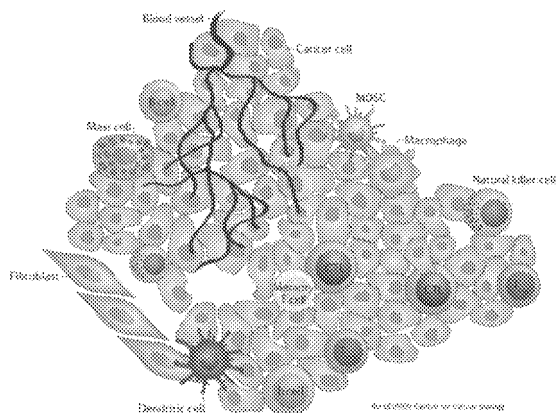
#### The TME Contains Many Immune and Non-Immune Cells

##### Non-immune cells:

- Vasculature
- Tumor cells
- Fibroblasts
- ECM

##### Immune cells:

- T cells
- NK cells
- B cells
- Dendritic cells
- Macrophages
- MDSCs
- Granulocytes



Sources: Autolus Company Presentation; Piper Jaffray Research

Based on our conversations, we think next-gen T cell therapies have a reasonable shot at working in solid tumors. While CAR-Ts have been effective in liquid tumor indications, no major breakthroughs have occurred in the solid tumor space despite many attempts at optimizing the CAR construct. Below, we discuss several factors that we believe will eventually lead to broader efficacy of cell therapy in solid tumors:

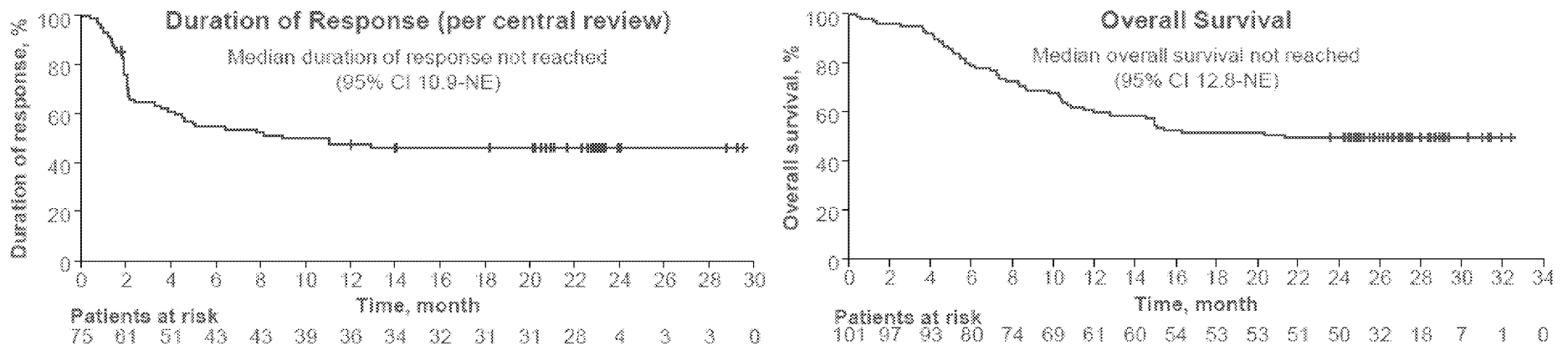
- **Construct improvements.** In addition to the previous discussion on prior slides, humanized scFv are now being used for solid tumors as opposed to the murine Fvm63, which can prevent generation of anti-CAR-T antibodies. Beyond CAR-specific adaptations, companies are also engineering armored/equipped T cells that express pro-defense transgenes, including those that have the potential for improved activity and persistence.
- **Manufacturing of CAR-T cell products from patients with solid tumors should be easier than those with liquid tumors.** A significant difference with solid tumor patients is that they are likely to have higher quality lymphocytes because they have not received significant rounds (and potentially years) of toxic chemo and/or received an allograft. Therefore, since the T cell expansion process would be starting from a relatively healthier cell population, manufacturing is likely to be easier. Interestingly, some think that this may also reduce the need for the selection of a certain population of T cells as the apheresed product should contain a good representation of cell types.
- **Novel antigen targets.** The next generation of T cell therapies are utilizing solid tumor targets that exhibit preferential expression on tumors which should minimize off-target toxicities. The various approaches are discussed in the company-specific profiles.

## Gilead/Kite: Yescarta Has Demonstrated What's Possible With Cell Therapy

Gilead/Kite is the leader of the autologous CAR-T cell therapy space. Gilead's Yescarta is an anti-CD19 directed autologous CAR-T therapy that is approved in r/r DLBCL. Importantly, Yescarta's real-world manufacturing experience has been very similar to that of the clinical trials where very few manufacturing failures have been reported. A 24-month update of the ZUMA-1 trial revealed continued durability of Yescarta responses in DLBCL that is impressive.

EXHIBIT 6

### ZUMA-1 24-Month Update Finds Plateaus In Duration of Response and Overall Survival in R/R DLBCL



Gilead/Kite is leaving no stone unturned in its efforts to improve the autologous CAR-T manufacturing process. While Yescarta has offered lifelines to many patients, Gilead is focused on providing further patient benefit through constant innovation. The company is optimizing its autologous manufacturing process by evaluating four main aspects including: (1) characterizing the incoming patient apheresis material; (2) evaluating additives to the cell product process that maintain or enhance the potential for greater efficacy or reduces safety risks in patients; (3) characterizing the final product prior to infusion back into the patient; and (4) analyzing infused CAR-Ts during therapy and linking the behavior of the cells to patient outcome. In addition, Gilead is evaluating process enhancements centered around reducing the expansion time, selecting and maintaining the desired phenotype/fitness of the cells, and reducing the number of open steps in the process (transitioning from the current partially open to a fully-closed system over time) – all of which can contribute to the T cell-mediated immune response. All of these considerations are needed to meaningfully link the cell product pre/post infusion characteristics and manufacturing conditions to outcomes in the clinic. We expect these studies, and the implications coming from them, will translate to continued improvements as they will reveal significant learnings that can be applied across Gilead's platform.

Sources: Company Reports; Piper Jaffray Research

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## Gilead/Kite: While Autologous Is Improving, Gilead Is Seeking The Next Breakthrough

Gilead/Kite is focused on improving patient experience with Yescarta. In addition to manufacturing optimizations that should improve outcomes with Yescarta, the company is focused on increasing the number of patients who achieve a deep and durable response from the current 50% range to 100% and to enhance the safety profile of existing and future therapies. To do so, Gilead is conducting "optimization" studies of Yescarta to evaluate the potential efficacy and safety benefits of various combinatorial approaches, bridging chemotherapy, pre-treatment regimens, and earlier intervention with steroids and other agents. For example, the company is evaluating anti-PD-L1 (Roche's atezolizumab) in combination with KTE-C19 in ZUMA-6 to evaluate the potential for additive effects. Gilead is also currently investigating mechanisms in addition to anti-PD-L1 that could increase the activity of the cell therapy products and make them more competitive in the TME, especially in the context of solid tumors. Gilead believes these optimizations will be needed to drive efficacy and durability and close the existing gap in treatment benefit.

Yescarta is also being developed in earlier lines of therapy, including second line and first line high-risk DLBCL. As autologous CAR-T therapies move further up in the treatment paradigm, the general consensus is that T cell health will be better due to less patient pretreatment. The company is currently conducting studies and will evaluate a similar battery of cell product analyses in these trials which can be compared to datasets in later lines of therapy. These evaluations in healthier patients could provide additional insight into manufacturing processes that can be further optimized to improve patient outcomes in both early and later lines of therapy.

Gilead's continuous pursuit of innovation includes the development of allogeneic cell therapy. Allogeneic-based cell products are an important focus for Gilead/Kite and is one of the multiple early-stage approaches the company is pursuing in parallel. The company agrees that allogeneic therapy offers the industry potential benefits including lower costs and rapid availability of product. However, Gilead notes that important technical challenges remain for establishing the benefit/risk profile of a gene-edited cell therapy. The company feels there are three main areas that require particular attention in this space for its success which are unique to the challenges faced with allogeneic products, including: (1) prevention of graft host versus disease (GvHD); (2) inhibition of host mediated graft rejection (HvG); and (3) selection of donor material; number of doses and donor to donor variability. While it is true that a single healthy donor can generate a significant number of doses, there is still potentially large donor variability that must be taken into account for allogeneic products. In addition to these points, the logistics around manufacturing will need to be scrutinized.

Gilead/Kite's collaboration with Sangamo positions it well to develop allogeneic products. The company's partnership with Sangamo allows the company to evaluate zinc finger editing as an integral part to their allogeneic strategy. Gene editing is being used to generate a T cell product that should eliminate the risk for GvHD and prevent HvG mediated immunity. The Sangamo partnership has also enabled Gilead/Kite to evaluate iPSC- and healthy donor-based approaches with cell types outside of T cells, including NK cells. iPSC-based approaches are potentially an attractive allogeneic platform as a uniform master cell bank would eliminate the concern for batch-to-batch variability that could arise from healthy donor-based sources of cells.

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Source: Company Reports; Piper Jaffray Research

## Gilead/Kite: Technology-Based Partnerships Enable Innovation For Solid Tumors

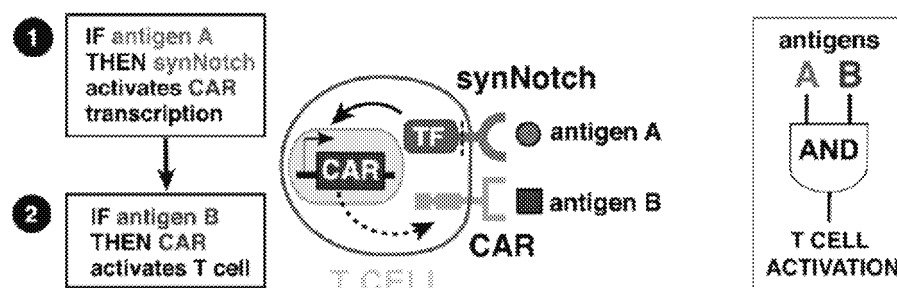
Gilead/Kite feels strongly that it has the collaborations and tools required to engineer success in solid tumors. Gilead/Kite has accumulated considerable experience and expertise with the advancement of a substantial cell therapy portfolio that includes both TCR and CAR programs targeting solid tumors. At the moment, it is conducting Phase I studies of two TCR candidates in solid tumors.

The company is also particularly excited about its collaborations and in-house technology platforms. With respect to collaborations, Gilead is working with Dr. Rosenberg at the NCI on neoantigen TCRs and feels that the approach is cutting edge. Additionally, the company views its partnership with Gadeta as an important option to evaluate in its solid tumor strategy. Here, Gilead is evaluating the utility of transferring tumor antigen specific  $\gamma\delta$  TCRs into conventional  $\alpha\beta$ -T cells. Based on the non-MHC restricted difference between  $\gamma\delta$  target cell recognition and that of  $\alpha\beta$ -T cells, which are MHC-restricted, it believes the mechanism of action could be particularly powerful in solid tumors. For Gilead/Kite's in-house technology, it is optimistic about the potential of the synNotch platform for the development of cell therapies for solid tumors. This technology allows for combinatorial antigen sensing (logic gates; AND and NOT) and the controlled production of virtually any biologic in the TME. Gilead believes this capability is unique to the company and gives it the ability to use antigens currently not addressable with CARs while at the same time modifying the TME with potent immunomodulatory molecules. Its first synNotch program is currently in pre-clinical development for prostate cancer.

Sources: Company Reports, Piper Jaffray Research

### EXHIBIT 7

#### A Two-Antigen Tumor Recognition Circuit Restricts CAR Expression



Gilead/Kite is exploring technologies and mechanisms that may increase cell therapy function. The company is exploring various technologies to enhance cellular function and anti-tumor immunity. For example, its synNotch platform and the zinc finger nuclease gene editing technology (previously discussed) provide the company with the tools to craft desired behaviors using synthetic biology. Also related to improving immune cell function, the company is interested in investigating metabolic pathways that are inhibitory or activating. Many of these metabolic pathways are critical to the activity of cell therapies.

## GILEAD EXPECTED MILESTONES

Product/Program	Event	Indication	Exp. Date
<b><u>Biktarvy/STR</u></b> Wholly-Owned	Launch in US And EU	HIV-1 Suppression	Ongoing
<b><u>Yescarta/CD19/CAR-T</u></b> Wholly-Owned	Yescarta EU Launch	DLBCL, PMBCL, and TFL	Ongoing
	Complete Enrollment Of ZUMA-5 Phase II	Indolent Non-Hodgkin's Lymphoma	Q1:2019
	Initiate ZUMA-12 Phase II	First-Line High-Risk DLBCL	Q1:2019
	Complete Enrollment Of ZUMA-7 Phase III	Second-Line DLBCL	H2:2019
	Initiate Rituximab/Lenalidomide Combo ZUMA-14 Phase II	Lymphoma	H2:2019
	Initial Data From ZUMA-2 Phase II	MCL	2019
	Data From PD-L1 Combo ZUMA-6 Phase II	Refractory DLBCL	2019
	Initial Data From ZUMA-8 Phase I	CLL	2019
	Initial Data From 4-1BB Agonist Combo ZUMA-11 Phase I	Refractory DLBCL	2019
<b><u>Descovy/STR</u></b> Wholly-Owned	Phase III Study Readout	Pre-Exposure Prophylaxis	Q2:2019
<b><u>Filgotinib/JAK-1</u></b> Partnership With Galapagos	FINCH-3 Phase III	MTX-Naive RA	Q1:2019
	FINCH-1 Phase III	MTX-Inadequate Responders RA	Q1:2019
	Data From SELECTION-1 Phase III	Biologic Experienced/Naive Ulcerative Colitis	Q2:2020
	Complete Enrollment DIVERSITY-1 Phase III	Biologic Experienced/Naive Crohn's Disease	Q3:2020
<b><u>Selonsertib/ASK-1</u></b> Wholly-Owned	Phase III STELLAR 4 48-Week Data Readout	F4 Fibrosis; NASH	Q1:2019
	Phase III STELLAR 3 48-Week Data Readout	F3 Fibrosis; NASH	Q2:2019
	Initiate Phase III Trial	Diabetic Kidney Disease	Q3:2019
<b><u>Cilofexor/GS-9674/FXR</u></b> Wholly-Owned	Initiate Phase III Trial	PSC	Q2:2019
<b><u>NASH Combinations</u></b> Wholly-Owned	ATLAS Phase IIb Combinations (SEL/ACC/FXR)	Advanced Fibrosis/NASH	Q4:2019
<b><u>KTE-X19/CAR-T</u></b> Wholly-Owned	Complete Enrollment Of ZUMA-3 Phase II	Adult Acute Lymphoblastic Leukemia	Q2:2019
	File For NDA Based On ZUMA-2 Data	Mantle Cell Lymphoma	H2:2019
	Initial Data From ZUMA-4 Phase II	Pediatric Acute Lymphoblastic Leukemia	2019
	Initial Data From ZUMA-8 Phase I	Chronic Lymphocytic Leukemia	2019
<b><u>KTE-718/MAGE A3-A6/CAR-T</u></b> Wholly-Owned	Complete Enrollment Of Phase Ia	MAGE A3/A6 Solid Tumors	H1:2020
<b><u>KTE-439/HPV-16 E7/CAR-T</u></b> Wholly-Owned	Initiate Clinical Trial	HPV-16 E7-Positive Solid Tumors	2019
<b><u>KTE-037/CD19/Allogeneic CAR-T</u></b> Wholly-Owned	File IND For Allo Anti-CD19 CAR-T	CD-19+ Cancers	H2:2019
<b><u>Tirabrutinib/BTK</u></b> Wholly-Owned	Data Update From Phase II Combination Trial	r/r Chronic Lymphocytic Leukemia	2019
<b><u>GS-9876/Syk</u></b> Wholly-Owned	Initial Data From Phase II Trial	Lupus Erythematosus	Q3:2019
	Initial Data From Phase II Trial	Sjogren's Syndrome	Q3:2019
<b><u>GS-4875/TPL2</u></b> Wholly-Owned	Initiate Phase II Trial	Ulcerative Colitis	Q3:2019
<b><u>GS-9688/HBV</u></b> Wholly-Owned	Initial Data From Phase II Trial	HBV Infection	Q2:2019
<b><u>GS-6207/Capsid Inhibitor</u></b> Wholly-Owned	Initial Data From Phase Ib Trial	HIV Infection	Q3:2019
<b><u>Vesatolimod/HIV Cure</u></b> Wholly-Owned	Complete Phase I Trials	Cure for HIV Infection	Q3:2019
<b><u>GS-9131/NRTI</u></b> Wholly-Owned	Initial Data From Phase II Trial	HIV Infection	Q3:2019

Source: Piper Jaffray; Company Reports

Current disclosure information for this company is located at <http://www.piperjaffray.com/researchdisclosures>





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**Assumptions:**

Shares Outstanding (MM)	1308	Equity Value	\$98,768
Increase in Working Capital	5%	Debt	\$27,500
Discount Rate	7.0%	Cash	\$31,512
WACC	9.3%	Enterprise Value	\$94,756

**Output (\$MM):**

Estimated Share Price: **\$75.0**

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# PiperJaffray

	GILEAD DISCOUNTED CASH FLOW VALUATION																			
Fiscal Year Ended Dec'31 (\$MM)	2016	2017	2018	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E
<b>Total Gilead Revenue</b>	\$30,390	\$26,107	\$22,127	\$22,345	\$23,440	\$23,255	\$23,860	\$24,935	\$26,110	\$25,320	\$24,435	\$24,370	\$24,440	\$24,045	\$23,330	\$22,980	\$22,940	\$18,815	\$15,500	\$13,525
% Change		-14%	-15%	+1%	+5%	-1%	+3%	+5%	+5%	-3%	-3%	-0%	+0%	-2%	-3%	-2%	-0%	-18%	-18%	-13%
Cost of Goods Sold	\$3,414	\$3,422	\$3,590	\$3,002	\$3,044	\$2,924	\$2,898	\$3,087	\$3,232	\$3,135	\$3,025	\$3,017	\$3,026	\$2,977	\$2,888	\$2,845	\$2,840	\$2,329	\$1,919	\$1,674
Gross Profit	\$26,976	\$22,685	\$18,537	\$19,343	\$20,396	\$20,331	\$20,962	\$21,848	\$22,878	\$22,185	\$21,410	\$21,353	\$21,414	\$21,068	\$20,442	\$20,135	\$20,100	\$16,486	\$13,581	\$11,851
<b>Gross Margin</b>	<b>89%</b>	<b>87%</b>	<b>84%</b>	<b>87%</b>	<b>87%</b>	<b>87%</b>	<b>88%</b>	<b>88%</b>	<b>88%</b>	<b>88%</b>	<b>88%</b>	<b>88%</b>	<b>88%</b>	<b>88%</b>	<b>88%</b>	<b>88%</b>	<b>88%</b>	<b>88%</b>	<b>88%</b>	<b>88%</b>
Research & Development	\$3,749	\$3,291	\$3,518	\$3,700	\$3,850	\$4,000	\$4,105	\$4,290	\$4,490	\$4,355	\$4,205	\$4,190	\$4,205	\$4,135	\$4,015	\$3,955	\$3,945	\$3,235	\$2,665	\$2,325
% of Revenue	12%	13%	16%	17%	16%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%
Selling, General, & Administrative	\$3,194	\$3,363	\$3,608	\$4,000	\$4,195	\$4,165	\$4,270	\$4,465	\$4,675	\$4,535	\$4,375	\$4,360	\$4,375	\$4,305	\$4,175	\$4,115	\$4,105	\$3,370	\$2,775	\$2,420
% of Revenue	11%	13%	16%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%
Operating Expenses	\$6,943	\$6,654	\$7,126	\$7,700	\$8,045	\$8,165	\$8,375	\$8,755	\$9,165	\$8,890	\$8,580	\$8,550	\$8,580	\$8,440	\$8,190	\$8,070	\$8,050	\$6,605	\$5,440	\$4,745
% of Revenue	23%	25%	32%	34%	34%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
<b>Earnings Before Income Taxes</b>	<b>\$20,033</b>	<b>\$16,031</b>	<b>\$11,411</b>	<b>\$11,643</b>	<b>\$12,351</b>	<b>\$12,166</b>	<b>\$12,587</b>	<b>\$13,093</b>	<b>\$13,713</b>	<b>\$13,295</b>	<b>\$12,830</b>	<b>\$12,803</b>	<b>\$12,834</b>	<b>\$12,628</b>	<b>\$12,252</b>	<b>\$12,065</b>	<b>\$12,050</b>	<b>\$9,881</b>	<b>\$8,141</b>	<b>\$7,106</b>
<b>EBIT Margin</b>	<b>66%</b>	<b>61%</b>	<b>52%</b>	<b>52%</b>	<b>53%</b>	<b>52%</b>	<b>53%</b>	<b>53%</b>	<b>53%</b>	<b>53%</b>	<b>53%</b>	<b>53%</b>	<b>53%</b>	<b>53%</b>	<b>53%</b>	<b>53%</b>	<b>53%</b>	<b>53%</b>	<b>53%</b>	<b>53%</b>
Income Taxes	\$3,797	\$3,784	\$2,162	\$2,302	\$2,532	\$2,518	\$2,632	\$2,763	\$2,919	\$2,856	\$2,784	\$2,803	\$2,835	\$2,812	\$2,737	\$2,702	\$2,703	\$2,251	\$1,890	\$1,677
Tax Rate	19%	24%	20%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%
<b>Net Operating Profit After Taxes</b>	<b>\$16,236</b>	<b>\$12,247</b>	<b>\$9,249</b>	<b>\$9,341</b>	<b>\$9,819</b>	<b>\$9,648</b>	<b>\$9,955</b>	<b>\$10,330</b>	<b>\$10,794</b>	<b>\$10,439</b>	<b>\$10,046</b>	<b>\$10,000</b>	<b>\$10,000</b>	<b>\$9,817</b>	<b>\$9,515</b>	<b>\$9,363</b>	<b>\$9,347</b>	<b>\$7,629</b>	<b>\$6,251</b>	<b>\$5,429</b>
<b>Adjustments:</b>																				
Capital Expenditures	(\$748)	(\$590)	(\$800)	(\$800)	(\$800)	(\$800)	(\$800)	(\$800)	(\$800)	(\$800)	(\$800)	(\$800)	(\$800)	(\$800)	(\$800)	(\$800)	(\$800)	(\$800)	(\$800)	(\$800)
Depreciation (And Amortization)	\$1,158	\$1,286	\$1,600	\$1,650	\$1,700	\$1,750	\$1,800	\$1,850	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900	\$1,900
Change in Working Capital	(\$3,674)	\$9,818	(\$1,500)	(\$1,575)	(\$1,654)	(\$1,736)	(\$1,823)	(\$1,914)	(\$2,010)	(\$2,111)	(\$2,216)	(\$2,327)	(\$2,443)	(\$2,566)	(\$2,694)	(\$2,828)	(\$2,970)	(\$3,118)	(\$3,274)	(\$3,438)
<b>Free Cash Flow</b>	<b>\$12,972</b>	<b>\$22,761</b>	<b>\$8,549</b>	<b>\$8,616</b>	<b>\$9,065</b>	<b>\$8,861</b>	<b>\$9,132</b>	<b>\$9,465</b>	<b>\$9,884</b>	<b>\$9,429</b>	<b>\$8,930</b>	<b>\$8,773</b>	<b>\$8,656</b>	<b>\$8,351</b>	<b>\$7,921</b>	<b>\$7,635</b>	<b>\$7,477</b>	<b>\$5,611</b>	<b>\$4,077</b>	<b>\$3,091</b>
% Change		+75%	-62%	+1%	+5%	-2%	+3%	+4%	+4%	-5%	-5%	-2%	-1%	-4%	-5%	-4%	-2%	-25%	-27%	-24%

Source: Piper Jaffray, Company Reports

Current disclosure information for this company is located at <http://www.piperjaffray.com/researchdisclosures>







IMPORTANT RESEARCH DISCLOSURES



Created by: BlueMatrix

Notes: The boxes on the Rating and Price Target History chart above indicate the date of the fundamental Equity Research Note, the rating and the price target. Each box represents a date on which an analyst made a change to a rating or price target, except for the first box, which may only represent the first Note written during the past three years.

Legend:

- I: Initiating Coverage
- R: Resuming Coverage
- T: Transferring Coverage
- D: Discontinuing Coverage
- S: Suspending Coverage
- OW: Overweight
- N: Neutral
- UW: Underweight
- NA: Not Available
- UR: Under Review

Distribution of Ratings/IB Services Piper Jaffray				
Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY [OW]	418	64.81	106	25.36
HOLD [N]	215	33.33	17	7.91
SELL [UW]	12	1.86	0	0.00

Note: Distribution of Ratings/IB Services shows the number of companies currently covered by fundamental equity research in each rating category from which Piper Jaffray and its affiliates received compensation for investment banking services within the past 12 months. FINRA rules require disclosure of which ratings most closely correspond with "buy," "hold," and "sell" recommendations. Piper Jaffray ratings are not the equivalent of buy, hold or sell, but instead represent recommended relative weightings. Nevertheless, Overweight corresponds most closely with buy, Neutral with hold and Underweight with sell. See Stock Rating definitions below.

**Analyst Certification — Tyler M. Van Buren, Sr. Research Analyst**

The views expressed in this report accurately reflect my personal views about the subject company and the subject security. In addition, no part of my compensation was, is, or will be directly or indirectly related to the specific recommendations or views contained in this report.

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Time of dissemination: 29 April 2019 03:05EDT.

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Piper Jaffray was making a market in the securities of Gilead Sciences, Inc. at the time this research report was published. Piper Jaffray will buy and sell Gilead Sciences, Inc. securities on a principal basis.

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**Overweight (OW):** Anticipated to outperform relative to the median of the group of stocks covered by the analyst.

**Neutral (N):** Anticipated to perform in line relative to the median of the group of stocks covered by the analyst.

**Underweight (UW):** Anticipated to underperform relative to the median of the group of stocks covered by the analyst.

## Other Important Information

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

Filed on May 24, 2016

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GILEAD SCIENCES, INC.,

Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 54**



**BREAKING** Dow drops 100 points after China trade officials cut US visit short



Dow drops 100 points after China trade officials cut US visit...

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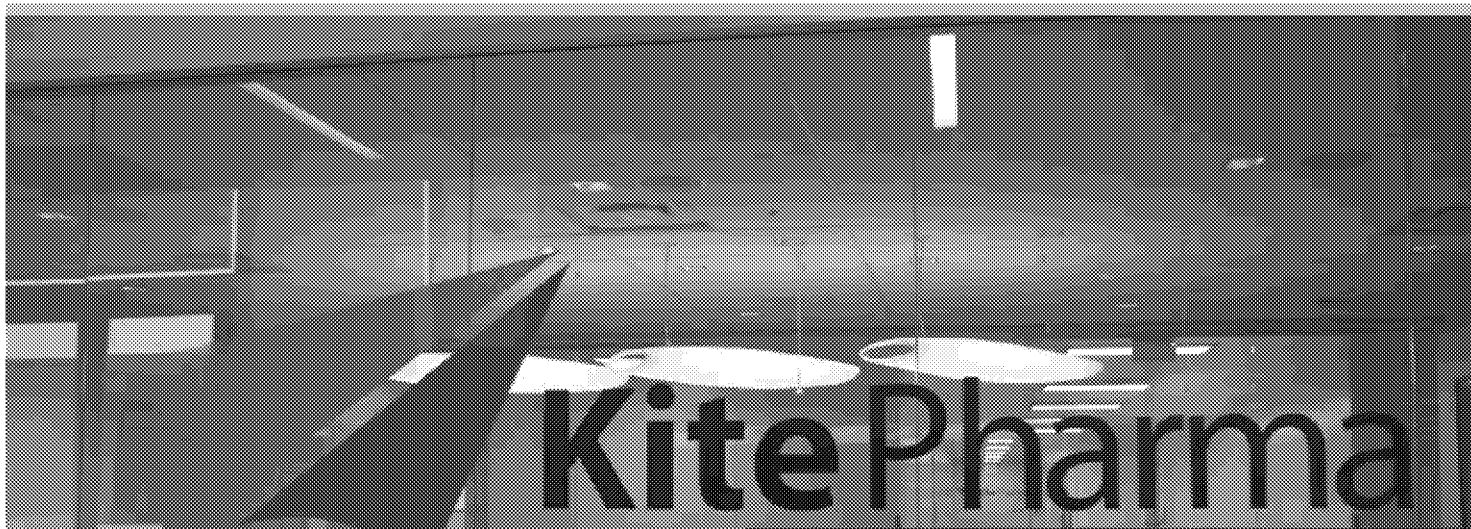
**DEALS AND IPOs**

# Gilead to buy Kite Pharma in \$11.9 billion deal

PUBLISHED MON, AUG 28 2017 • 8:27 AM EDT    UPDATED MON, AUG 28 2017 • 12:50 PM EDT

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**BREAKING** Dow drops 100 points after China trade officials cut US visit short



VIDEO 00:50

Gilead to buy Kite Pharma in \$11.9 billion deal

Gilead Sciences agreed to buy Kite Pharma in a \$11.9 billion deal on Monday, as it looks to fuel growth with an emerging class of cancer immunotherapies that are expected to generate billions.

Gilead will pay \$180 per share in an all-cash deal, representing a 29.4 percent premium over Kite's Friday close. Kite's shares were trading up at \$178.15 before the bell.

Santa Monica, California-based Kite is developing a CAR-T, or chimeric antigen receptor T-cell therapy, which harnesses the body's own immune cells to recognize and attack malignant cells.

Gilead's growth has been fueled by its pricey but revolutionary hepatitis C drugs but with fewer eligible patients and rising competition, sales have begun to fall.

Second-quarter sales of its hepatitis C drugs — Sovaldi, Harvoni and Epclusa — totaled \$2.9 billion, down from \$4 billion a year earlier.

Wall Street and Gilead shareholders have long been expecting Gilead to use its cash pile for a big-ticket acquisition.

The deal for Kite, which has been approved by the boards of both companies, is expected to close in the fourth quarter.

Kite is one of the leading players in the emerging field of CAR-T, and is competing with rivals Novartis, Juno



MARKETS



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**BREAKING** Dow drops 100 points after China trade officials cut US visit short



The U.S. Food and Drug Administration (FDA) is expected to decide by Nov. 29 whether to approve Kite's CAR-T, axi-cel, for treatment of adults with advanced lymphoma.

Gilead has a market value of \$96.36 billion, according to Thomson Reuters data. The company was once the world's largest maker of HIV drugs, and in 2011 agreed to acquire hep C drug developer Pharmasset for \$11 billion.

Last year, Gilead generated total sales of \$30.39 billion, of which \$14.8 billion came from hep C treatments.

Bank of America/Merrill Lynch and Lazard are acting as financial advisers to Gilead, while Centerview Partners is Kite's exclusive financial adviser.

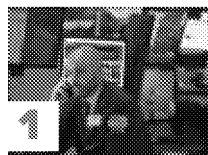
Skadden, Arps, Slate, Meagher & Flom is the legal counsel to Gilead and Sullivan & Cromwell and Cooley for Kite.

[The Wall Street Journal](#) first reported the deal.

Gilead's shares were little changed in premarket trading, while Juno's shares rose nearly 14 percent and Bluebird's 2.6 percent.

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## TRENDING NOW



Dow drops 100 points after China trade officials cut US visit short



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**OTX 55**

13d Filings  
Barrons Magazine

## Activist Gilead Wants Seats at Landauer

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BON  
English  
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13Ds are filed with the Securities and Exchange Commission within 10 days of an entity's attaining a greater than 5% position in any class of a company's securities. Subsequent changes in holdings or intentions must be reported in amended filings. This material has been extracted from filings released by the SEC from Dec. 8 through Dec. 14, 2016. Source: InsiderScore.com

### Activist Filings

#### CDI (ticker: CDI)

Bradley Radoff, on behalf of BLR & Partners and together with Joshua Schechter, issued an open letter to the chairman of CDI, a staffing company, on Dec. 14. The letter criticized CDI's "long-term destruction of shareholder value" and said the signers intend to nominate independent directors at the 2017 annual meeting.

In forceful language, the letter stated the best course is for the board to immediately engage a financial advisor to explore alternatives, including a sale or a merger, and that "there is significant value that can be realized through a sale" that would "exceed any purported risk-adjusted standalone plan, especially a plan that relies on the same board whose long-term performance has been a disaster" for CDI and its "beleaguered" shareholders.

BLR owns 1,445,000 shares (7.7% of the total outstanding) after buying 110,000 from Oct. 19 to Dec. 13 at \$5.40 to \$8.17 each. Schechter owns 18,372.

#### Peabody Energy (BTUUQ)

On Dec. 8, Mangrove Partners filed a motion in a U.S. bankruptcy court seeking creation of a "committee of equity security holders" for the company's Chapter 11 cases. Mangrove said it believes, "in light of the substantial rebound of the coal industry since the filing of the Chapter 11 cases, [that] holders of the shares will see meaningful recoveries in connection with a reorganization of the debtors if metallurgical and thermal coal prices stabilize at or around \$145/ton and \$77/ton or higher, respectively—prices that are well below both historical averages and current prices." Mangrove went on to say that it hasn't been invited to participate in the discussions regarding Peabody's reorganization being developed by debtors, and that it believes "it is critical that the holders of the shares be given a fair opportunity to demonstrate that they are entitled to recover on their investments."

Mangrove holds 971,058 shares (5.2%).

### Original Filings

#### Diebold Nixdorf (DBD)

Atlantic Investment Management reported ownership of 3,854,761 shares (5.1%) after buying 3,491,514 shares from Oct. 26 to Dec. 13 at prices in a range of \$21.20 to \$24.79 per share. Atlantic didn't reveal any plans or

proposals.

## Increases in Holdings

### Seacoast Banking of Florida (SBCF)

Basswood Capital Management bought 326,906 shares from Nov. 9 to Nov. 30 at \$17.76 to \$20.59 each and sold 143,529 from Nov. 9 to Nov. 11 at \$17.71 to \$17.74. The transactions increased the investor's stake to 2,335,043 shares (6.2%).

Basswood also said an observer rights agreement, which may be terminated by Seacoast or Basswood Managing Member Matthew Lindenbaum after Nov. 30, remains in effect. But Basswood said Lindenbaum has no intention of terminating the agreement, so he can continue as an observer during board meetings.

## Decreases in Holdings

### Ferro (FOE)

Gamco Investors (GBL) decreased its holdings to 11,759,822 shares (14.1%) by selling 533,400 shares from Oct. 14 to Dec. 12 at \$12.66 to \$15.73 apiece.

### Stewart Information Services (STC)

Foundation Asset Management cut its stake to 1,165,350 shares (4.99%) by selling 145,500 from Nov. 29 to Dec. 8 at \$43.99 to \$47.56 apiece. It said the sale was made as "part of a portfolio rebalancing program" and that it intends to remain a "significant holder" of STC shares.

### Ladder Capital (LADR)

TowerBrook Capital Partners sold 4,441,661 shares in a public offering at \$13.056 per share on Dec. 12, lowering its ownership to 13,126,995 shares (12%).

### Wheeler Real Estate Investment Trust (WHLR)

Bulldog Investors owns 3,378,893 shares (4.97%) after selling 316,804 from Nov. 14 to Dec. 12 at \$1.60 to \$1.70 apiece.

## The Activist Spotlight

### Landauer (LDR)

Business: radiation-exposure detection and analysis Investor's Avg Cost: \$36.49/share Stock Market Value: \$486 million (\$50.60/share) What's Happening: **Gilead** Capital is nominating a competing slate of directors at next annual meeting.

Key Numbers: 5%: percentage of Landauer common owned by **Gilead**. 20%: Landauer's operating margin, versus almost 40% in 2004. \$100 million: Its net debt, versus net cash of \$29 million in 2008.

Behind the Scenes: **Gilead** isn't an activist. It prefers to work privately with management to help companies realize their potential through changes in governance and strategy.

Landauer's core business, radiation measurement, has a 75% market share and recurring revenue. It isn't capital intensive and has historic returns on invested capital greater than 70%. However, its stock has been significantly underperforming.

**Gilead** pointed out that Chairman Michael Leatherman misrepresented himself as a certified public accountant

while serving as CFO and a member of the board's audit committee. The company responded by making changes. Leatherman resigned as executive chairman, but remains a director and on the 2017 slate. Meanwhile, the company's soon-to-be launched Verifii project could create tremendous shareholder value.

**Gilead** wants to get the company settled down and focused, and to bring in relevant board expertise to empower and incentivize the CEO and management. It has also identified serious governance issues. But the board's nonchalant response at this moment raises a red flag. If these issues aren't resolved amicably, and quickly, **Gilead** should have no problem getting at least two board seats in a proxy fight.

-- Kenneth Squire

The 13D Activist Fund, a mutual fund run by an affiliate of the author and not connected to Barron's, has no position in the securities mentioned here. In addition, the author publishes and sells 13D research reports, whose buyers may include representatives of participants in, and targets of, shareholder activism.

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**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 56**



# Landauer Agrees to Appoint Jeffrey A. Strong to Board of Directors and Announces Agreement with Gilead Capital LP

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NEWS PROVIDED BY

**Landauer, Inc. →**

Jan 11, 2017, 08:00 ET

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GLENWOOD, Ill., Jan. 11, 2017 /PRNewswire/ -- Landauer, Inc. (NYSE: LDR), a recognized leader in personal and environmental radiation measurement and monitoring and outsourced medical physics services, today announced that the Company has expanded the Company's Board of Directors from nine to ten directors and appointed Jeffrey A. Strong to the Board to fill the resulting vacancy. In conjunction with the Company's 2017 Annual Meeting of Stockholders, the Board will recommend for election Mr. Strong and Frank B. Modruson, who is also standing for election as a new independent director.

Mr. Strong's appointment is part of an agreement with Gilead Capital LP ("Gilead"), under which Gilead has agreed to withdraw its slate of director nominees for election at the 2017 Annual Meeting, to vote for all of Landauer's director nominees, and to other customary standstill provisions. Pursuant to the

agreement with Gilead, the Company has also agreed to appoint a new independent director mutually agreeable with Gilead for election at the 2018 Annual Meeting of Stockholders.

William G. Dempsey, Lead Independent Director, said, "We appreciate the constructive dialogue we have had with Gilead and welcome Jeffrey as a new director. He brings additional expertise to our highly qualified Board, and we look forward to working together as we continue to execute on our strategic plan to drive profitability and stockholder value. We are committed to maintaining a strong, independent Board and we are confident that the recent changes we have made provide Landauer with a highly qualified group of director nominees with the right skills and experience to lead the Company forward."

Mr. Strong, the Chief Investment Officer, Managing Partner, and Co-Founder of Gilead, added, "I am pleased to join the Board under this agreement, which will provide the Company with fresh perspectives and experience. Gilead is excited about Landauer's future, and we look forward to working constructively with the senior leadership team and other directors to maximize Landauer's long-term value for all stockholders."

The complete agreement between Landauer and Gilead will be included as an exhibit to the Company's Current Report on Form 8-K, which will be filed with the Securities and Exchange Commission ("SEC"). Additional details regarding the 2017 Annual Meeting of Stockholders will be included in the Company's definitive proxy materials, including an amended proxy card, which will be filed with the SEC.

Lazard served as financial advisor to Landauer and Sidley Austin LLP served as the Company's legal advisor.

## **Jeffrey A. Strong Biography**

Jeffrey A. Strong, 39, is the Chief Investment Officer, Managing Partner, and Co-Founder of Gilead Capital LP, which beneficially owns 5% of the outstanding stock of Landauer. Prior to Gilead, Mr. Strong was a Partner and Senior Analyst at QVT Financial LP, a multi-strategy hedge fund, where he specialized in active ownership investments and other global special situations. Before QVT, Mr. Strong served as an Analyst at Shenkman Capital Management, focusing on high-yield bond investments in the healthcare, chemical, and telecom industries. Mr. Strong has served on the Nominating Committee of Fornebu Utvikling ASA, on the board of Treveria plc, and on the board of TPC Group Inc., where he was also Chairman of the Compensation and the Nominating and Governance Committees. He has an M.B.A. from the College of William & Mary, a B.S. from the University of Missouri, and is a CFA® charterholder.

## **About Landauer**

Landauer is a leading global provider of technical and analytical services to determine occupational and environmental radiation exposure, as well as the leading domestic provider of outsourced medical physics services. For more than 50 years, the Company has provided complete radiation dosimetry services to hospitals, medical and dental offices, universities, national laboratories, nuclear facilities and other industries in which radiation poses a potential threat to employees. Landauer's services include the manufacture of various types of radiation detection monitors, the distribution and collection of the monitors to and from customers, and the analysis and reporting of exposure findings. The Company provides its dosimetry services to approximately 1.8 million individuals globally. In addition, through its Medical Physics segment, the Company provides therapeutic and imaging physics services to the medical physics community. For information about Landauer, please visit their website at <http://www.landauer.com>.

## **About Gilead**

Gilead Capital LP is an investment adviser focused on long-term investments in high-quality public small-cap companies in North America and Europe. Gilead pursues a Leadership Investing strategy, supporting its portfolio companies by constructively engaging with management teams and boards of directors to elevate governance and enhance long-term value for the benefit of all shareholders.

## **Additional Information and Where to Find It**

This press release may be deemed to be solicitation material in connection with the matters to be considered at the 2017 annual meeting (the "2017 Annual Meeting") of stockholders of Landauer, Inc. ("Landauer" or the "Company"). The Company intends to file a definitive proxy statement and a proxy card with the U.S. Securities and Exchange Commission (the "SEC") in connection with any such solicitation of proxies from Landauer stockholders. LANDAUER STOCKHOLDERS ARE STRONGLY ENCOURAGED TO READ ANY SUCH PROXY STATEMENT (INCLUDING ANY AMENDMENTS OR SUPPLEMENTS THERETO) WHEN THEY BECOME AVAILABLE, BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION. Stockholders will be able to obtain any proxy statement, any amendments or supplements thereto and other documents filed by the Company with the SEC for no charge at the SEC's website at [www.sec.gov](http://www.sec.gov). Copies will also be available at no charge by writing to the Company at 2 Science Road, Glenwood, Illinois 60425, Attention: Corporate Secretary.

## **Participants in the Solicitation**

The Company and its directors and executive officers may be deemed to be participants in the solicitation of proxies from the Company's stockholders in connection with the matters to be considered at the 2017 Annual Meeting. Investors may obtain information regarding the Company and its directors and executive officers in the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2016, which was filed with the SEC on December 14, 2016, and the Company's preliminary proxy statement for its 2017 Annual Meeting, which was filed with the SEC on January 3, 2017. More detailed information regarding the identity of potential participants in the solicitation, and their direct or indirect interests, by security holdings or otherwise, will be set forth in the definitive proxy statement and other materials to be filed with the SEC in connection with the 2017 Annual Meeting.

For the latest news releases and other corporate documents on Landauer, Inc.,  
visit  
[www.landauer.com](http://www.landauer.com)

**For Further Information Contact:**

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**OTX 57**



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## Gilead Blasts \$825M Monotype Take-Private Deal

By Darcy Reddan

Law360 (August 20, 2019, 5:49 PM EDT) -- Monotype minority shareholder Gilead Capital slammed the typeface company's planned \$825 million take-private deal in a letter Tuesday, contending the board should print its proxy statement in Comic Sans font to showcase what a "mockery" the sales process was.

Gilead Capital LP, which holds more than 1% of Monotype Imaging Holdings Inc.'s outstanding shares, said in the letter to management that the \$19.85 per share private equity firm HGGC agreed to pay was "inadequate," adding that the company is worth no less than \$30 per share.

Gilead also highlighted an alleged lack of transparency throughout the sales process, as well as questions regarding what it said were the company's surprisingly strong second-quarter earnings, and asked its board to clear the air.

"And if the board is unwilling to hold itself accountable to the shareholders it serves, it should print the proxy statement in Comic Sans. At least then the world will see this process for the mockery that it is," Gilead said in Tuesday's letter.

Gilead, an investment adviser, said in the letter that it is taking its views public because the board has ignored its concerns. Gilead claims that while management has been touting "tremendous value" and a "significant premium," there have been no conference calls to discuss the deal.

The letter notes that the company's second-quarter report "exceeded both market expectations and the upper end of management's own guidance."

Gilead went on to note it was "shocked that the sale price — \$19.85 — appears to be the exact same price at which the board was buying back shares in the second quarter!"

The investment adviser said it struggled with understanding how the company could tout the price point as a "tremendous value," pointing out that the stock price is near a six-year low.

In **late July**, HGGC and Monotype said they had cut a deal to take Monotype, which licenses typefaces to designers and manufacturers, private. The transaction is being steered by Kirkland & Ellis LLP and Goodwin Procter LLP.

Shares in Monotype were trading at \$19.87 on Tuesday, a 0.6% premium on Monday's closing price.

A spokesperson for Monotype told Law360 Tuesday the company's board of directors "is committed to maximizing value for all shareholders," noting that the deal provides "shareholders with immediate value at a significant premium, and includes a 30-day 'go-shop' to ensure that shareholder value is maximized."

Representatives for Gilead and HGGC did not return requests for comment Tuesday.

Gilead is represented by Oishan Frome Wolosky LLP.

--Additional reporting by Elise Hansen. Editing by Gemma Horowitz.

*Update: This article has been updated to include additional counsel information.*

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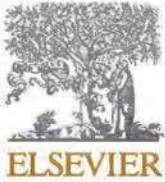
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**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 58**





## How much do investors trade because of name/ticker confusion?★

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### ABSTRACT

We conduct a search for pairs of companies with similar names/ticker symbols. Between 12% and 25% of such pairs exhibit co-movements in trading turnover, which we attribute to investor confusion. We estimate that trades made by mistake contributed to 5% of the trading turnover. The three-hour CARs for the company chosen by mistake around the time intervals with extreme returns for the paired company are 0.5%. The confusion is highest for large companies and around time intervals with high turnover. We show that when the cause of confusion disappears, the co-movement in turnover also disappears.

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### 1. Introduction

On October 4, 2013, the stock of a long-closed electronics retailer Tweeter Home Entertainment Group, Inc. (Ticker Symbol: TWTRQ) suddenly soared 1400%. The sudden increase in investor interest in the company and the unusual return happened the day after another, unrelated, company Twitter Inc. (proposed Ticker Symbol: TWTR) filed papers detailing its plans for a \$1 billion initial public offering [as reported by [Isidore \(2013\)](#) to CNN]. The phenomenon can be attributed to investor confusion, as investors apparently mistook the penny stock for Twitter's upcoming stock offering.

In another example, on May 2, 2007, Graco Children's Products Inc., a subsidiary of Newell Companies Inc. (Ticker Symbol: NWL), announced a recall of its soft block tower toys. In the upcoming days, the stock for an unrelated fluid-handling systems manufacturer, Graco Inc. (Ticker Symbol: GGG), dropped by over 2.5%. Even popular news aggregators such as Google Finance incorrectly listed the news about Graco Children's Products alongside the Graco Inc. stock quote, showing that confusion is not limited to individual investors. Besides sharing the Graco name, these two companies have nothing in common.

★ We are grateful to Tarun Chordia, Jennifer Conrad, Wei Xiong, Wei Jiang, Ron Kaniel, Tyler Shumway, Stephen J. Brown, Bing Han, Richard Warr, Suzanne S. Lee, participants of the 2018 SFA conference in Asheville, NC, participants of the finance workshop at the Rutgers School of Business-Camden, David Pedersen, Zhanel DeVides, Eugene Pilotte, Ivo Jansen, Jun Guo, and anonymous referees for helpful comments and discussion. We thank Brad Barber and Terrance Odean for generously sharing their discount brokerage dataset with us. We would like to thank the Whitcomb Center for Research in Financial Services at Rutgers University for funding the data.

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There are other instances of stock confusion among investors. Ford Motor Company (F), the automobile manufacturer, is often confused with Forward Industries Inc. (FORD), a designer and distributor of custom carry and protective solutions. Hewlett Packard Co. (HPQ), an IT company, is often confused with Helmerich & Payne Inc. (HP), a petroleum contract drilling company.<sup>1</sup>

In a well-researched case study, *Rashes (2001)* documents that between 1996 and 1997, two unrelated companies, MCI Communications (MCIC), a telecommunications company, and Massmutual Corporate Investors (MCI), a closed-end mutual fund, showed unusual co-movements in turnover and prices. He attributes the co-movements to investor confusion between the two stocks. Moreover, he shows that deviations from the intrinsic value in the smaller company, MCI, lasted days as investors realized their mistakes.

These and other similar examples are often used to point to investors' irrationality and as evidence against market efficiency. The academic study by *Rashes (2001)* can now be found on the syllabi of graduate classes on psychology and economics alongside other papers that constitute the fundamentals of the behavioral school of thinking in finance.<sup>2</sup> However, it is important to recognize that *Rashes (2001)* is not a systematic study of the phenomenon, but rather a well-executed singleton case study. The main question of how common this behavioral phenomenon is in the U.S. stock market has remained unanswered. Is his finding just a small anomaly with no larger significance or is it a systematic component of investors' decision making? Therefore, it is important to study the prevalence of this particular behavior.<sup>3</sup>

To quantify the presence of confusion trading, we also investigate research questions: How common is it for companies to have identifiers similar to those of other companies? Are the examples documented by *Rashes (2001)* anecdotal or do they represent common occurrences? How often do investors confuse companies with similar identifiers and what are the determinants of such confusion? How much trading is due to confusion? How much do confusion trades cost investors?

We start by screening the U.S. stock market between 1993 and 2013 for companies that share parts of their names and/or ticker symbols with another company. Even after excluding the most common parts of the names, such as "Corp.," "Inc.," and so forth, we find that the phenomenon of having similar names/tickers is quite common. Companies that share some meaningful part of their names and/or ticker symbols with another company constitute over 55% of publicly traded firms. To limit our sample of firms to a more manageable size that will allow us to conduct a detailed intraday analysis, we apply several criteria to isolate pairs of companies that have the highest potential for confusion. Such companies are the best candidates with which to document trades made by mistake.

We use five types of possible similarities between the names and tickers of companies to identify the pairs most likely to be confused by investors. After running our identification algorithm, we identify 254 pairs with the greatest similarities. Unlike *Rashes (2001)*, we use intraday data to capture possible co-movements in turnover and returns. Using intraday data increases the chances of detecting investor confusion because it may be too short-lived to be captured by daily closing prices (*Chordia et al., 2014*).

We document that, out of the 254 candidate pairs with the highest possible similarities, 31 pairs (12.2%) seem to exhibit a statistically significant co-movement in turnover that, when controlled for other factors, can be attributed to trades made by investors who mistake one company for another. We find that in some cases, the phenomenon happens only around time intervals containing extreme trading turnover in the bigger company and is not present for the rest of the time (this is true for 15 additional pairs in the sample). We also show that in 18 additional cases, the investor reaction involving the smaller company occurs with up to a three-hour delay after news concerning the bigger company is released. Including these 33 pairs brings our estimate of pairs that cause investor confusion up to 25% of identified potential candidates. Given how widespread similarities between companies' names and tickers are, the finding suggests that trades made by mistake are not anecdotal and have a more systematic nature. We show that such confusion is most evident around periods with extreme trading turnover and extreme returns for the bigger company of the pair and is less evident around more common events such as analysts' forecasts, recommendations, and release of earnings reports.

For 56 out of the original 254 and for 18 out of the 31 significant turnover pairs, we document that returns also exhibit significant co-movements. The cumulative abnormal return (CAR) for the smaller ("mistaken") company around times with extreme returns in the bigger company ranges between 0.1% and 0.6% for positive news (between -0.1% and -0.6% for negative news) for the three-hour window around the event. We document that, on average, it takes over a week for returns to reverse. We also show that confusion trading is not just a retail investor phenomenon. Institutional investors are also subject to confusion trading.

The market-wide setup of our study and screening for companies with the highest degree of similarities allows us to investigate the determinants of the strength of investor confusion. We find that the larger the size of the smaller company in a pair, the stronger the confusion. We also show that the probability of confusion is higher if two companies are listed on the same exchange and for companies with lower institutional holdings. Analyst coverage also increases the probability of confusion. At the same time, return co-movements are more evident in pairs for which stock returns are less volatile.

<sup>1</sup> See also the following news about name/ticker confusion: *Ewing (1999)*, *Levenson (2014)*, and *Levine (2019)*, among others.

<sup>2</sup> For example, at UC Berkeley's "Psychology and Economics 219" course. The syllabus can be found at: [http://eml.berkeley.edu/~webfac/dellavigna/e219b\\_s12/219BSyllabusSpring2012\\_Jan12-2.pdf](http://eml.berkeley.edu/~webfac/dellavigna/e219b_s12/219BSyllabusSpring2012_Jan12-2.pdf).

<sup>3</sup> *Davies et al. (2007)* applied *Rashes' (2001)* analyses to 29 pairs in the stock market in the United Kingdom. In contrast to our study, they did not use intraday data. They find statistically insignificant results and conclude that any trade by confusion, if present, can be confined to shorter, intraday, intervals. Because of the use of daily regressions, the applicability of their results to the larger universe of securities is unclear.



By our estimates, the trades made by mistake, on average, cost investors \$1.1M per pair per year in transaction costs. This figure typically constitutes around 5% of the total transaction costs for the smaller company of the pair. The fraction of trades due to confusion in the smaller company is similar at 5%. Compared to the documented number of trades made by retail investors of just 2% (Evans, 2009), the reported number is economically large and indicates that confusion trading is not driven only by retail investors.

For robustness, we also look at pairs in which one (or both) of the companies change their names/tickers so that they are no longer confusing. We show that when the cause of the confusion disappears, the phenomenon also goes away.

Our study has broad policy implications and is of interest to the broad community of market participants. First, we draw investors' attention to the phenomenon of mistaking one company for another and urge them to be more careful when placing orders for companies with similar tickers and/or names. As noted by Levine (2019), even fast algorithmic traders are not free of this type of error, let alone individual retail investors. Our study also points out that brokerage houses can do more to prevent trades made by mistake. We provide a list of companies that are most likely to be subject to confusion trading and recommend using additional checks and/or warnings when investors try to execute a trade for those stocks, especially for large trades and high transaction costs. We would also like to draw attention away from the companies on the list themselves or any other company that possibly shares part of its name/ticker symbol with another firm to focus on general awareness of the potential confusion. The impact may be especially big for the smaller company in a pair. Firms might be willing to avoid any price movements not associated with new information related to the firm itself. One approach for these firms is to change their name and/or ticker. Our results show that when firms do change their names and/or tickers, this confusion disappears.<sup>4</sup>

The documented short-term predictability of returns and a sizable reaction ( $\pm 0.5\%$ ) in the small stock to news related to the big stock indicates inefficiencies in the markets. These inefficiencies should be of interest to arbitrageurs. In the modern era of high-frequency trading and low transaction costs, computer algorithms seek opportunities to exploit even the tiniest profits. Actively trading off the mispriced confused stock will generate profits for arbitrageurs and eliminate the inefficiency. Our study could also be of interest to the regulators of financial markets. Rashes (2001) documents that the NYSE was contacted about changing the ticker symbol for MCI/MCIC. Yet, the NYSE did not believe the amount of confusion generated was significant enough to justify the change. Our study shows that at least for some pairs, such confusion is sizable and persistent. Finally, this paper is of interest to behavioral and financial researchers. We document that companies with similar ticker symbols and/or names represent more than one-half of all publicly traded stocks. If confusion trading is a phenomenon that is not limited to just the sample of stocks described in this study, but is indeed a much broader phenomenon, it may have significant implications for asset pricing. To our knowledge, we are the first to measure the presence, scale, and economic significance of investor confusion.

## 2. Data and variables

### 2.1. Sample

We start by searching for pairs of publicly traded companies on the CRSP database that have similar names and/or ticker symbols between 1993 and 2013. First, we identify companies with similar ticker symbols. This list includes companies for which the ticker symbol of one company contains the entire ticker of another company (with at least three letters), plus an extra letter or two. For example, ABM-ABMD. We were able to identify 5703 pairs of that nature with 7589 unique companies (some companies' tickers were matched to the tickers of several other companies). Another example of similar ticker symbols includes pairs for which both companies have ticker symbols of at least four letters in length. Here, the ticker symbol of one company contains all the letters of the ticker symbol of another company with the same two first letters but with the last two letters switched. For example, TGCI-TGIC. The search provides 375 pairs of that nature for 739 unique companies.

We then move on to find companies with similar names. This process is more complicated because many companies share common words in their names such as "First," "American," or "Financial." We want companies to share the "meaningful" parts of their names. Therefore, we proceed with screening for companies that share parts of their names and exclude the most commonly shared words. Even after we filter out the first 100 most common words in company names, the search still provides 10,493 companies.

Finally, we look for companies for which a ticker symbol of one company is part of the name of another company. There are 84 pairs like that, attached to 165 unique companies. For all pairs in our original search, we require that the companies in each pair have overlapping periods of existence. Combined together, our search shows that there are some 14,437 companies that share some part of their identifying information (name or ticker symbol) with another company. This constitutes over 55% of all stocks that were being publicly traded during our 1993–2013 sample period.<sup>5</sup> We conclude that the majority of companies on the market share some part of their name or/and trading symbol with some other company and that the phenomenon is common.

<sup>4</sup> On October 8, 2013, FINRA changed Tweeter's ticker symbol to THEGQ. There are other cases when companies changed their names and/or tickers because of potential confusion with another stock. For example, AppNet Systems was confused with Appian Technology and changed its ticker symbol from APPN to APPG on March 31, 1999.

<sup>5</sup> We use the number of stocks available on CRSP to get the estimate, 26,236.



Of course, not all identified companies will be confused by investors. We narrow our search and select company pairs with the highest degree of similarities. We believe that these companies can be confused by investors more easily than others. We require that the intraday stock prices are available on the NYSE TAQ (Trade and Quote) database between 1993 and 2013. To avoid any co-movement caused by intra-industry factors, we require that companies in each pair belong to two different two-digit SIC-groups.

We apply five filters and identify five sources ("types") of confusion. The first type includes pairs for which the ticker symbol of the smaller company of the two is part of the name of another company (the larger one of the pair). The search gives us 26 pairs of this type. The infamous example of a confused pair that falls into this type is the Bed Bath & Beyond Inc. (BBBY) and Bedford Property Investors Inc. (BED).

The second type is similar to the first one, with the difference being that the ticker symbol of the larger company of the two is part of the name of the smaller company. There are 34 pairs that could fall prey to this second type of confusion. In some cases, there is double-confusion: a ticker for one company is part of the name of another company, and, at the same time, the ticker of the paired company is part of the name of the first company. An example of a pair exhibiting these traits would be Witco Chemical Corp. (WIT) and Wit Capital Group Inc. (WITC). Besides sharing their names and ticker symbols, these two companies have nothing in common.

For the third type of confusion, we require that three conditions are met. First, both companies' ticker symbols should consist of at least three letters. Second, the ticker symbol of one company is the ticker of another company plus an extra letter or two. These two requirements by themselves are very broad and create too many matches to be useful. At the same time, we believe that the requirements by themselves are not representative of the true confusion. Therefore, we add the extra requirement that the two companies should share parts of their names. We further manually check that the shared part of the name is meaningful and excluded matches that are simply generated by common words such as "Inc." or "Corp." The search provides 182 pairs. *Rashes' (2001)* MCI-MCIC pair is in this category.

The fourth type of confusion includes pairs for which both companies have ticker symbols containing at least four letters. Here, the ticker symbol of one company is the ticker symbol of another, with the last two letters switched. Again, we further require that the two companies share a meaningful part of their names. There are 8 pairs in this group, and an example is the Victoria Bankshares Inc. (VICT) and Victoria Creations Inc. (VITC) pair.

Finally, we search the media for news about confused stocks that were not identified by our algorithm. The search gives us two pairs: Hewlett Packard Co. (HPQ and its previous ticker symbol HWP) is often confused with Helmerich & Payne Inc. (HP), and Newell Companies (the owner of the Graco Children's products brand, NWL) with its confusing pairing, Graco Inc. (GGG).

We also check companies' PERMNOs and PERMCOs on the CRSP database to make sure they are not different issues of the same company. In total, this gives us 254 candidate pairs of companies.

We recognize that there are possibly other types of confusion between companies. For example, *Davies et al. (2007)* document that companies may be confused when their names are spelled differently but sound similar. Even though other types of confusion are not included in our search, we believe that our sample size is large enough to test our major hypotheses and that it can provide a lower bound for investor confusion.

Two possible kinds of erroneous trades may contribute to co-movements in turnover. The first kind, "true" investor confusion, occurs when investors mistake one company for another and trade irrationally believing that they are buying or selling stocks in the right company. The second kind is due to the phenomenon called "fat fingers," which occurs when investors enter the wrong ticker symbol into their trading system as a genuine mistake (a typo). *Rashes (2001)* argues that the number of shares being traded via mistakes of the first kind is much greater than the number being traded due to the second type. *Davies et al. (2007)* note that any mistakes that are a result of fat fingers are more likely to be evident over a short horizon and are less likely to be a reason for co-movements in daily studies. Often, investors will realize their mistake within minutes and correct themselves. This will result in two transactions being recorded: one for the mistaken trade, and one when the trade is corrected. In many cases, however, as noted by *Rashes (2001)*, there are safeguards against this type of mistake. The goal of our study is not to differentiate between the two kinds of mistakes. Instead, we are examining how much of the trading turnover can be attributed to both kinds, collectively. *Internet Appendix A* provides the list of all pairs in our sample.

## 2.2. Intraday prices, returns, and turnover

We use the NYSE TAQ database to obtain intraday stock prices. To build relative announcement returns, we create 10-min interval prices by converting the TAQ trade-by-trade prices. There are 39 10-min intervals in a trading day. We form intraday prices at interval times every 10 min ( $P_{9:40}, P_{9:50}, \dots, P_{15:40}, P_{15:50}, P_{16:00}$ ) using the nearest TAQ price within 5 min of the interval time. In cases when there are multiple prices in the specified second, we compute the volume-weighted average price. If no trades occurred for some 10-min interval, we set the corresponding interval return to zero. However, we exclude observations for which more than 10% of the 10-min interval prices are missing to exclude possible liquidity effects. We employ the standard filters used in the microstructure literature: we exclude the first and last trades as well as trades that occur outside of regular trading hours. For each 10-min interval, we compute the total volume for each company in the pair and the market. To calculate turnover, we divide the total volume obtained by the number of shares outstanding on the same day from CRSP. Using turnover instead of raw share volume helps in controlling for events such as stock splits. Finally, for easy comparison between different pairs, we standardize dependent and independent turnover variables by subtracting the mean and dividing by the standard deviation within each pair.



companies. In column (9) of Panel B in Table 7, the [-10,+10] window (which corresponds to  $\pm 100$  min) provides an estimate of \$52.99M, or almost 80% of the total transaction costs due to confusion.<sup>15</sup>

Comparing total costs around different events is not representative due to the different frequencies of events. For example, using the 99.9th percentile for identifying extreme turnover intervals instead of the 99th percentile decreases the number of ETs ten times over. Panel C of Table 7 shows the average transaction costs attributed to investor confusion on a *per event* basis. Making this transition allows us to compare relative events in terms of associated transaction costs to investors.

Consistent with our earlier findings in Table 3, the highest transaction costs and number of erroneous trades occur around time intervals with the most extreme trading turnovers (99.95th percentile) for the BIG companies. On average, for the [-10,+10] window, the transaction costs are over \$5080 per event (column (9)) and constitute approximately 44,300 traded shares (column (5)). These values are followed by those for the extreme turnovers in the 99.9th and 99th percentiles with over \$4500 and \$2800 in costs and 39,300 and 24,200 in trading volumes, respectively. Among the four types of corporate events (Table 7, Panel C, column (9)), the CIGs have the highest transaction costs per event (over \$2130), followed by EAs (over \$1470), recommendations (\$1250), and forecasts (\$900). These values are consistent with uninformed investors reacting more strongly to irregular and unexpected corporate events (such as CIGs) than to scheduled and expected corporate events (such as EAs).

## 5. Stopped confusion

If our hypothesis is correct and the observed co-movements in turnover and stock prices are indeed due to investor confusion, then it must be the case that any such co-movement should disappear when the cause of the confusion disappears. Such a result is possible when one company of the pair changes its name and/or ticker symbol to a different one. Incidentally, for 10 out of the 31 pairs, we are able to identify such changes.

For five pairs, one company of the two in the pair changes its ticker (and usually its name at the same time), and both companies continue to co-exist. This allows us to re-estimate equation (1) for the new period during which both companies are still publicly traded concurrently, but the source of confusion has disappeared. For five pairs, two companies co-existed *before* the estimation period, and then one of the companies changed its name and/or ticker, and that change *started* the possible confusion. In this case, we can re-estimate equation (1) for the pre-period during which the source of confusion has not yet started. In four cases, the change of the name and ticker took place in the BIG company. In six cases, it occurred in the SMALL company.

Table 8 documents the 10 pairs in this study, their old and new tickers and names, as well as original and new estimation periods with a short description of the origins of the changes that we were able to identify. We re-estimate equation (1) for each of the pairs for the new estimation period. Column (8) shows that for nine pairs, the newly estimated coefficient is not significant anymore (in one case, it is actually significant but with a negative sign).<sup>16</sup>

We believe that this evidence is consistent with our conjecture that any identified co-movements in trading turnover are due to investor mistakes.

## 6. Discussion and conclusion

In this paper, we investigate the economic and statistical significance of trades made out of confusion in the U.S. market. Using a sampling approach, we document that confusion trading is not anecdotal and has a more systematic nature. After conducting a market-wide search for companies with similar names and/or ticker symbols, we first document that the majority of publicly traded firms share part of their name and/or ticker symbol with another company. To narrow our search, we concentrated on the companies for which the likelihood of confusion is highest, and we were able to identify 254 pairs that can be easily mistaken for each other by investors.

Out of the 254 pairs, 31 pairs (12.2%) show statistically and economically significant co-movements in trading turnover within the same 10-min interval. That co-movement is hard to attribute to anything but investor confusion. Fifteen more pairs show significant co-movements only when the trading turnover in the bigger company is especially large. Finally, for 18 pairs, the co-movement is delayed, with delays being contained within three trading hours, which brings the total estimate of how common significant confusion pairs are to over 25% of pairs with similar tickers/names.

Our paper is the first to report the percentage of trades associated with confusion and the effects of these “confusion” trades. Trades made by mistake constitute roughly 6.1M shares per pair per year and cost investors, on average, \$1.1M per pair per year. We find that such “confusion” trades account for around 5%, on average, of the total trading turnover and total annual transaction costs involving the smaller company. We also show that investor confusion is especially great around time intervals with large, abnormal trading turnovers and/or extreme returns for the bigger company in the pair. Erroneous trades involv-

<sup>15</sup> Given that our detection technique generates the 99% EVs with the frequency of 1% of the time, the [-10,+10] windows around those EVs cover approximately 20% of the data.

<sup>16</sup> Observe that because we do not use the two-step approach here, we tend to over-find confusion, and, by chance only, are expected to see one significant pair ( $10 \times 0.1$ ).



ing the smaller firm are easier to execute around positive news for the bigger company than around negative news for the bigger company. Finally, investors who make investment mistakes seem to be more likely to make trades out of confusion around irregular events (such as company issued guidance) rather than regular, scheduled events (such as earnings announcements). We also document that confusion trading is a phenomenon that is attributable to both retail and institutional investors alike.

We test our hypothesis that these co-movements are due to investor confusion on pairs for which the cause of confusion ceases due to name and/or ticker changes on the part of one of the companies and show that any co-movement disappears in such cases.

We do not claim the observed co-movements are confined only to the 31 (or 64) pairs. Quite to the contrary, the goal of this study is to show that confusion trading is potentially much more prevalent than previously believed. Our original subsample represents a small fraction of all firms that are potentially exposed to confusion trading. A broader study that tests for co-movements between all stocks that share parts of tickers or names is left for future research. Such a study would give a better understanding of how widespread the phenomenon is, gauge the possibility for a trading strategy that exploits this behavioral anomaly, and investigate the implications for asset pricing.

We also urge the regulators to study the issue and publicize the list of the tickers which are most often confused (listed in Appendix A). We urge brokers to implement simple technical solutions (akin to using a spell checker) to intervene with the order process when a trader enters a ticker from the list of highly confused pairs. And for investors, our message is simple, "Always double-check before you trade."

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.finmar.2019.06.002>.

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

Filed on May 24, 2016

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GILEAD SCIENCES, INC.,

Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 59**

# The Turnaround Letter

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## LOOKING TO INSIDERS FOR CLUES TO A TURNAROUND

It's been said that insiders sell their personal holdings of their company's shares for many reasons, but they buy for only one reason: the stock is headed higher. For turnaround investors, insider stock purchases can provide important clues that a recovery may be ahead.

Corporate officers, directors and major stockholders are required to report their purchases and sales of stock to the Securities and Exchange Commission (SEC) every month. These "insider" trades can indicate that those with the best knowledge of a company believe it will do better in the future. Long before anything newsworthy happens, or before an upturn appears in a company's financials, an insider may see positive changes and purchase the company's stock. This can be a sign that "outsiders" should consider buying it, too.

These publicly-reported insider purchases are different from other kinds of "insider trading", which are illegal practices where individuals trade stocks on material, non-public information beyond the boundaries set by the law.

Our research focused on recent, large purchases reported by insiders of major U.S. companies. We chose only open market purchases, which provide a more valuable signal than option-grant purchases or other types of buying. And, as turnaround investors, we emphasized out-of-favor stocks. Listed below are seven companies with these appealing traits.

**CADENCE BANCORPORATION (CADE)** – Based in Houston, Cadence is a regional bank with \$18 billion in assets. It was formed by the current management team in the aftermath of the 2009 financial crisis with \$1 billion they raised to acquire distressed banks. Following several acquisitions, Cadence completed its initial public offering in April 2017. While the shares have rebounded this year after a nearly 50% decline late last year, they remain barely above the \$20 IPO price. Cadence is producing healthy profits and is well-capitalized although its loan reserves appear a tad light. In March, founder/chairman Paul Murphy, president Samuel Tortorici and other directors and officers purchased \$43 million in shares – a strong vote of confidence in Cadence's future.

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**CAMPING WORLD HOLDINGS (CWH)** – Founded in 1966, Camping World is the nation's largest retailer of recreational vehicles (RVs), accessories and repair, refurbishment and other services,



lagged. However, the long-term cumulative investment return, including dividends and other distributions, has been impressive.

**HERZFELD CARIBBEAN BASIN (CUBA)** – This fund focuses on stocks that would benefit from easing of the United States’ trade embargo with Cuba. Its shares surged to a 30% premium in 2015 when the embargo was temporarily eased, but have since slipped to a sizeable discount. The fund holds mostly mainstream U.S. and Latin American equities like construction company MasTec, cruise liner Royal Caribbean and Puerto Rican bank Popular. It also holds some obscure Cuba-based assets but these rightfully have been written down to zero. While quirky

(and expensive, with a 2.7% expense ratio), this fund might offer some appeal to savvy investors interested in working the discount.

**ROYCE GLOBAL VALUE TRUST (RGT)** – Managed by value investing legend Chuck Royce and his highly regarded Royce & Associates, this fund focuses on small and mid-cap value stocks around the world. It is highly diversified, holding nearly 200 stocks, with about 90% of its assets in developed market equities. RGT has a somewhat elevated 1.7% expense ratio, yet part of this may be due to its small size. Potential investors should be aware of RGT’s volatile performance, reflected in a -18% return last year following a 36% gain the prior year.

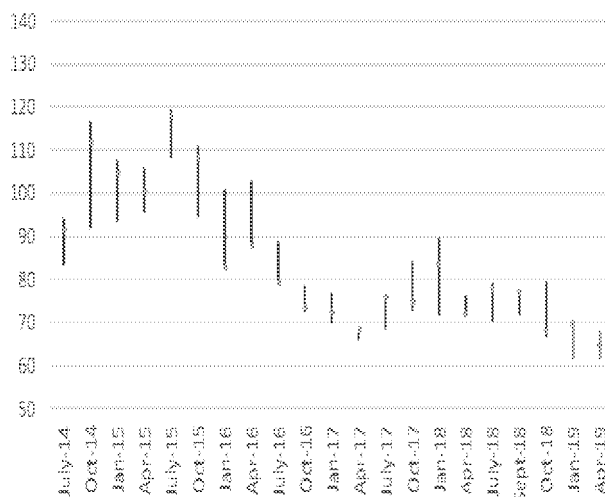
## RECOMMENDATIONS

### Purchase Recommendation: Gilead Sciences

**GILEAD SCIENCES**  
 333 LAKESIDE DRIVE  
 FOSTER CITY, CA 94404  
 TEL. (650) 574-3000  
[www.gilead.com](http://www.gilead.com)

**CATEGORY: LARGE CAP (\$83 BILLION)**  
**SYMBOL: GILD EXCHANGE: NASDAQ**  
**BUSINESS: BIOPHARMACEUTICALS**  
**ANNUAL REVENUES (2018): \$22.1 BILLION**  
**EARNINGS (2018): \$5.5 BILLION**  
**4/29/19 PRICE: \$64.92**  
**52-WEEK RANGE: \$79.61-60.32**  
**ESTIMATED DIVIDEND YIELD: 3.9%**  
**PRICE TARGET: \$105**

**Background:** Gilead Sciences is a major biopharmaceuticals producer focusing on life-threatening diseases. Founded in 1987 by Michael Riordan, a 29-year-old medical doctor, Gilead has grown to over \$22 billion in revenues through both internal growth and by acquisitions. Two-thirds of Gilead’s current sales are produced by its powerful HIV treatment franchise. Products to treat hepatitis C (“HCV”) generate another 17% of its revenues, with



hepatitis B, blood cancer, cardiovascular and anti-infection products comprising the balance. The company completed its initial public offering in January 1992 at \$15, producing a 256x price gain, excluding any dividends, to its peak \$120 (post-splits) price in 2015.

However, since the 2015 peak, Gilead’s shares have fallen by nearly half. The company’s remarkably strong historical revenue growth has

now reversed, with accelerating declines over the past three years to a 15% rate in 2018. While its HIV franchise continues to grow, demand for its HCV products is shriveling as patients are being cured and competition from new and cheaper treatments has intensified. Near-term prospects for growth from other products currently appear limited. The shares also bear the weight of fears over increased government pressure to reduce prices, including potential "Medicare for All" legislation. With this narrative, amidst a strong bull stock market, it's perhaps not a surprise that Gilead shares continue to slip.

**Analysis:** Gilead's discarded shares offer considerable value. At a highly discounted 6.6x EV/EBITDA multiple, the shares are cheaper than nearly all comparable peers. The company's revenues are stabilizing, as continued growth in the HIV franchise should offset declines in HCV treatment revenues. With little value ascribed to the research pipeline, any improvement in its prospects offers additional growth potential.

Its wide 50% EBITDA margins, combined with minimal capital spending needs, will likely allow Gilead to generate over \$7 billion in free cash flow this year, ahead of last year's prodigious

\$5.6 billion in free cash flow. This would be more than enough to pay for the modest \$1 billion in capital spending and \$2.4 billion in dividends, leaving over \$4 billion of surplus cash flow (nearly 19% of revenues). Gilead's balance sheet, already flush with over \$30 billion in cash (more than the \$27 billion in debt), buttresses its fundamentals and provides firepower for acquiring promising new treatments.

Importantly, the company recently brought on a new CEO. Daniel O'Day, previously the long-time head of the pharmaceutical division of Roche Holdings, joined on March 1st. His fresh perspective and expertise in oncology should help boost Gilead's revenue growth prospects, and he is likely to impose cost controls that would improve margins.

Long-term investors have an opportunity to look past the company's uninspiring current narrative to potentially healthy returns driven by both the generous dividend and a potential rebound in the stock price.

**We recommend the PURCHASE of shares of Gilead Sciences (GILD) with a \$105 price target.**

### ***Sale Recommendations: PennyMac & Ally Financial***

While **PennyMac** shares have not reached our 26 price target, we are moving them to a SELL, for a 54% total return since inception. The yield is attractive, but we believe the company's turnaround is essentially complete.

While **Ally Financial's** strong earnings and asset quality have helped the shares approach our 33

price target, we are concerned that deteriorating credit conditions in the auto finance sector make the risk/reward balance less favorable. Therefore, we are moving **ALLY** shares to a SELL, with a 26% total return since inception.

**Disclosure: An employee of the Publisher owns PennyMac and Ally Financial shares.**

### ***NEWS NOTES:***

While **Consolidated Communications** suspended its high dividend, its business fundamentals remain essentially unchanged. Cash previously paid as dividends will be redirected to reduce its debt for the next few years. After

a sharp sell-off, we think the shares have some bounce potential from here.

**Disclosure: Accounts managed by an affiliate of the Publisher, and an employee of the Publisher, own CNSL shares.**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

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**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 60**



## **Gilead and Galapagos Complete Closing of Their Transformative Research and Development Collaboration**



August 23, 2019 04:01 PM Eastern Daylight Time

FOSTER CITY, Calif. & MECHELEN, Belgium--(BUSINESS WIRE)--Gilead Sciences, Inc. (NASDAQ: GILD) and Galapagos NV (Euronext & NASDAQ: GLPG) today announced the closing of the global research and development collaboration agreement signed on July 14, 2019.

This agreement has received clearance from the U.S. Federal Trade Commission under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 and merger control approval from the Austrian Federal Competition Authority.

Under the terms of the agreement, the closing of this transaction triggers an upfront license fee payment of \$3.95 billion by Gilead to Galapagos. In addition, Gilead has made an equity investment in Galapagos of approximately \$1.1 billion (or approximately €960 million) by subscribing for new shares at a price of €140.59 per share, including issuance premium. As a result, Gilead now owns 13,589,686 ordinary shares of Galapagos, representing approximately 22 percent of the currently outstanding share capital of Galapagos.

"We are excited to close this unique agreement, which will generate both long-term strategic value and mutual, immediate benefits," said Daniel O'Day, Chairman and Chief Executive Officer of Gilead. "The collaboration reflects Gilead's intent to grow our innovation network through diverse and creative partnerships."

"This agreement is about maximizing innovation based on developing new mode of action medicines. With the capital provided by Gilead, we aim to progress innovation to patients," said Onno van de Stolpe, Chief Executive Officer of Galapagos.

In accordance with Belgian transparency legislation<sup>1</sup>, Galapagos notes that its total share capital currently amounts to €333,479,569.76; the total number of securities conferring voting rights is 61,652,086, which is also the total number of voting rights (the "denominator"), and all securities conferring voting rights and all voting rights are of the same category. The total number of rights (warrants) to subscribe to not yet issued securities conferring voting rights is 5,958,292, which equals the total number of voting rights that may result from the exercise of these warrants. Galapagos does not have any convertible bonds or shares without voting rights outstanding.

#### **About Gilead Sciences**

Gilead Sciences, Inc. is a research-based biopharmaceutical company that discovers, develops and commercializes innovative medicines in areas of unmet medical need. The company strives to transform and simplify care for people with life-threatening illnesses around the world. Gilead has operations in more than 35 countries worldwide, with headquarters in Foster City, California. For more information on Gilead Sciences, please visit the company's website at [www.gilead.com](http://www.gilead.com).

#### **About Galapagos**

Galapagos (Euronext & NASDAQ: GLPG) discovers and develops small molecule medicines with novel modes of action, three of which show promising patient results and are currently in late-stage development in multiple diseases. The company's pipeline comprises Phase 3 through to discovery programs in inflammation, fibrosis, osteoarthritis and other indications. Galapagos' ambition is to become a leading global biopharmaceutical company focused on the discovery, development and commercialization of innovative medicines. More information at [www.glpg.com](http://www.glpg.com).

#### **Gilead Forward-Looking Statements**

This press release includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, related to Gilead, Galapagos and the global research and development collaboration agreement that are subject to risks, uncertainties and other factors. All statements other than statements of historical fact are statements that could be deemed forward-looking statements, including all statements regarding the intent, belief or current expectation of the companies and members of their senior management team. Forward-looking statements include, without limitation, the risk that Gilead may not realize any benefits from the global collaboration agreement; its potential effects on Gilead's revenues and earnings; Gilead may fail to discover, develop and commercialize any of Galapagos' pipeline

products under the agreement; the filing of the new drug applications for approval of filgotinib in the currently anticipated timeframe; approval of filgotinib by regulatory authorities, including any approvals, if granted, may have significant limitations on its use; the anticipated timing of clinical data of Galapagos' pipeline products; the possibility of unfavorable results from these clinical trials; and the accuracy of any assumptions underlying any of the foregoing. Investors are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties and are cautioned not to place undue reliance on these forward-looking statements. Actual results may differ materially from those currently anticipated due to a number of risks and uncertainties. Risks and uncertainties that could cause the actual results to differ from expectations contemplated by forward-looking statements include: the occurrence of any event, change or other circumstance that could give rise to the termination of the collaboration agreement; the effects of the transaction on relationships with employees, customers, other business partners or governmental entities; transaction costs; the risk Galapagos' stockholders do not approve Gilead's board nominees or issuance of the warrants, as the case may be. These and other risks are described in detail in Gilead's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, as filed with the U.S. Securities and Exchange Commission. All forward-looking statements are based on information currently available to Gilead, and Gilead assumes no obligation to update any such forward-looking statements.

#### **Galapagos Forward-Looking Statements**

This release may contain forward-looking statements with respect to Galapagos, including statements regarding Galapagos' strategic ambitions, the implementation of the global collaboration agreement, and the amount and timing of any payments by Gilead to Galapagos. Galapagos cautions the reader that forward-looking statements are not guarantees of future performance. Forward-looking statements involve known and unknown risks, uncertainties and other factors which might cause the actual results, financial condition and liquidity, performance or achievements of Galapagos, or industry results, to be materially different from any historic or future results, financial conditions and liquidity, performance or achievements expressed or implied by such forward-looking statements. In addition, even if Galapagos' results, performance, financial condition and liquidity, and the development of the industry in which it operates are consistent with such forward-looking statements, they may not be predictive of results or developments in future periods. Among the factors that may result in differences are the inherent uncertainties associated with competitive developments, clinical trial and product development activities and regulatory approval requirements (including that data from the ongoing and planned clinical research programs may not support registration or further development of its candidate products due to safety, efficacy or other reasons), Galapagos' reliance on collaborations with third parties (including its collaboration partner Gilead), and estimating the commercial potential of its candidate products. A further list and description of these risks, uncertainties and other risks can be found in Galapagos' Securities and Exchange Commission (SEC) filings and reports, including in Galapagos' most recent annual report on Form 20-F filed with the SEC and subsequent filings and reports filed by Galapagos with the SEC. Given these uncertainties, the reader is advised not to place any undue reliance on such forward-looking statements. These forward-looking statements speak only as of the date of publication of this document. Galapagos expressly disclaims any obligation to update any such forward-looking statements in this document to reflect any change in its expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements, unless specifically required by law or regulation.

*For more information on Gilead Sciences, please visit the company's website at [www.gilead.com](http://www.gilead.com), follow Gilead on Twitter (@GileadSciences) or call Gilead Public Affairs at 1-800-GILEAD-5 or 1-650-574-3000.*

<sup>1</sup> Belgian Act of 2 May 2007 on the disclosure of major shareholdings in issuers whose shares are admitted to trading on a regulated market.

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**OTX 61**

# 7 Things to Expect for Gilead Sciences in 2019

The big biotech's executives spill the beans on plans for the new year at the J.P. Morgan Healthcare Conference.



Keith Speights  
(TMFFishBiz)

Updated: Apr 15, 2019 at 3:05PM

Every year, major healthcare companies get an opportunity to tell their story at [the J.P. Morgan Healthcare Conference](#). At this year's conference, **Gilead Sciences'** ([NASDAQ:GILD](#)) story sounded better than it has in quite a while.

Several Gilead Sciences executives answered questions at the J.P. Morgan conference on Monday, including interim CEO Gregg Alton, CFO Robin Washington, head of worldwide commercial operations Laura Hamill, and Chief Scientific Officer John McHutchison. These key members of the biotech's management team identified seven things to expect for Gilead in 2019.



IMAGE SOURCE: GETTY IMAGES.

## 1. A new CEO at the helm

Gilead will soon have a new CEO. The company announced on Dec. 10, 2018,



that Daniel O'Day will take the top spot at Gilead effective March 1, 2019. O'Day is currently CEO of **Roche** Pharmaceuticals.

Interim CEO Gregg Alton, who also serves as Gilead's chief patent officer, said that O'Day's "commitment to science and innovation" was especially attractive to Gilead. Alton added that O'Day brings broad experience and is a "strong cultural fit" with the company.

## 2. A return to growth

Former Gilead CEO John Milligan predicted in late 2017 that 2018 could be "the beginning of a growth phase" for the biotech. Although Gilead's revenue and earnings didn't actually increase on a year-over-year basis in 2018, the company did set the stage for what Alton says will be a return to growth in 2019.

CFO Robin Washington, as other Gilead executives have done in the past, referred to 2018 as a "trough year." Alton agreed that Gilead will begin to turn things around this year with higher year-over-year product revenue growth.

## 3. Continued strength in HIV

While Alton acknowledged that competition will heat up in HIV, he stated that Gilead's HIV franchise will remain strong. Washington also pointed out HIV as a major source of long-term growth for the company.

Biktarvy will be the primary driver of that growth. Laura Hamill said that the drug is "setting the record for the most successful HIV launch in the industry." Biktarvy is already the No. 1 HIV drug in the U.S. for both treatment-naïve and switch patients.

## 4. Stabilization for HCV

The sore spot for Gilead over the last few years has been its steep decline in revenue from its hepatitis C virus (HCV) franchise. While sales might still slip some, Washington said that Gilead is seeing stabilization for its HCV drugs.

She noted that "HCV is still a very important franchise for us." The HCV market is less volatile now than in the past now that it's shaped up to be pretty much a one-on-one battle between Gilead and **AbbVie**. As a result, Washington thinks that Gilead will be able to forecast HCV revenue more accurately in 2019.

## 5. Building on leadership in cell therapy

Alton boasted that Gilead is the leader in cell therapy with Yescarta as a best-in-class product. Although sales for Yescarta picked up in 2018, the cell therapy is still likely to generate less than \$300 million for the year. However, Gilead expects momentum to continue in the new year.

John McHutchison pointed out what he called "incredible" real-world data from patients who have been treated with Yescarta. He said that Gilead is moving forward with the cell therapy in multiple early lines of therapy as well as targeting new indications. However, McHutchison added that the biotech probably won't advance its BCMA cell therapy candidate because it didn't show the "depth of response to put forward a best-in-class program."

## 6. Lots of important late-stage clinical results

Alton and McHutchison mentioned that Gilead anticipates announcing results from late-stage clinical studies in 2019. One is for an already-approved drug, Descovy, in HIV pre-exposure prophylaxis (PrEP). Gilead's Truvada is already approved for PrEP, but the biotech hopes that Descovy could be an effective therapy as well.

The most excitement, though, is for Gilead's new experimental drugs. Gilead expects to report results from a late-stage study of filgotinib in treating rheumatoid arthritis in the first quarter of 2019. The company also plans to announce results from two late-stage studies of selonsertib in treating nonalcoholic steatohepatitis (NASH) in the first half of the year. McHutchison exclaimed that he is "confident" about the prospects of success for Gilead's promising NASH drug.

## 7. Acquisitions

When asked about Gilead's capital allocation strategy, Washington responded that the No. 1 priority is mergers and acquisitions. She said that the company's approach is to "follow the science."

Expect Gilead to primarily make deals in the core therapeutic areas where it currently focuses, particularly cell therapy and NASH. Washington said that the biotech is "looking at lots of opportunities," so 2019 could be a busy year for Gilead on the business development front.

*Check out the latest [Gilead Sciences earnings call transcript](#).*

## 10 stocks we like better than Gilead Sciences

When investing geniuses David and Tom Gardner have a stock tip, it can pay to listen. After all, the newsletter they have run for over a decade, *Motley Fool Stock Advisor*, has quadrupled the market.\*

David and Tom just revealed what they believe are the ten best stocks for investors to buy right now... and Gilead Sciences wasn't one of them! That's right -- they think these 10 stocks are even better buys.

[See the 10 stocks](#)

\*Stock Advisor returns as of June 1, 2019

*Keith Speights* owns shares of AbbVie and Gilead Sciences. The Motley Fool owns shares of and recommends Gilead Sciences. The Motley Fool has a [disclosure policy](#).

### **This Marijuana Stock Could be Like Buying Amazon for \$3.19**

A little-known Canadian company just unlocked what some experts think could be the key to profiting off the coming marijuana boom.

And make no mistake – it is coming.

Cannabis legalization is sweeping over North America – 10 states plus Washington, D.C., have all legalized recreational marijuana over the last few years, and full legalization came to Canada in October 2018.

And one under-the-radar Canadian company is poised to explode from this coming marijuana revolution.

Because a game-changing deal just went down between the Ontario government and this powerhouse company...and you need to hear this story today if you have even considered investing in pot stocks.

Simply click here to get the full story now.

[Learn more](#)

## **3 High-Yield Dividend Stocks to Buy on Sale**

Low valuations, high prices: These three stocks appear to be ready to put in your shopping cart right now.



**Keith Speights**  
(TMFFishBiz)

Sep 1, 2019 at 7:30AM

There aren't too many more attractive combinations for income-seeking investors than a high-dividend yield and a bargain price. The bad news is that not many great stocks fit those criteria. The good news, though, is that a few do.

**AbbVie** ([NYSE:ABBV](#)), **AT&T** ([NYSE:T](#)), and **Gilead Sciences** ([NASDAQ:GILD](#)) claim mouthwatering dividend yields and very attractive valuations. Here's what you need to know about these three high-yield dividend stocks that you can buy on sale right now.



IMAGE SOURCE: GETTY IMAGES.

## 1. AbbVie

AbbVie's dividend currently yields 6.5%. That fantastic yield isn't the only thing to like about the big drugmaker's dividend. The company has increased its dividend payout by nearly 168% since being spun off from **Abbott Labs** in 2013. AbbVie remains committed to rewarding shareholders through dividend hikes.

In addition to offering a high-dividend yield, AbbVie stock is dirt cheap. Shares trade at only a little over seven times expected earnings. That's one of the lowest valuations in the pharmaceutical industry and is especially appealing for a company that generated free cash flow of more than \$9.8 billion over the last 12 months.

What's the catch? Investors are worried about declining sales for Humira and AbbVie's dependence on the immunology drug. There's also plenty of skepticism about AbbVie's pending \$63 billion acquisition of Allergan.

On the other hand, AbbVie recently won an enormously important FDA approval for Rinvoq in treating rheumatoid arthritis. The company scored another victory earlier this year when the FDA approved Skyrizi for treating psoriasis. Both drugs should be megablockbusters for AbbVie and, along with current stars Imbruvica and Venclexta, help the company overcome the challenges resulting from the slipping sales of Humira.

## 2. AT&T

AT&T continues to rank as one of the premier dividend stocks on the market with a yield of over 5.8%. The telecommunications giant might not give shareholders huge dividend hikes, but it does claim an impressive track record of 35 consecutive years of dividend increases.

Shares currently trade at around 9.6 times expected earnings. That level makes AT&T more attractively valued than several of its peers in the telecom industry.

The company certainly faces some big challenges. AT&T's TV segment has pretty much been a mess, with subscribers bailing on DIRECTV and canceling their HBO subscriptions after the popular *Game of Thrones* series wrapped up. There's also a huge debt of nearly \$160 billion looming like a dark cloud over the company's head.

However, AT&T's business aside from the TV segment appears to be in pretty good shape overall. The company is also steadily paying down its debt. Don't expect tremendous growth from AT&T just yet, but the rise of high-speed 5G wireless networks should provide a boost to the company in the coming years. Most importantly, AT&T should keep those nice dividends flowing.

## 3. Gilead Sciences

Gilead Sciences doesn't have a long track record of paying dividends -- the company initiated its dividend program just four years ago. But while the big biotech's dividend history is short, it's definitely sweet. Gilead's dividend currently yields 4%, and the company has raised its dividend payout by nearly 47% since 2015.

The stock is also priced at a bargain. Gilead's shares trade at a little over nine times expected earnings. The really good news for the company is that it has returned to revenue and earnings growth after a long decline caused by sinking sales for its hepatitis C franchise.

Gilead hasn't totally emerged from the shadow of its hep-C problems. The biotech has encountered some pipeline setbacks, notably including selonsertib flopping in late-stage studies for treating liver disease nonalcoholic steatohepatitis (NASH). Gilead could also face headwinds associated with

innovation in any pharmaceutical stock, particularly the threat of the US

investing in any pharmaceutical stock, particularly the threat of the U.S. government imposing limitations on how companies establish drug prices.

Still, though, the future looks brighter now for Gilead than it has looked in quite a while. Gilead has a solid new CEO in Dan O'Day. It could soon win regulatory approvals for potential blockbuster immunology drug filgotinib. The biotech's HIV drugs, especially Biktarvy, continue to perform really well. Gilead's dividend is likely to increase in the future -- and its valuation probably will, too.

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**OTX 62**



## Gilead Goal 2018 - Changing The Conversation

Jan. 13, 2017 10:07 AM ET111 comments

by: Out of Ignorance

### Summary

- In a recent wide ranging CNBC interview, CEO Milligan set his goal for Gilead for 2018; he wants to change the conversation.
- The right sort of deals are ones that build on Gilead's existing assets invigorating its pipeline.
- Following are clues to the outline of an invigorated pipeline.
- One additional consideration.

### Introduction

John Milligan took over as CEO of Gilead Sciences (NASDAQ:GILD) on March 10, 2016. On April 28, 2016, Gilead announced that its quarterly HCV revenues dropped >12% from \$4.892 to \$4.294 billion, after growing from nearly nothing in 2013. They are still dropping. Milligan offers no prospect of any correction on that front.

Gilead's fabulous cash cow, the HCV juggernaut of Sovaldi/Harvon/Epclusa, hopefully soon to be crowned with FDA approval of SOF/VEL/VOX, is not disappearing any time soon, however, it is in a long term contraction. Growth for the HCV franchise is not in the cards. It has been the same story for Milligan's entire tenure as CEO; little wonder that he wants to change the conversation.

The fact that Gilead has been vigorously expanding and growing its HIV assets never seems to draw appropriate attention. During the CNBC interview, neither questioner asks anything about Gilead's HIV franchise. Their only two interests are: what is the future for Gilead's HCV revenues and when will a deal be announced?

**In a recent wide ranging CNBC interview, CEO Milligan set his goal for Gilead for 2018; he wants to change the conversation.**

A recent wide ranging CNBC interview started with Meg Tirrell asking the questions and moving to Melissa Lee. Melissa Lee closed out her portion with a question characterizing the combination of Gilead's recent hire of Andy Dickinson from Lazard and prospective repatriation as the "stars aligning" for an M&A deal. Milligan responded, noting that Dickinson:

...came in to really help us realign our business development efforts, so it is not just M&A that we're interested in but its partnerships and potentially creative partnerships that he's particularly adept at. So we do want to add to the pipeline. I wouldn't say M&A's a foregone conclusion but I would say we'll be very active in bringing product in **so when we have this interview in 2018 we can talk more about our pipeline and less about HCV.[emphasis added]** [transcribed by contributor from CNBC 5:00]

Now there's a concept that everyone except for Gilead shorts can sign on to with gusto. Clearly, Milligan "gets it". The question is, "Can Gilead rustle up just the right sort of deal?"

**The right sort of deals are ones that build on Gilead's existing assets invigorating its pipeline.**

Milligan described the key elements that make for a successful merger in the mold of the Triangle Pharmaceuticals and Pharmasset deals as follows:

[such a target] has to have the right characteristics, where we have the capability, the understanding and, importantly, the other components in our portfolio to make more of it than it would be on its own. We were able to do that with Triangle and again with Pharmasset. We are looking heavily at assets that can combine with or be complimentary to things that we own. They are rare. They are often very expensive.  
[transcribed by contributor from CNBC 1:00]

Milligan also states that Gilead must have a high degree of confidence as to its understanding of the technical aspect of any deal. Deals are hard to undo, so you better "have the science right" as he puts it before you sign on the dotted line.

This excerpt should make it clear that suitable candidates are ones who can complete a metaphysical handshake with one or more of Gilead's existing research programs. Insofar as the nitty-gritty of such programs are highly secret, there is limited scope for accurate selection of ultimate candidates.

**Following are clues to the outline of an invigorated pipeline.**

Gilead wants to improve existing programs more than starting afresh. Gilead's largest set of programs in its existing pipeline are in the area of liver diseases, inflammation/respiratory and hematology/ oncology. It seems pretty clear that conversation changing will fall into one or more of these three.

The one that intrigues me the most falls within the liver peg. Gilead has set itself the goal of curing HBV and is a far distance from doing so. Certainly there is no area where Gilead is more likely "to get the science right" than in connection with a subject it has been studying in detail for over a year.

Accordingly my big wager is that either: Gilead has a breakthrough on some HBV program of its own, perhaps positive results from its GS-9620 Phase 2 trial, or Gilead does a serious HBV focused deal. Such a deal should bring Gilead's HBV prospects near to the level of confidence that Gilead exudes in its NASH program.

If you talk to people more knowledgeable than I, such as CEO Milligan himself, they will tell you that Gilead is angling towards a deal in the hematology/oncology area. In this respect, in mid 2016 Bloomberg issued an interesting article titled "Gilead Chief Has \$21 Billion in Cash and an Itch to Do a Deal".

The article includes the following excerpt which reads very much like Milligan's current tune:

Milligan says he's eager to score a key asset in cancer, one of the three therapeutic areas he seeks to expand alongside liver diseases and inflammatory disorders. His guiding question when surveying possible targets is: "What is going to be the cutting-edge technology five years from now, and would I be part of that?" To that end, he's not limiting himself to any particular subset of cancer, like blood or solid tumors.

In the interim Gilead has hired a Dr. Riva to play a major role in its hematology/oncology arena. I take this as raising Gilead's confidence that it will be able to get the science right if a hematology/oncology prospect comes into view.

In favor of the likelihood of hematology/oncology deals I would be remiss if I did not point to the significant body of informed opinion who think it likely that Dr. Riva would favor such a deal. The thinking further goes, as I understand it, that assurances of such a deal would be part of his reason for moving to Gilead.

When asked about Dr. Riva's impact on the deal front by CNBC, Milligan ducked the issue by saying that he would not put pressure on a new hire by raising expectations.

On the other hand, I observe as a non-scientist, that the hematology/oncology field is such a tough nut to crack that one hire shouldn't really move the needle in terms of confidence. Certainly Gilead ought to be able to evaluate HBV therapies with greater confidence than it can cancer therapies.

As for the inflammation/respiratory cohort, I would consider that as the odd man out except that Gilead has just completed its Galapagos deal. There could be more to go with Galapagos or it may be that some additional ingredients would fit nicely within their existing deal.

#### **Additional considerations.**

After I wrote the foregoing, CSYJ focused my attention on Slide 32 from Milligan's slide presentation at the JPMorgan Healthcare Conference. I found it particularly persuasive in supporting the thesis here.

Slide 32 titled "Our Focus in 2017 and Beyond" lists M&A and partnerships as two of the three means by which Gilead will build out its existing therapeutic programs. This emphasizes showing that these are indeed "top of mind" for Gilead from this point forward as Dr. Milligan reiterates in the previously referenced CNBC clip.

## Our Focus in 2017 and Beyond

- Extend and grow our leadership position in HIV
- Maximize the HCV opportunity by focusing on patients and access
- Build out emerging therapeutic areas
  - Internal programs, M&A, and partnerships
- Maintain our strong operating and financial discipline
  - Expense control
  - Capital allocation focus
    - M&A, dividends, share repurchases

2016 full year results and 2017 guidance will be provided in our earnings call on February 7, 2017

32

In connection with Gilead's capital allocation, the priorities are M&A, dividends and share repurchases **in that order**. That is a ranking which I expect will find substantial support among Gilead's shareholders here on SA. We often read articles and comments on SA advocating for M&A as the top priority. The preference for dividends over buybacks is not quite as clear.

### Conclusion

Unless Gilead's deal tentacles have entirely ossified, I expect that Milligan will meet his goal of changing the conversation by 2018. Maybe this will not be early 2018, which is getting closer by the day, but at least by close of the calendar year.

I do not think it is going to be one big deal. Rather, I expect several bite size deals, each adding materiality to Gilead's depleted pipeline.

As an aside, let me note that Gilead's pipeline would look better if some of the FDA approvals it has in hand had taken a bit longer, or if Gilead had not so thoroughly downplayed the significance of its pending application for SOF/VEL/VOX.

**Disclosure:** I am/we are long GILD. I wrote this article myself, and it expresses my own opinions. I am not receiving compensation for it (other than from Seeking Alpha). I have no business relationship with any company whose stock is mentioned in this article.

### Comments (111)

AlanCT

This is a VERY GOOD piece of journalist work, in which I've learnt CEO Milligan's thinking, would like to give him a high rating of prudence, and consequently become a firm defender of Milligan in terms of M&A deliberation.

Instead of saying Milligan doesn't understand the market, I'd rather say those financial gurus don't understand Milligan and Gilead science.

13 Jan 2017, 10:30 AM



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

Filed on May 24, 2016

Published in the *Official Gazette* on November 8, 2016

GILEAD SCIENCES, INC.,

Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 63**

SC 13G 1 sc13g11035com\_10272017.htm SCHEDULE 13G

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D. C. 20549**

**SCHEDULE 13G  
(Rule 13d-102)**

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT  
TO RULES 13d-1(b), (c), AND (d) AND AMENDMENTS THERETO FILED  
PURSUANT TO RULE 13d-2(b)

(Amendment No. )<sup>1</sup>

Computer Programs and Systems, Inc.

(Name of Issuer)

Common Stock, \$0.001 par value

(Title of Class of Securities)

205306103

(CUSIP Number)

October 17, 2017

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

<sup>1</sup> The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, *see* the *Notes*).

CUSIP NO. 205306103

1	NAME OF REPORTING PERSON  Gilead Capital LP	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION  Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER  0
	6	SHARED VOTING POWER  926,043
	7	SOLE DISPOSITIVE POWER  0
	8	SHARED DISPOSITIVE POWER  926,043
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  926,043	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  6.7%	
12	TYPE OF REPORTING PERSON  IA	



CUSIP NO. 205306103

1	NAME OF REPORTING PERSON  Gilead Capital GP LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP  (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION  Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER  0
	6	SHARED VOTING POWER  926,043
	7	SOLE DISPOSITIVE POWER  0
	8	SHARED DISPOSITIVE POWER  926,043
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  926,043	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  6.7%	
12	TYPE OF REPORTING PERSON  OO	

CUSIP NO. 205306103

1	NAME OF REPORTING PERSON  Jeffrey A. Strong	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP  (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION  USA	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER  0
	6	SHARED VOTING POWER  926,043
	7	SOLE DISPOSITIVE POWER  0
	8	SHARED DISPOSITIVE POWER  926,043
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  926,043	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  6.7%	
12	TYPE OF REPORTING PERSON  IN	

CUSIP NO. 205306103

Item 1(a). Name of Issuer:

Computer Programs and Systems, Inc., a Delaware corporation (the "Issuer").

Item 1(b). Address of Issuer's Principal Executive Offices:

6600 Wall Street  
Mobile, Alabama 36695

Item 2(a). Name of Person Filing

Gilead Capital LP ("Gilead LP")  
Gilead Capital GP LLC ("Gilead GP")  
Jeffrey A. Strong

Each of the foregoing is referred to as a "Reporting Person" and collectively as the "Reporting Persons."

Item 2(b). Address of Principal Business Office or, if None, Residence

The principal business address of each of the Reporting Persons is:

157 Columbus Avenue, Suite 403  
New York, New York 10023

Item 2(c). Citizenship

Each of Gilead LP and Gilead GP is incorporated in the State of Delaware. Mr. Strong is a citizen of the United States of America.

Item 2(d). Title of Class of Securities:

Common Stock, par value \$0.001 per share (the "Common Stock")

Item 2(e). CUSIP Number:

205306103

CUSIP NO. 205306103

Item 3. If This Statement is Filed Pursuant to Rule 13d-1(b), or 13d-2(b) or (c), Check Whether the Person Filing is a:

- Not applicable.
- (a)  Broker or dealer registered under Section 15 of the Exchange Act.
- (b)  Bank as defined in Section 3(a)(6) of the Exchange Act.
- (c)  Insurance company as defined in Section 3(a)(19) of the Exchange Act.
- (d)  Investment company registered under Section 8 of the Investment Company Act.
- (e)  An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E).
- (f)  An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F).
- (g)  A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G).
- (h)  A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act.
- (i)  A church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act.
- (j)  Group, in accordance with Rule 13d-1(b)(1)(ii)(J).
- (k)  Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with Rule 240.13d-1(b)(1)(ii)(J), please specify institution: \_\_\_\_\_

Item 4. Ownership

(a) Amount beneficially owned:

As of the close of business on October 27, 2017, Gilead LP beneficially owned 926,043 shares of Common Stock, including 925,418 shares held through separately managed accounts to which Gilead LP serves as investment manager.

Each of Gilead GP, as the general partner of Gilead LP, and Mr. Strong, as the managing member of Gilead GP, may be deemed to beneficially own the 926,043 shares of Common Stock beneficially owned by Gilead LP.

The filing of this Schedule 13G shall not be construed as an admission that the Reporting Persons are, for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended, the beneficial owners of any of the shares reported herein. Each of the Reporting Persons specifically disclaims beneficial ownership of the shares reported herein that are not directly owned by such Reporting Person except to the extent of his or its pecuniary interest therein.

(b) Percent of class:

See Cover Pages Item 11. The percentages are based on 13,755,726 shares of Common Stock outstanding, as of August 7, 2017, which is the total number of shares of Common Stock outstanding as reported in the Issuer's Quarterly Report filed on Form 10-Q with the Securities and Exchange Commission on August 8, 2017.

- (c) Number of shares as to which such person has:
  - (i) Sole power to vote or to direct the vote  
See Cover Pages Items 5-9.
  - (ii) Shared power to vote or to direct the vote  
See Cover Pages Items 5-9.
  - (iii) Sole power to dispose or to direct the disposition of  
See Cover Pages Items 5-9.
  - (iv) Shared power to dispose or to direct the disposition of  
See Cover Pages Items 5-9.

CUSIP NO. 205306103

Item 5. Ownership of Five Percent or Less of a Class.

Not Applicable.

Item 6. Ownership of More than Five Percent on Behalf of Another Person.

Not Applicable.

Item 7. Identification and Classification of the Subsidiary That Acquired the Security Being Reported on by the Parent Holding Company or Control Person.

Not Applicable.

Item 8. Identification and Classification of Members of the Group.

See Exhibit 99.1.

Item 9. Notice of Dissolution of Group.

Not Applicable.

Item 10. Certifications.

By signing below each of the undersigned certifies that, to the best of its knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

CUSIP NO. 205306103

SIGNATURE

After reasonable inquiry and to the best of his knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: October 27, 2017

Gilead Capital LP

By: Gilead Capital GP LLC  
General PartnerBy: /s/ Jeffrey A. StrongName: Jeffrey A. Strong  
Title: Managing Member

Gilead Capital GP LLC

By: /s/ Jeffrey A. StrongName: Jeffrey A. Strong  
Title: Managing Member/s/ Jeffrey A. Strong

Jeffrey A. Strong

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

Filed on May 24, 2016

Published in the *Official Gazette* on November 8, 2016

GILEAD SCIENCES, INC.,

Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 64**



SC 13D/A 1 sc13da111035005\_02272019.htm AMENDMENT NO. 1 TO THE SCHEDULE 13D  
**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**SCHEDULE 13D**  
(Rule 13d-101)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT  
TO § 240.13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO  
§ 240.13d-2(a)

(Amendment No. 1)<sup>1</sup>

Computer Programs and Systems, Inc.  
(Name of Issuer)

Common Stock, \$0.001 par value  
(Title of Class of Securities)

205306103  
(CUSIP Number)

KANCHANA WANGKEO LEUNG, ESQ.  
GILEAD CAPITAL LP  
157 Columbus Avenue, Suite 403  
New York, New York 10023

MITCHELL RAAB, ESQ.  
OLSHAN FROME WOLOSKY LLP  
1325 Avenue of the Americas  
New York, New York 10019  
(212) 451-2300  
(Name, Address and Telephone Number of Person  
Authorized to Receive Notices and Communications)

February 27, 2019  
(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box .

*Note:* Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See § 240.13d-7 for other parties to whom copies are to be sent.

---

1 The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, *see the Notes*).

---

CUSIP NO. 205306103

1	NAME OF REPORTING PERSON  Gilead Capital Master Fund Ltd.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS  WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION  CAYMAN ISLANDS	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER  - 0 -
	8	SHARED VOTING POWER  76,173
	9	SOLE DISPOSITIVE POWER  - 0 -
	10	SHARED DISPOSITIVE POWER  76,173
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  76,173	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  Less than 1%	
14	TYPE OF REPORTING PERSON  CO	



CUSIP NO. 205306103

1	NAME OF REPORTING PERSON  Gilad Capital LP	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS  OO	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION  DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER  - 0 -
	8	SHARED VOTING POWER  1,070,570
	9	SOLE DISPOSITIVE POWER  - 0 -
	10	SHARED DISPOSITIVE POWER  1,070,570
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  1,070,570	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  7.6%	
14	TYPE OF REPORTING PERSON  IA	



CUSIP NO. 205306103

1	NAME OF REPORTING PERSON  Gilead Capital GP LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS  AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION  DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER  - 0 -
	8	SHARED VOTING POWER  1,070,570
	9	SOLE DISPOSITIVE POWER  - 0 -
	10	SHARED DISPOSITIVE POWER  1,070,570
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  1,070,570	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  7.6%	
14	TYPE OF REPORTING PERSON	

OO



CUSIP NO. 205306103

1	NAME OF REPORTING PERSON  Jeffrey A. Strong	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS  OO	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION  USA	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER  - 0 -
	8	SHARED VOTING POWER  1,070,570
	9	SOLE DISPOSITIVE POWER  - 0 -
	10	SHARED DISPOSITIVE POWER  1,070,570
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  1,070,570	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  7.6%	
14	TYPE OF REPORTING PERSON	

IN

CUSIP NO. 205306103

The following constitutes Amendment No. 1 to the Schedule 13D filed by the undersigned (“Amendment No. 1”). This Amendment No. 1 amends the Schedule 13D as specifically set forth herein.

Item 4. Purpose of Transaction.

Item 4 is hereby amended to add the following:

On February 27, 2019, the Reporting Persons and the Issuer entered into a support agreement (the “Agreement”), pursuant to which, simultaneously with the execution of the Agreement, the Issuer appointed Jeffrey A. Strong to fill the vacancy in Class I of the Board of Directors (the “Board”) resulting from John C. Johnson’s resignation from the Board on November 15, 2018, with a term expiring at the Issuer’s 2021 Annual Meeting of Stockholders (the “2021 Annual Meeting”).

Also pursuant to the Agreement, the Issuer has agreed to, among other things, (i) appoint Mr. Strong to the Nominating and Corporate Governance Committee or the Compensation Committee of the Board no later than the Issuer’s 2019 Annual Meeting of Stockholders (the “2019 Annual Meeting”), (ii) appoint Glenn P. Tobin as the independent Chairperson of the Board no later than the 2019 Annual Meeting, (iii) nominate, recommend and solicit proxies for the election of an additional independent director, to be mutually agreed upon by the Issuer and the Reporting Persons in accordance with the terms of the Agreement (the “New Director Nominee”), at the Issuer’s 2020 Annual Meeting of Stockholders (the “2020 Annual Meeting”) and (iv) fix the size of the Board to nine directors immediately following the 2020 Annual Meeting through the remainder of the Standstill Period (as defined below). The Agreement also provides that, during the Standstill Period, if Mr. Strong is unable to serve as a director due to his death or incapacity or a family emergency or other emergent circumstance, the Reporting Persons will be entitled to recommend to the Nominating and Corporate Governance Committee and the Board a substitute person (who meets certain independence and experience criteria) to fill the resulting vacancy.

Pursuant to the terms of the Agreement, the Reporting Persons are subject to certain customary standstill restrictions that, among other things, prohibit the Reporting Persons from acquiring an economic interest in more than 10.0% of the Issuer’s outstanding common stock and from taking certain actions with respect to extraordinary transactions and other matters, as described in the Agreement. The standstill restrictions apply until the date that is thirty (30) days prior to the deadline for the submission of stockholder nominations for directors at the 2021 Annual Meeting (the “Standstill Period”). However, the Standstill Period will terminate immediately in the event that the New Director Nominee is not selected thirty (30) days prior to the deadline for the submission of stockholder nominations for directors at the 2020 Annual Meeting.

During the Standstill Period, the Reporting Persons have agreed to vote (i) in favor of each director nominated and recommended by the Board for election at any meeting of stockholders or at any adjournments or postponements thereof, (ii) against any stockholder nominations for director that are not approved and recommended by the Board for election at any such meeting and against any proposals or resolutions to remove any member of the Board, and (iii) subject to certain exceptions related to the recommendations of proxy advisory firms, in accordance with the recommendations of the Board on all other proposals of the Board set forth in the Issuer’s proxy statements.

The foregoing description of the terms of the Agreement does not purport to be complete and is qualified in its entirety by reference to the full text of the Agreement, a copy of which is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

CUSIP NO. 205306103

In conjunction with the Agreement, the Issuer and the Reporting Persons have also entered into a customary confidentiality agreement governing the confidentiality obligations of the Reporting Persons, a copy of which is attached hereto as Exhibit 99.2 and is incorporated herein by reference.

Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer.

Item 6 is hereby amended to add the following:

On February 27, 2019, the Reporting Persons and the Issuer entered into the Agreement defined and described in Item 4 above, which is incorporated herein by reference.

Also on February 27, 2019, the Reporting Persons and the Issuer entered into a confidentiality agreement as described in Item 4 above, which is incorporated herein by reference.

Item 7. Material to be Filed as Exhibits.

Item 7 is hereby amended to add the following exhibits:

- 99.1 Support Agreement, by and among Gilead Capital Master Fund Ltd., Gilead Capital LP, Gilead Capital GP LLC, Jeffrey A. Strong and Computer Programs and Systems, Inc., dated as of February 27, 2019 (incorporated by reference to Exhibit 10.1 of the Issuer's Current Report on Form 8-K filed with the SEC on February 27, 2019).
- 99.2 Confidentiality Agreement by and among Gilead Capital Master Fund Ltd., Gilead Capital LP, Gilead Capital GP LLC, Jeffrey A. Strong and Computer Programs and Systems, Inc., dated as of February 27, 2019.

CUSIP NO. 205306103

SIGNATURES

After reasonable inquiry and to the best of his knowledge and belief, the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: February 27, 2019

Gilead Capital Master Fund Ltd.

By: /s/ Jeffrey A. Strong

Name: Jeffrey A. Strong

Title: Sole Director

Gilead Capital LP

By: Gilead Capital GP LLC  
General PartnerBy: /s/ Jeffrey A. Strong

Name: Jeffrey A. Strong

Title: Managing Member

Gilead Capital GP LLC

By: /s/ Jeffrey A. Strong

Name: Jeffrey A. Strong

Title: Managing Member

/s/ Jeffrey A. Strong

Jeffrey A. Strong

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

Filed on May 24, 2016

Published in the *Official Gazette* on November 8, 2016

GILEAD SCIENCES, INC.,

Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 65**

SC 13D 1 sc13d11035002\_11212016.htm THE SCHEDULE 13D

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

SCHEDULE 13D  
(Rule 13d-101)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT  
TO § 240.13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO  
§ 240.13d-2(a)

(Amendment No. )<sup>1</sup>

Landauer, Inc.  
(Name of Issuer)

Common Stock, \$0.10 par value  
(Title of Class of Securities)

51476K 10 3  
(CUSIP Number)

KANCHANA WANGKEO LEUNG, ESQ.  
GILEAD CAPITAL LP  
157 Columbus Avenue, Suite 403  
New York, New York 10023

MITCHELL RAAB, ESQ.  
OLSHAN FROME WOLOSKY LLP  
1325 Avenue of the Americas  
New York, New York 10019  
(212) 451-2300  
(Name, Address and Telephone Number of Person  
Authorized to Receive Notices and Communications)

November 21, 2016  
(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box .

*Note:* Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See § 240.13d-7 for other parties to whom copies are to be sent.

<sup>1</sup> The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, *see* the *Notes*).

---



CUSIP No. 51476K 10 3

1	NAME OF REPORTING PERSON  Gilead Capital LP	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS  WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION  DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER  - 0 -
	8	SHARED VOTING POWER  480,215
	9	SOLE DISPOSITIVE POWER  - 0 -
	10	SHARED DISPOSITIVE POWER  480,215
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  480,215	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  5.0%	
14	TYPE OF REPORTING PERSON  IA	

CUSIP No. 51476K 10 3

1	NAME OF REPORTING PERSON  Gilead Capital GP LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS  AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION  DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER  - 0 -
	8	SHARED VOTING POWER  480,215
	9	SOLE DISPOSITIVE POWER  - 0 -
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11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  480,215	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  5.0%	
14	TYPE OF REPORTING PERSON  OO	

CUSIP No. 51476K 10 3

1	NAME OF REPORTING PERSON Jeffrey A. Strong	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS OO	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION USA	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER - 0 -
	8	SHARED VOTING POWER 480,215
	9	SOLE DISPOSITIVE POWER - 0 -
	10	SHARED DISPOSITIVE POWER 480,215
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 480,215	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 5.0%	
14	TYPE OF REPORTING PERSON IN	

CUSIP No. 51476K 10 3

The following constitutes the Schedule 13D filed by the undersigned (the “Schedule 13D”).

Item 1. Security and Issuer.

This statement relates to the Common Stock, \$0.10 par value (the “Shares”), of Landauer, Inc., a Delaware corporation (the “Issuer”). The address of the principal executive offices of the Issuer is 2 Science Road, Glenwood, IL 60425.

Item 2. Identity and Background.

(a) This statement is filed by:

- (i) Gilead Capital LP (“Gilead Capital”), a Delaware limited partnership, which serves as the investment manager to separately managed accounts (the “Gilead Capital Accounts”);
- (ii) Gilead Capital GP LLC (“Gilead Capital GP”), a Delaware limited liability company, as the general partner of Gilead Capital;  
and
- (iii) Jeffrey A. Strong, as managing member of Gilead Capital GP.

Each of the foregoing is referred to as a “Reporting Person” and collectively as the “Reporting Persons.” Each of the Reporting Persons is party to that certain Joint Filing Agreement as further described in Item 6. Accordingly, the Reporting Persons are hereby filing a joint Schedule 13D.

(b) The address of the principal office of each of Gilead Capital, Gilead Capital GP and Mr. Strong is 157 Columbus Avenue, Suite 403, New York, New York 10023.

(c) The principal business of Gilead Capital is providing discretionary investment advice and management services to the Gilead Capital Accounts, and other institutional clients. The principal business of Gilead Capital GP is acting as the general partner of Gilead Capital. The principal occupation of Mr. Strong is serving as the managing member of Gilead Capital GP and Chief Investment Officer and Managing Partner of Gilead Capital.

(d) No Reporting Person has, during the last five years, been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) No Reporting Person has, during the last five years, been party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) Each of Gilead Capital and Gilead Capital GP is organized under the laws of the State of Delaware. Mr. Strong is a citizen of the United States of America.

Item 3. Source and Amount of Funds or Other Consideration.

The Shares held by the Gilead Capital Accounts were purchased with working capital in open market purchases, except as otherwise noted, as set forth in Schedule A, which is incorporated by reference herein. The aggregate purchase price of the 480,215 Shares held in the Gilead Capital Accounts is approximately \$17,523,056, including brokerage commissions.



CUSIP No. 51476K 10 3

Item 4. Purpose of Transaction.

The Reporting Persons purchased the Shares based on the Reporting Persons' belief that the Shares, when purchased, were undervalued and represented an attractive investment opportunity. Depending upon overall market conditions, other investment opportunities available to the Reporting Persons, and the availability of Shares at prices that would make the purchase or sale of Shares desirable, the Reporting Persons may endeavor to increase or decrease their position in the Issuer through, among other things, the purchase or sale of Shares on the open market or in private transactions or otherwise, on such terms and at such times as the Reporting Persons may deem advisable.

On November 22, 2016, the Reporting Persons issued an open letter to the Board expressing their concerns regarding the Issuer's corporate governance and poor long-term financial performance. In the letter, the Reporting Persons first addressed the issue of Executive Chairman Michael Leatherman. The Reporting Persons had discovered that Mr. Leatherman was a not Certified Public Accountant, contrary to statements in the Issuer's filings. The Reporting Persons had brought this information to Mr. Leatherman's attention and the attention of the full Board, but no action has been taken to date to make Mr. Leatherman account for this misrepresentation. The Reporting Persons also detailed other governance concerns in the letter, such as (i) the Issuer's accounting restatement and revision processes for the fiscal years ending 2011 through 2014, which occurred while Mr. Leatherman acted as interim Chief Financial Officer and as a member of the Audit Committee, (ii) the Board's capital allocation, including with respect to the implementation of the Enterprise Resource Planning system which budget ballooned from \$10 million to \$57 million and the Board's decision to acquire a medical products business without obvious synergies, which was ultimately sold at a loss of more than 88%, and (iii) the Board's failure thus far to execute on wireless dosimetry technology despite publicly disclosing plans to pursue such technology since 2010. The Reporting Persons stated their belief that the Issuer's governance issues have taken a toll on the Issuer's financial health, noting the Issuer's precipitous decline in adjusted operating margins, from nearly 40% to 20% since 2008, and net cash, from a net cash position of \$29 million in 2008 to a net debt position of \$100 million as of June 30, 2016. The Reporting Persons also noted the Board's 50% reduction in quarterly dividend payments in 2015 and poor shareholder returns since 2008 compared to the Issuer's peer group and industry indices. The Reporting Persons further noted that every director who oversaw this extended underperformance remains a director on the Board, including Executive Chairman Michael Leatherman. Accordingly, the Reporting Persons demanded that the Board take immediate action to remove Mr. Leatherman as a director and officer of the Issuer, disclose the process by which Mr. Leatherman and fellow director Bill Dempsey were appointed to the Board (each of whom came through company contacts), establish a special committee of independent directors to investigate and strengthen the nomination and review process for director candidates, and appoint Jeffrey Strong as a director to help remedy the governance shortfalls. The Reporting Persons concluded that if the Board fails to address the aforementioned governance deficiencies, the Reporting Persons would act to protect shareholder value, including proposing a slate of directors at the Issuer's annual meeting of shareholders. The full text of the letter is attached hereto as Exhibit 99.2 and is incorporated herein by reference.

CUSIP No. 51476K 10 3

No Reporting Person has any present plan or proposal which would relate to or result in any of the matters set forth in subparagraphs (a) - (j) of Item 4 of Schedule 13D except as set forth herein or such as would occur upon or in connection with completion of, or following, any of the actions discussed herein. The Reporting Persons intend to review their investment in the Issuer on a continuing basis. Depending on various factors including, without limitation, the Issuer's financial position and investment strategy, the price levels of the Shares, conditions in the securities markets and general economic and industry conditions, the Reporting Persons may in the future take such actions with respect to their investment in the Issuer as they deem appropriate including, without limitation, continuing to engage in communications with management and the Board of Directors of the Issuer, engaging in discussions with stockholders of the Issuer or other third parties about the Issuer and the Reporting Persons' investment, including potential business combinations or dispositions involving the Issuer or certain of its businesses, making recommendations or proposals to the Issuer concerning changes to the capitalization, ownership structure, board structure (including board composition), potential business combinations or dispositions involving the Issuer or certain of its businesses, or suggestions for improving the Issuer's financial and/or operational performance, purchasing additional Shares, selling some or all of their Shares, or changing their intention with respect to any and all matters referred to in Item 4.

Item 5. Interest in Securities of the Issuer.

The aggregate percentage of Shares reported owned by each Reporting Person is based upon 9,603,864 Shares outstanding, which is the total number of Shares outstanding as of August 4, 2016 as reported in the Issuer's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on August 8, 2016.

A. Gillead Capital

- (a) As of the close of business on November 21, 2016, 480,215 Shares were held in the Gillead Capital Accounts. As the investment manager of the Gillead Capital Accounts, Gillead Capital may be deemed the beneficial owner of the Shares held in the Gillead Capital Accounts.

Percentage: Approximately 5.0%

- (b)
1. Sole power to vote or direct vote: 0
  2. Shared power to vote or direct vote: 480,215
  3. Sole power to dispose or direct the disposition: 0
  4. Shared power to dispose or direct the disposition: 480,215

Gillead Capital has the power to vote or dispose of any Shares held within the Gillead Capital Accounts. Gillead Capital shares the power to vote and dispose of the Shares held within the Gillead Capital Accounts with Gillead Capital GP and Mr. Strong.

- (c) The transactions in the Shares by Gillead Capital through the Gillead Capital Accounts during the past 60 days are set forth in Schedule A and are incorporated herein by reference.

B. Gillead Capital GP

- (a) Gillead Capital GP, as the general partner of Gillead Capital may be deemed the beneficial owner of the 480,215 Shares held in the Gillead Capital Accounts.

Percentage: Approximately 5.0%

CUSIP No. 51476K 10 3

- (b)
1. Sole power to vote or direct vote: 0
  2. Shared power to vote or direct vote: 480,215
  3. Sole power to dispose or direct the disposition: 0
  4. Shared power to dispose or direct the disposition: 480,215

- (c) Gilead Capital GP has not entered into any transactions in the Shares during the past 60 days. The transactions in the Shares through the Gilead Capital Accounts during the past 60 days are set forth in Schedule A and are incorporated herein by reference.

C. Jeffrey A. Strong

- (a) Mr. Strong, as the managing member of Gilead Capital GP, may be deemed the beneficial owner of the 480,215 Shares held in the Gilead Capital Accounts.

Percentage: Approximately 5.0%

- (b)
1. Sole power to vote or direct vote: 0
  2. Shared power to vote or direct vote: 480,215
  3. Sole power to dispose or direct the disposition: 0
  4. Shared power to dispose or direct the disposition: 480,215

- (c) Mr. Strong has not entered into any transactions in the Shares during the past 60 days. The transactions in the Shares through the Gilead Capital Accounts during the past 60 days are set forth in Schedule A and are incorporated herein by reference.

The filing of this Schedule 13D shall not be construed as an admission that the Reporting Persons are, for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended, the beneficial owners of any of the Shares reported herein. Each Reporting Person disclaims beneficial ownership of such Shares except to the extent of his or its pecuniary interest therein.

- (d) No person, other than the Reporting Persons and the Gilead Capital Accounts, is known to have the right to receive, or the power to direct the receipt of dividends from, or proceeds from the sale of, the Shares.

- (e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer.

On November 22, 2016, the Reporting Persons entered into a Joint Filing Agreement in which the Reporting Persons agreed to the joint filing on behalf of each of them of statements on Schedule 13D with respect to the securities of the Issuer to the extent required by applicable law. The Joint Filing Agreement is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

Other than as described herein, there are no contracts, arrangements, understandings or relationships among the Reporting Persons, or between the Reporting Persons and any other person, with respect to the securities of the Issuer.



CUSIP No. 51476K 10 3

Item 7.

Material to be Filed as Exhibits.

- 99.1 Joint Filing Agreement by and among Gilead Capital LP, Gilead Capital GP LLC and Jeffrey A. Strong, dated November 22, 2016.
- 99.2 Letter to Issuer's Board of Directors, dated November 22, 2016.

CUSIP No. 51476K 10 3

SIGNATURES

After reasonable inquiry and to the best of his knowledge and belief, the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: November 22, 2016

Gilead Capital LP

By: Gilead Capital GP LLC  
General Partner

By: /s/ Jeffrey A. Strong  
Name: Jeffrey A. Strong  
Title: Managing Member

Gilead Capital GP LLC

By: /s/ Jeffrey A. Strong  
Name: Jeffrey A. Strong  
Title: Managing Member

/s/ Jeffrey A. Strong  
Jeffrey A. Strong

CUSIP No. 51476K 10 3

**SCHEDULE A****Transactions in the Shares During the Past Sixty Days**

<u>Nature of the Transaction</u>	<u>Securities Purchased/(Sold)</u>	<u>Price Per Share(\$)</u>	<u>Date of Purchase / Sale</u>
<b><u>GILEAD CAPITAL LP</u></b>			
<b><u>(THROUGH THE GILEAD CAPITAL ACCOUNTS)</u></b>			
Purchase of Common Stock	1,861	43.8390	09/26/2016
Purchase of Common Stock	536	43.8390	09/26/2016
Purchase of Common Stock	703	43.8390	09/26/2016
Purchase of Common Stock	721	43.5753	09/29/2016
Purchase of Common Stock	207	43.5753	09/29/2016
Purchase of Common Stock	272	43.5753	09/29/2016
Purchase of Common Stock	1,080	43.9978	10/07/2016
Purchase of Common Stock	311	43.9978	10/07/2016
Purchase of Common Stock	409	43.9711	10/07/2016
Purchase of Common Stock	7,800	43.4453	10/11/2016
Purchase of Common Stock	2,249	43.4453	10/11/2016
Purchase of Common Stock	2,951	43.4453	10/11/2016
Purchase of Common Stock	1,945	43.5816	10/12/2016
Purchase of Common Stock	560	43.5816	10/12/2016
Purchase of Common Stock	735	43.5816	10/12/2016
Purchase of Common Stock	2,227	43.3930	10/13/2016
Purchase of Common Stock	641	43.3930	10/13/2016
Purchase of Common Stock	842	43.3930	10/13/2016
Purchase of Common Stock	7,387	43.4899	10/14/2016
Purchase of Common Stock	2,129	43.4899	10/14/2016
Purchase of Common Stock	2,794	43.4899	10/14/2016
Purchase of Common Stock	2,161	43.4335	10/25/2016
Purchase of Common Stock	622	43.4335	10/25/2016
Purchase of Common Stock	817	43.4335	10/25/2016
Purchase of Common Stock	241	42.2175	11/01/2016
Purchase of Common Stock	69	42.2176	11/01/2016
Purchase of Common Stock	90	42.2175	11/01/2016
Purchase of Common Stock	45	51.7750	11/21/2016
Purchase of Common Stock	35	51.7750	11/21/2016
Purchase of Common Stock	120	51.7750	11/21/2016

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

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Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 66**

SC 13D/A 1 sc13da411035002\_09072017.htm

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**SCHEDULE 13D  
(Rule 13d-101)**

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT  
TO § 240.13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO  
§ 240.13d-2(a)

(Amendment No. 4)<sup>1</sup>

Landauer, Inc.  
(Name of Issuer)

Common Stock, \$0.10 par value  
(Title of Class of Securities)

51476K 10 3  
(CUSIP Number)

KANCHANA WANGKEO LEUNG, ESQ.  
GILEAD CAPITAL LP  
157 Columbus Avenue, Suite 403  
New York, New York 10023

MITCHELL RAAB, ESQ.  
OLSHAN FROME WOLOSKY LLP  
1325 Avenue of the Americas  
New York, New York 10019  
(212) 451-2300  
(Name, Address and Telephone Number of Person  
Authorized to Receive Notices and Communications)

September 6, 2017  
(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box .

*Note:* Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See § 240.13d-7 for other parties to whom copies are to be sent.

<sup>1</sup> The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, *see the Notes*).

---

CUSIP NO. 51476K 10 3

1	NAME OF REPORTING PERSON  Gilead Capital LP	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS  WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION  DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER  - 0 -
	8	SHARED VOTING POWER  525,361
	9	SOLE DISPOSITIVE POWER  - 0 -
	10	SHARED DISPOSITIVE POWER  525,361
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  525,361	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  5.5%	
14	TYPE OF REPORTING PERSON  IA	





CUSIP NO. 51476K 10 3

1	NAME OF REPORTING PERSON  Gilead Capital GP LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS  AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION  DELAWARE	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER  - 0 -
	8	SHARED VOTING POWER  525,361
	9	SOLE DISPOSITIVE POWER  - 0 -
	10	SHARED DISPOSITIVE POWER  525,361
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  525,361	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  5.5%	
14	TYPE OF REPORTING PERSON  OO	



CUSIP NO. 51476K 10 3

1	NAME OF REPORTING PERSON  Jeffrey A. Strong	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS  OO	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION  USA	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER  - 0 -
	8	SHARED VOTING POWER  525,361
	9	SOLE DISPOSITIVE POWER  - 0 -
	10	SHARED DISPOSITIVE POWER  525,361
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  525,361	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  5.5%	
14	TYPE OF REPORTING PERSON	

IN

CUSIP NO. 51476K 10 3

The following constitutes Amendment No. 4 to the Schedule 13D filed by the undersigned (“Amendment No. 4”). This Amendment No. 4 amends the Schedule 13D as specifically set forth herein.

Item 3. Source and Amount of Funds or Other Consideration.

Item 3 is hereby amended and restated to read as follows:

The Shares deemed to be beneficially owned by Gilead Capital were purchased with working capital in open market purchases, except as otherwise noted, as set forth in Schedule A, which is incorporated by reference herein. The aggregate purchase price of the 525,361 Shares deemed to be beneficially owned by Gilead Capital is approximately \$19,849,430, including brokerage commissions.

Item 4. Purpose of Transaction.

Item 4 is hereby amended to add the following:

On September 6, 2017, the Issuer entered into an Agreement and Plan of Merger (the “Merger Agreement”), with Fortive Corporation, a Delaware corporation (“Parent”), and Fern Merger Sub Inc., a Delaware corporation and an indirect wholly owned subsidiary of Parent (“Sub”). Pursuant to the Merger Agreement, on the terms and subject to the conditions set forth in the Merger Agreement, as promptly as reasonably practicable (and, in any event, no later than September 20, 2017), Sub will commence a tender offer (the “Offer”) to purchase any and all of the outstanding shares of common stock, par value \$0.10 per share, of the Issuer (“Company Common Stock”), at a price per share of Company Common Stock of \$67.25 (such amount, or any other amount per share paid pursuant to the Offer and the Merger Agreement, the “Offer Price”), subject to any required withholding of taxes, net to the seller thereof in cash, without interest, on the terms and subject to the conditions and limitations set forth in the Merger Agreement. The Merger Agreement also provides that, following the time Sub irrevocably accepts for payment all shares of Company Common Stock that Sub became obligated to purchase pursuant to the Offer, upon the terms and subject to the conditions set forth in the Merger Agreement, Sub will be merged with and into the Issuer (the “Merger”) in accordance with Delaware law, with the Issuer continuing as the surviving corporation. As a result of the Merger, the Issuer will become a wholly owned subsidiary of Parent.

Pursuant to the Merger Agreement, at the effective time of the Merger (the “Effective Time”), each share of Company Common Stock issued and outstanding immediately prior to the Effective Time (other than (i) shares held by stockholders who have properly exercised appraisal rights under Delaware law and (ii) shares held in the treasury of the Issuer or by Parent, Sub or any of their respective wholly owned subsidiaries) will automatically be converted into the right to receive the Offer Price in cash, subject to any required withholding of taxes, without interest.

A more complete description of the Merger Agreement and the conditions to the Offer are set forth in the Issuer’s Current Report on Form 8-K filed with the SEC on September 6, 2017 (the “Issuer 8-K”). Such description of the Merger Agreement is incorporated herein by reference and is qualified in its entirety by reference to the full text of the Merger Agreement, which is attached as Exhibit 2.1 to the Issuer 8-K and is also incorporated herein by reference.

Concurrently with the execution and delivery of the Merger Agreement, the Reporting Persons entered into a tender and support agreement (the “Support Agreement”) with Parent and Sub pursuant to which it agreed to tender all of the Shares in the Offer, subject to certain exceptions. The Support Agreement automatically terminates, among other items, upon the termination of the Merger Agreement or upon a Change of Company Recommendation (as such term is defined in the Merger Agreement). The foregoing description of the Support Agreement is qualified in its entirety by the full text of the Support Agreement, the form of which is attached hereto as Exhibit 99.2 and is incorporated herein by reference.

Item 5. Interest in Securities of the Issuer.

Items 5(a)-(c) are hereby amended and restated to read as follows:

The aggregate percentage of Shares reported owned by each Reporting Person is based upon 9,638,580 Shares outstanding, which is the total number of Shares outstanding as of August 4, 2017 as reported in the Issuer's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on August 8, 2017.

A. Gilead Capital

- (a) As of the close of business on September 7, 2017, Gilead Capital directly beneficially owned 200 Shares. As the investment manager of the Gilead Capital Accounts, Gilead Capital may be deemed the beneficial owner of the 525,161 Shares held in the Gilead Capital Accounts.

Percentage: Approximately 5.5%

- (b) 1. Sole power to vote or direct vote: 0  
2. Shared power to vote or direct vote: 525,361  
3. Sole power to dispose or direct the disposition: 0  
4. Shared power to dispose or direct the disposition: 525,361

Gilead Capital has the power to vote and dispose of the Shares held in the Gilead Capital Accounts. Gilead Capital shares the power to vote and dispose of the Shares it beneficially owns, including the Shares held in the Gilead Capital Accounts, with Gilead Capital GP and Mr. Strong.

- (c) Gilead Capital has not entered into any transactions in the Shares during the past sixty days.

B. Gilead Capital GP

- (a) Gilead Capital GP, as the general partner of Gilead Capital may be deemed the beneficial owner of the 525,361 Shares beneficially owned by Gilead Capital.

Percentage: Approximately 5.5%

- (b) 1. Sole power to vote or direct vote: 0  
2. Shared power to vote or direct vote: 525,361  
3. Sole power to dispose or direct the disposition: 0  
4. Shared power to dispose or direct the disposition: 525,361

- (c) Gilead Capital GP has not entered into any transactions in the Shares during the past sixty days.

C. Jeffrey A. Strong

- (a) Mr. Strong, as the managing member of Gilead Capital GP and the Chief Investment Officer and managing partner of Gilead Capital, may be deemed the beneficial owner of the 525,361 Shares beneficially owned by Gilead Capital.

Percentage: Approximately 5.5%

- (b) 1. Sole power to vote or direct vote: 0  
2. Shared power to vote or direct vote: 525,361  
3. Sole power to dispose or direct the disposition: 0  
4. Shared power to dispose or direct the disposition: 525,361

- (c) Mr. Strong has not entered into any transactions in the Shares during the past sixty days.

The filing of this Schedule 13D shall not be construed as an admission that the Reporting Persons are, for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended, the beneficial owners of any of the Shares reported herein. Each Reporting Person disclaims beneficial ownership of such Shares except to the extent of his or its pecuniary interest therein.

Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer.

Item 6 is hereby amended to add the following:

On September 6, 2017, the Issuer entered into the Merger Agreement as described in Item 4 above and referenced as Exhibit 99.1 hereto.

On September 6, 2017, the Reporting Persons entered into the Support Agreement with Parent and Sub as described in Item 4 above and referenced as Exhibit 99.2 hereto.

Item 7. Material to be Filed as Exhibits.

Item 7 is hereby amended to add the following exhibits:

99.1 Agreement and Plan of Merger (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed by the Issuer on September 6, 2017).

99.2 Tender and Support Agreement.

CUSIP NO. 51476K 10 3

SIGNATURES

After reasonable inquiry and to the best of his knowledge and belief, the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: September 7, 2017

Gilead Capital LP

By: Gilead Capital GP LLC  
General Partner

By: /s/ Jeffrey A. Strong  
Name: Jeffrey A. Strong  
Title: Managing Member

Gilead Capital GP LLC

By: /s/ Jeffrey A. Strong  
Name: Jeffrey A. Strong  
Title: Managing Member

/s/ Jeffrey A. Strong  
Jeffrey A. Strong



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

Filed on May 24, 2016

Published in the *Official Gazette* on November 8, 2016

GILEAD SCIENCES, INC.,

Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 67**

**FILED UNDER SEAL**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

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v.

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Applicant.

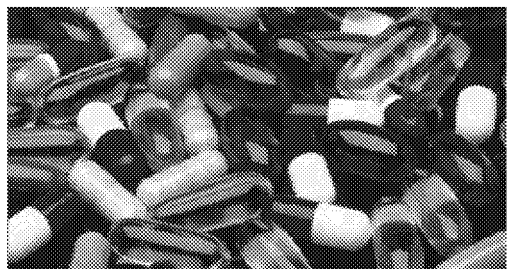
**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 68**



## Gelatin Applications



# Gelatin Products and Applications

With five global manufacturing sites Nitta offers a range of gelatins to meet our customer's exact specifications and requirements. These include gelatins derived from bovine bone, pork skin and fish, which are suitable in many different applications.

### Food

With its versatility, gelatin has numerous and varied uses in the processing of many food products. In confection, it is a key ingredient in products such as marshmallows, gummy candy and fruit snacks. The dairy industry makes extensive use of gelatin in the manufacture of sour cream, yogurt, ice cream, cheese and specialty desserts, while meat processors depend on the properties of gelatin in the production of head cheese, pates, and luncheon meats. Gelatin is an ingredient that is high in protein, fat free, cholesterol free and low in calories. This makes it invaluable in the processing of many other food products.

### Pharmaceuticals and Cosmetics

There are many different grades of gelatin for a variety of uses in the pharmaceutical industry. It is a key ingredient in the production of soft and hard shell gelatin capsules. Gelatin is used as a binder in tablet formulations and as a coating to ease swallowing or mask unpleasant tastes. Cosmetics companies are also important users. Its properties are particularly well suited for encapsulation of

bath oils, in moisturizing lotions and skin creams, making it an important contributor to how we look and feel every day.

### Other Applications

Gelatin is used in a wide range of technical applications. Nitta Gelatin is well equipped to supply many different grades of technical gelatins. In the beer, juice and wine industries, gelatin is used as a clarifying agent. Gelatin is also used in the production of photographic film and paper. Other commercial applications include the manufacture of adhesives, matches, and specialty micro-encapsulated products.

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
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Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 69**

**FILED UNDER SEAL**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
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**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 70**



## ADVISORY-Alerts on Landauer Inc and Gilead Capital LP wrongly coded to Gilead Sciences

54 words

19 December 2016

23:51 GMT

Reuters News

LBA

English

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Dec 19 (Reuters) - Alerts on Landauer Inc commenting on **Gilead Capital LP's** nomination of directors was wrongly coded to **Gilead Sciences Inc**, an unrelated company. For the correct alerts, click (Reporting by Ismail Shakil in Bengaluru)

Released: 2016-12-20T00:51:26.000Z

Thomson Reuters (Markets) LLC

Document LBA0000020161219eccj01aos

### Search Summary

Text	Gilead Capital and Gilead Sciences
Date	All Dates
Source	All Sources
Author	All Authors
Company	All Companies
Subject	All Subjects
Industry	All Industries
Region	All Regions
Language	English
Results Found	4
Timestamp	24 September 2019 20:42 GMT

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
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In the matter of application Serial Nos.:

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Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 71**





Sunday, September 15, 2019 - 20:01

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66.52 USD (+0.24%)

09/13/2019 - 15:59 15 min delay - NASDAQ Stocks

Open: 66.75

Change: +0.16

Volume: 4,814,680

Low: 66.21

High: 67.49

High / Low range: 1.28

Type: Stocks

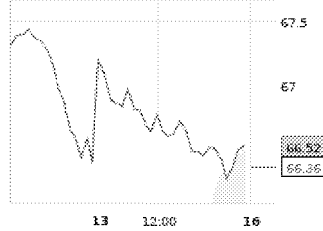
Ticker: GILD

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GILEAD SCIENCES INC. 15:59 (GMT-4)



## GILEAD SCIENCES INC. overview



09/09/2019 - 07:35 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[Business Wire](#) published a news.



[Gilead Sciences and the Elton John AIDS Foundation Launch RADIANT Initiative to Address HIV in Eastern Europe and Central Asia \(EECA\)](#) 09/09/2019 - 07:30 • [Business Wire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

Gilead Sciences, Inc. (Nasdaq: GILD) and the Elton John AIDS Foundation today announced the launch of the ground-breaking RADIANT initiative at the Fast-Track Cities 2019 conference in London. RADIANT seeks to meaningfully address new HIV infections and deaths from AIDS-related illnesses in Eastern Europe and Central Asia (EECA). RADIANT builds on the existing collaboration between the Foundation and Gilead in the EECA Key Populations (EECAKP) fund, leveraging both organizations' greater...

Thank you Chart

08/28/2019 - 09:05 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[PR Newswire](#) published a news.



[Gilead Capital Expresses Grave Concerns With Monotype Proxy Statement and Highlights Board's Failure to Protect Shareholders' Interests](#) 08/28/2019 - 09:00 • [PR Newswire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

Gilead Capital Expresses Grave Concerns With Monotype Proxy Statement and Highlights Board's Failure to Protect Shareholders' Interests Gilead Capital continues to believe Monotype sale price is inadequate and that Company is worth at least \$30/share Reiterates demand for Board to hold a call to explain recent business performance and its rationale for selling the Company at the same price it recently bought shares PR Newswire NEW YORK, Aug. 28, 2019 NEW YORK , Aug. 28, 2019 /PRNewswire/ -....

Thank you Chart

08/20/2019 - 09:05 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[PR Newswire](#) published a news.



[Gilead Capital Sends Open Letter To Board Of Monotype Imaging Holdings Opposing Sale To HGGC](#) 08/20/2019 - 09:00 • [PR Newswire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

Gilead Capital Sends Open Letter To Board Of Monotype Imaging Holdings Opposing Sale To HGGC Believes sales price is inadequate and Company is worth at least \$30/share Calls upon Board to inform shareholders about the fairness of the deal and the Company's recent earnings beat ahead of go-shop expiration PR Newswire NEW YORK, Aug. 20, 2019 NEW YORK , Aug. 20, 2019 /PRNewswire/ -- Gilead Capital LP ("Gilead Capital"), a long-term shareholder of Monotype Imaging Holdings Inc. (NASDAQ: TYPE)...

Thank you Chart

08/06/2019 - 08:05 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[Business Wire](#) published a news.



[Ontario Provides Access to Biktarvy® for the Treatment of HIV](#) 08/06/2019 - 08:00 • [Business Wire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

Gilead Sciences Canada, Inc. (Gilead Canada) today announced that effective July 31, the Ontario Drug Benefit Program will provide eligible patients with access to Biktarvy® (bictegravir 50 mg/emtricitabine 200 mg/tenofovir alafenamide 25 mg) tablets, a once-daily single tablet and complete regimen for the treatment of HIV-1 infection in adults. Health Canada granted a Notice of Compliance for BIKTARVY in July 2018. This press release features multimedia. View the full release here:...

Thank you Chart

07/11/2019 - 00:25 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[PR Newswire](#) published a news.



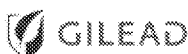
[Gilead Sciences to Establish Its Western China Operation Center in Chengdu Hi-tech Zone](#) 07/11/2019 - 00:21 • [PR Newswire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

Gilead Sciences to Establish Its Western China Operation Center in Chengdu Hi-tech Zone PR Newswire CHENGDU, China, July 11, 2019 CHENGDU, China , July 11, 2019 /PRNewswire/ -- On July 10th , Chengdu Hi-tech Zone and Gilead Sciences inked a strategic cooperation agreement on the Gilead Sciences Western China Operation Center project, which marked the official registration of its western China operation center in Chengdu Hi-tech Zone. Established in 1987 and headquartered in California , Gilead...

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07/11/2019 - 00:25 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[PR Newswire](#) published a news.



[Gilead Sciences to Establish Its Western China Operation Center in Chengdu Hi-tech Zone](#) 07/11/2019 - 00:23 • [PR Newswire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

Gilead Sciences to Establish Its Western China Operation Center in Chengdu Hi-tech Zone PR Newswire CHENGDU, China, July 11, 2019 CHENGDU, China , July 11, 2019 /PRNewswire/ -- On July 10th , Chengdu Hi-tech Zone and Gilead Sciences inked a strategic cooperation agreement on the Gilead Sciences Western China Operation Center project, which marked the official registration of its western China operation center in Chengdu Hi-tech Zone. Established in 1987 and headquartered in California , Gilead...

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07/01/2019 - 19:05 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[Business Wire](#) published a news.



[Gilead Announces Intent to Submit New Drug Application for Filgotinib to U.S. Food and Drug Administration This Year](#) 07/01/2019 - 19:00 • [Business Wire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

Gilead Sciences, Inc. (NASDAQ: GILD) today announced that at a recent pre-New Drug Application (NDA) meeting with the U.S. Food and Drug Administration (FDA), the company provided an update about the investigational, oral, selective JAK1 inhibitor filgotinib. The company discussed with the agency the Phase 3 FINCH studies, as well as the ongoing Phase 2 MANTA safety study assessing semen parameters with filgotinib treatment in men with moderately to severely active ulcerative colitis or...

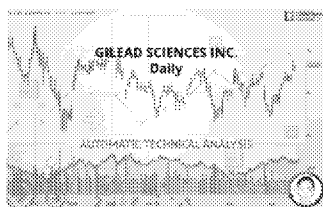
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06/20/2019 - 03:38 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > Analyses



Londinia AI posted a new analysis.

- 
- 
- 
- 0
- 1.8k
- 1.8k
- 0



GILEAD SCIENCES INC. - Daily

Timeframe : Daily - Simple chart

Status : INVALID

All elements being clearly bullish, it would be possible for traders to trade only long positions (at the time of purchase) on GILEAD SCIENCES INC. as long as the price remains well above 67.64 USD....

Thank you Reply Chart

05/21/2019 - 16:05 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News[Business Wire](#) published a news.

[Gilead Sciences to Present at the Jefferies 2019 Global Healthcare Conference on Wednesday, June 5 05/21/2019 - 16:01](#) • [Business Wire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

Gilead Sciences, Inc. (Nasdaq: GILD) today announced that Daniel O'Day, Gilead's Chairman and Chief Executive Officer, will participate in a fireside chat at the Jefferies 2019 Global Healthcare Conference in New York on Wednesday, June 5 at 11:30 a.m. Eastern Time. The audio portion of the fireside chat will be accessible live through the company's Investors page at <http://investors.gilead.com/>. Please connect to the company's website at least 15 minutes prior to the start of the...

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05/08/2019 - 03:50 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News[GlobeNewsWire](#) published a news.

[HOOKIPA Achieves Research Milestone in HBV Collaboration and License Agreement with Gilead 05/08/2019 - 03:47](#) • [GlobeNewsWire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

NEW YORK and VIENNA, Austria, May 08, 2019 (GLOBE NEWSWIRE) -- HOOKIPA Pharma Inc. (NASDAQ: HOOK), a company developing a new class of immunotherapeutics targeting infectious diseases and cancers based on its proprietary arenavirus platform, today announced that it has achieved a further research milestone in its collaboration and license agreement with Gilead Sciences, Inc. ("Gilead") for development of a therapeutic hepatitis B virus (HBV) vaccine. Based on the terms of the agreement,...

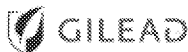
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04/30/2019 - 16:30 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News[Business Wire](#) published a news.

[Gilead Sciences' Chief Financial Officer Robin Washington to Step Down in Early 2020 04/30/2019 - 16:27](#) • [Business Wire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

Gilead Sciences, Inc. (Nasdaq: GILD) announced today that Robin Washington, Executive Vice President (EVP) and Chief Financial Officer (CFO), plans to retire from her role, effective March 1, 2020. Ms. Washington will continue as EVP and CFO while the company works to identify a successor. Should a CFO be named before March 1, 2020, Ms. Washington has agreed to remain in an advisory capacity through the completion of the company's reporting of 2019 financial results to ensure a smooth...

Thank you Chart

04/30/2019 - 00:35 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News[PR Newswire](#) published a news.

[Taiwan National Health Insurance Administration of the Ministry of Health and Welfare Approves Vemlidy\(R\) \(tenofovir alafenamide\) for Reimbursement 04/30/2019 - 00:33](#) • [PR Newswire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

Taiwan National Health Insurance Administration of the Ministry of Health and Welfare Approves Vemlidy(R) (tenofovir alafenamide) for Reimbursement PR Newswire TAIPEI, Taiwan, April 30, 2019 - Vemlidy(R) has shown improved renal and bone safety profiles compared to TDF making it an important first-line treatment option for chronic hepatitis B TAIPEI, Taiwan, April 30, 2019 /PRNewswire/ -- Gilead Sciences, Inc. today announced that with effect from 1 May 2019, Vemlidy (tenofovir alafenamide),...

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04/29/2019 - 23:35 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News[PR Newswire](#) published a news.

[Taiwan National Health Insurance Administration of the Ministry of Health and Welfare Approves Vemlidy\(R\) \(tenofovir alafenamide\) for Reimbursement 04/29/2019 - 23:30](#) • [PR Newswire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

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03/28/2019 - 17:05 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News[Business Wire](#) published a news.



[Gilead and Galapagos Announce Filgotinib Meets Primary and Key Secondary Endpoints in the Phase 3 FINCH 1 Rheumatoid Arthritis Study 03/28/2019 - 17:03](#) • [Business Wire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

regulated information -- Gilead Sciences, Inc. (NASDAQ: GILD) and Galapagos NV (Euronext & NASDAQ: GLPG) today announced Week 24 results of FINCH 1, an ongoing, randomized, double-blind, placebo- and active-controlled Phase 3 study of filgotinib, an investigational, oral, selective JAK1 inhibitor, in adults with moderately-to-severely active rheumatoid arthritis. FINCH 1 evaluated filgotinib versus adalimumab or placebo, on a stable background dose of methotrexate in patients with prior...

Thank you Chart

03/27/2019 - 06:10 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[Business Wire](#) published a news.



[Gilead to Present New Data From Multiple Liver Disease Research and Development Programs at The International Liver Congress™ 2019 03/27/2019 - 06:06](#) • [Business Wire](#) • [Stocks](#) • [More GILEAD SCIENCES INC. news...](#)

Gilead Sciences, Inc. (Nasdaq: GILD) today announced that data from the company's research and development programs in nonalcoholic steatohepatitis (NASH), primary sclerosing cholangitis (PSC) and viral hepatitis will be presented at The International Liver Congress™ 2019 in Vienna, Austria from April 10-14, 2019. These data reflect Gilead's ongoing focus and commitment to advancing research and patient care across the field of liver disease. "For 20 years, Gilead has been focused...

Thank you Chart

03/13/2019 - 08:35 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[PR Newswire](#) published a news.



[Agenus Milestone Triggers \\$7.5M Payment from Gilead 03/13/2019 - 08:30](#) • [PR Newswire](#) • [Stocks](#)

Agenus Milestone Triggers \$7.5M Payment from Gilead - FDA has accepted IND filing for AGEN1423 PR Newswire LEXINGTON, Mass., March 13, 2019 LEXINGTON, Mass., March 13, 2019 /PRNewswire/ -- Agenus Inc. (NASDAQ: AGEN), an immuno-oncology (I-O) company with a pipeline of immune checkpoint antibodies, cancer vaccines and adoptive cell therapies 1, announced today that the FDA has accepted the company's IND filing for AGEN1423 - a milestone in its partnership with Gilead Sciences, Inc. This...

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03/06/2019 - 17:35 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[Business Wire](#) published a news.



[Gilead Presents New Data on Biktarvy® \(Bictegravir, Emtricitabine and Tenofovir Alafenamide\) and TAF-Based Regimens for the Treatment of HIV-1 in Children, Older Adults and Women 03/06/2019 - 17:30](#) • [Business Wire](#) • [Stocks](#)

Gilead Sciences, Inc. (NASDAQ: GILD) today announced 48-week results from a Phase 2/3 study (Study GS-US-380-1474) evaluating the efficacy and safety of Biktarvy® (bictegravir 50 mg/emtricitabine 200 mg/tenofovir alafenamide 25 mg tablets, BIC/FTC/TAF), a once-daily single tablet regimen, in virologically suppressed adolescents and children at least 6 years of age who are living with HIV. Through Week 48, Biktarvy maintained high rates of virologic suppression with a low incidence of study...

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02/11/2019 - 16:35 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[Business Wire](#) published a news.



[Gilead Announces Topline Data From Phase 3 STELLAR-4 Study of Selonsertib in Compensated Cirrhosis \(F4\) Due to Nonalcoholic Steatohepatitis \(NASH\) 02/11/2019 - 16:30](#) • [Business Wire](#) • [Stocks](#)

Gilead Sciences, Inc. (Nasdaq: GILD) today announced that STELLAR-4, a Phase 3, randomized, double-blind, placebo-controlled study evaluating the safety and efficacy of selonsertib, an investigational, once-daily, oral inhibitor of apoptosis signal-regulating kinase 1 (ASK1), in patients with compensated cirrhosis (F4) due to nonalcoholic steatohepatitis (NASH), did not meet the pre-specified week 48 primary endpoint of a ≥ 1-stage histologic improvement in fibrosis without worsening of NASH....

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01/24/2019 - 08:35 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[PR Newswire](#) published a news.



[Agenus Closes \\$150 Million Immuno-Oncology Transaction with Gilead 01/24/2019 - 08:30](#) • [PR Newswire](#) • [Stocks](#)

Agenus Closes \$150 Million Immuno-Oncology Transaction with Gilead PR Newswire LEXINGTON, Mass., Jan. 24, 2019 LEXINGTON, Mass., Jan. 24, 2019 /PRNewswire/ -- Agenus Inc. (NASDAQ: AGEN), an immuno-oncology company with a pipeline of immune modulating antibodies, cancer vaccines, and adoptive cell therapies 1, today announced the closing of its immuno-oncology (I-O) partnership deal with Gilead Sciences, Inc. (NASDAQ: GILD), focused on the development and commercialization of up to five novel...

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10/31/2018 - 07:55 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[GlobeNewsWire](#) published a news.



[Investor Expectations to Drive Momentum within Gilead Sciences, SCANA, Brink's, Fortive, Asbury Automotive Group, and Helmerich & Payne --- Discovering Underlying Factors of Influence 10/31/2018 - 07:55](#) • [GlobeNewsWire](#) • [Stocks](#)

NEW YORK, Oct. 31, 2018 (GLOBE NEWSWIRE) -- In new independent research reports released early this morning, Fundamental Markets released its latest key findings for all current investors, traders, and shareholders of Gilead Sciences, Inc. (NASDAQ:GILD), SCANA Corporation (NYSE:SCG), Brink's Company (NYSE:BCO), Fortive Corporation (NYSE:FTV), Asbury Automotive Group, Inc. (NYSE:ABG), and Helmerich & Payne, Inc. (NYSE:HP), including updated fundamental summaries, consolidated fiscal reporting,...

Thank you Chart

10/01/2018 - 11:07 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

Fox Business posted a new video.



[Gilead to offer cheaper versions of hepatitis C drug](#) 10/01/2018 - 11:07 • [Fox Business](#) • [Stocks](#)

Dr. Marc Siegel discusses how Gilead plans to offer cheaper versions of its hepatitis C drugs and how a new study revealed that too much rest may not be good .....

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09/27/2018 - 08:20 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

GlobeNewsWire published a news.



[Analysis: Positioning to Benefit within Enerplus, ExlService, Gilead Sciences, 51job, QUALCOMM, and Perrigo Company plc --- Research Highlights Growth, Revenue, and Consolidated Results](#) 09/27/2018 - 08:20 • [GlobeNewsWire](#) • [Stocks](#)

NEW YORK, Sept. 27, 2018 (GLOBE NEWSWIRE) -- In new independent research reports released early this morning, Fundamental Markets released its latest key findings for all current investors, traders, and shareholders of Enerplus Corporation (NYSE:ERF), ExlService Holdings, Inc. (NASDAQ:EXLS), Gilead Sciences, Inc. (NASDAQ:GILD), 51job, Inc. (NASDAQ:JOBS), QUALCOMM Incorporated (NASDAQ:QCOM), and Perrigo Company plc (NYSE:PRGO), including updated fundamental summaries, consolidated fiscal...

Thank you Chart

08/22/2018 - 07:00 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

PR Newswire published a news.



[Sierra Oncology Acquires Momelotinib, an Investigational Janus Kinase \(JAK\) 1/2 and Activin Receptor Type 1 \(ACVR1\) Inhibitor for Myelofibrosis, from Gilead Sciences](#)

08/22/2018 - 07:00 • [PR Newswire](#) • [Stocks](#)

Sierra Oncology Acquires Momelotinib, an Investigational Janus Kinase (JAK) 1/2 and Activin Receptor Type 1 (ACVR1) Inhibitor for Myelofibrosis, from Gilead Sciences PR Newswire VANCOUVER, Aug. 22, 2018 - More than 1,200 patients treated to date with momelotinib, including in two Phase 3 trials; ongoing therapy for more than seven years in some patients - - Demonstrated meaningful anemia-related benefits - - Substantive spleen and symptom control in JAK inhibitor naïve myelofibrosis patients,...

Thank you Chart

04/18/2018 - 18:00 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

PR Newswire published a news.



[Astellas Announces Sale of Certain Agensys Research Facilities to Kite, a Gilead Company](#) 04/18/2018 - 18:00 • [PR Newswire](#) • [Stocks](#)

Astellas Announces Sale of Certain Agensys Research Facilities to Kite, a Gilead Company Asset Transfer was Completed on April 12, 2018 PR Newswire TOKYO, April 18, 2018 TOKYO , April 18, 2018 /PRNewswire/ -- Astellas Pharma Inc. (TSE: 4503, President and CEO: Kenji Yasukawa , "Astellas" ) and Kite, a Gilead Company (Nasdaq: GILD, President and CEO: John Milligan , "Kite"), today announced that an agreement has been completed for the transfer of certain Agensys research facilities in Santa...

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02/06/2018 - 07:00 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

ACCESSWIRE published a news.



[Gilead Sciences, Inc. to Host Earnings Call](#) 02/06/2018 - 07:00 • [ACCESSWIRE](#) • [Stocks](#)

NEW YORK, NY / ACCESSWIRE / February 6, 2018 / Gilead Sciences, Inc. (NASDAQ: GILD ) will be discussing their earnings results in their Q4 Earnings Call to be held on February 6, 2018 at 4:30 PM Eastern Time. To listen to the event live or access a replay of the call - visit <https://www.investornetwork.com/company/24226> . To receive updates for this company you can register by emailing [info@investornetwork.com](mailto:info@investornetwork.com) or by clicking get investment info from the company's profile. About Investor Network...

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09/01/2017 - 09:31 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

PR Newswire published a news.



[Stock Score Reports for Chesapeake Energy, Ford, General Electric, Gilead Sciences and Snap Inc.](#) 09/01/2017 - 09:31 • [PR Newswire](#) • [Stocks](#)

Stock Score Reports for Chesapeake Energy, Ford, General Electric, Gilead Sciences and Snap Inc. PR Newswire CHICAGO, Sept. 1, 2017 CHICAGO , Sept. 1, 2017 /PRNewswire/ -- InvestorsObserver issues critical PriceWatch Alerts for CHK, F, GE, GILD, and SNAP. To see InvestorsObserver's proprietary scoring system rates these stocks, view the InvestorsObserver's PriceWatch Alert by selecting the corresponding link. CHK: <https://www.investorsobserver.com/pr-stocks-lp/?stocksymbol=chk&pnumber=90120170...>

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07/26/2017 - 05:35 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

ACCESSWIRE published a news.



[Investor Network: Gilead Sciences, Inc. to Host Earnings Call 07/26/2017 - 05:35 • ACCESSWIRE • Stocks](#)

NEW YORK, NY / ACCESSWIRE / July 26, 2017 / Gilead Sciences, Inc. (NASDAQ: GILD ) will be discussing their earnings results in their Q2 Earnings Call to be held on Wednesday, July 26, 2017 at 4:30 PM Eastern Time. To listen to the event live - visit <https://www.investornetwork.com/company/24226> . Replay Information The replay will be available online at <https://www.investornetwork.com/company/24226> . About Investor Network Investor Network (IN) is a new financial content community, serving...

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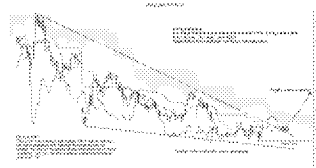
06/20/2017 - 16:53 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > Analyses

\*\*\*\*\*



[tasciccac](#) posted a new analysis.

- 
- 
- 
- 14
- 92
- 270
- 95



Near the end of its falling wedge, daily #Ichimoku...

Timeframe : Daily - Chart + Trading signal

The last semester the prices evolve into a falling wedge, in case of bullish breakout of this pattern I will apply the following plan: Buy the pullback on the falling wedge (65\$) Stop loss near...

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04/06/2017 - 09:31 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

PR Newswire published a news.



[Special Investors Release: Covered call stock options reports for Comcast, Salesforce, Gilead Sciences, Hewlett Packard Enterprise Company, and Snap Inc. 04/06/2017 - 09:31 • PR Newswire • Stocks](#)

Special Investors Release: Covered call stock options reports for Comcast, Salesforce, Gilead Sciences, Hewlett Packard Enterprise Company, and Snap Inc. PR Newswire CHICAGO, April 6, 2017 CHICAGO , April 6, 2017 /PRNewswire/ -- InvestorsObserver issues critical PriceWatch Alerts for CMCSA, CRM, GILD, HPE, and SNAP. To see the high-return covered-call trades uncovered by InvestorsObserver's analysts, read the InvestorsObserver's PriceWatch Alert by selecting the corresponding link. CMCSA:...

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03/09/2017 - 09:31 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

PR Newswire published a news.



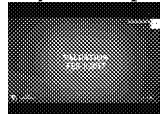
[Beat market volatility with these stock option trade ideas for Citigroup, Exelixis, Gilead Sciences, Tesla Motors, and US Oil Fund! 03/09/2017 - 09:31 • PR Newswire • Stocks](#)

Beat market volatility with these stock option trade ideas for Citigroup, Exelixis, Gilead Sciences, Tesla Motors, and US Oil Fund! PR Newswire CHICAGO, March 9, 2017 CHICAGO , March 9, 2017 /PRNewswire/ -- InvestorsObserver issues critical PriceWatch Alerts for C, EXEL, GILD, TSLA, and USO. To see the high-return covered-call trades uncovered by InvestorsObserver's analysts, read the InvestorsObserver's PriceWatch Alert by selecting the corresponding link. C:...

Thank you Chart

02/07/2017 - 14:02 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

Why Invest In posted a new video.



[Gilead Sciences 02/07/2017 - 14:02 • Why Invest In • Stocks](#)

VIDEO FINANCIAL REPORTING Why invest in is the first financial video platform where you can easily search through thousands of videos describing global .....

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01/31/2017 - 09:31 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

PR Newswire published a news.



[InvestorsObserver releases covered-call reports for General Electric, Gilead Sciences, Marathon Oil Corporation, Tempur Sealy and Tesla Motors 01/31/2017 - 09:31 • PR Newswire • Stocks](#)

InvestorsObserver releases covered-call reports for General Electric, Gilead Sciences, Marathon Oil Corporation, Tempur Sealy and Tesla Motors PR Newswire CHICAGO, Jan. 31, 2017 CHICAGO , Jan. 31, 2017 /PRNewswire/ -- InvestorsObserver issues critical PriceWatch Alerts for GE, GILD, MRO, TPX, and TSLA. To see the high-return covered-call trades uncovered by InvestorsObserver's analysts, read the InvestorsObserver's PriceWatch Alert by selecting the corresponding link. GE:...

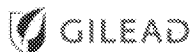
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01/11/2017 - 09:00 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

PR Newswire published a news.



[Landauer Agrees to Appoint Jeffrey A. Strong to Board of Directors and Announces Agreement with Gilead Capital LP](#) 01/11/2017 - 09:00 • [PR Newswire](#) • [Stocks](#)  
 Landauer Agrees to Appoint Jeffrey A. Strong to Board of Directors and Announces Agreement with Gilead Capital LP [PR Newswire](#) GLENWOOD, Ill., Jan. 11, 2017  
 GLENWOOD, Ill., Jan. 11, 2017 /[PRNewswire/](#) -- Landauer, Inc. (NYSE: LDR), a recognized leader in personal and environmental radiation measurement and monitoring and outsourced medical physics services, today announced that the Company has expanded the Company's Board of Directors from nine to ten directors and appointed Jeffrey A. Strong to...  
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 12/28/2016 - 09:31 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > [News](#)  
[PR Newswire](#) published a news.



[Gilead Sciences, Kinder Morgan, Netflix, Merck & Company Incorporated, and Tesla Motors and more offer option-trading opportunities that offer returns of more than 21%](#) 12/28/2016 - 09:31 • [PR Newswire](#) • [Stocks](#)  
 Gilead Sciences, Kinder Morgan, Netflix, Merck & Company Incorporated, and Tesla Motors and more offer option-trading opportunities that offer returns of more than 21%  
[PR Newswire](#) CHICAGO, Dec. 28, 2016 CHICAGO , Dec. 28, 2016 /[PRNewswire/](#) -- InvestorsObserver issues critical PriceWatch Alerts for GILD, KMI, MRK, NFLX, and TSLA. To see the high-return covered-call trades uncovered by InvestorsObserver's analysts, read the InvestorsObserver's PriceWatch Alert by selecting the corresponding link...  
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 12/19/2016 - 18:33 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > [News](#)  
[PR Newswire](#) published a news.



[Landauer, Inc. Comments on Gilead's Nomination of Directors](#) 12/19/2016 - 18:33 • [PR Newswire](#) • [Stocks](#)  
 Landauer, Inc. Comments on Gilead's Nomination of Directors [PR Newswire](#) GLENWOOD, Ill., Dec. 19, 2016 GLENWOOD, Ill., Dec. 19, 2016 /[PRNewswire/](#) -- Landauer, Inc. (NYSE: LDR), a recognized leader in personal and environmental radiation measurement and monitoring and outsourced medical physics services, today issued the following statement in response to Gilead Capital LP's ("Gilead") nomination of three candidates, including Gilead's Chief Investment Officer and Managing Partner, Jeffrey A....  
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 12/01/2016 - 09:31 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > [News](#)  
[PR Newswire](#) published a news.



[Twilio Inc. trade offers a 13.03% return in 141 days, or find similar option trades on Gilead Sciences, Energy Select Sector, Halliburton, and NVIDIA](#) 12/01/2016 - 09:31 • [PR Newswire](#) • [Stocks](#)  
 Twilio Inc. trade offers a 13.03% return in 141 days, or find similar option trades on Gilead Sciences, Energy Select Sector, Halliburton, and NVIDIA [PR Newswire](#)  
 CHICAGO, Dec. 1, 2016 CHICAGO , Dec. 1, 2016 /[PRNewswire/](#) -- InvestorsObserver issues critical PriceWatch Alerts for GILD, HAL, NVDA, TWLO, and XLE. To see the high-return covered-call trades uncovered by InvestorsObserver's analysts, read the InvestorsObserver's PriceWatch Alert by selecting the corresponding link. GILD:...  
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 11/17/2016 - 04:31 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > [News](#)  
[PR Newswire](#) published a news.



[Gilead Sciences trade offers a 4.68% return in 93 days, or find similar option trades on Starbucks, Fossil Group, Electronic Arts, and Noble](#) 11/17/2016 - 04:31 • [PR Newswire](#) • [Stocks](#)  
 Gilead Sciences trade offers a 4.68% return in 93 days, or find similar option trades on Starbucks, Fossil Group, Electronic Arts, and Noble [PR Newswire](#) CHICAGO, Nov. 17, 2016 CHICAGO , Nov. 17, 2016 /[PRNewswire/](#) -- InvestorsObserver issues critical PriceWatch Alerts for EA, FOSL, GILD, NE, and SBUX. To see the high-return covered-call trades uncovered by InvestorsObserver's analysts, read the InvestorsObserver's PriceWatch Alert by selecting the corresponding link. EA:...  
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 11/04/2016 - 05:31 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > [News](#)  
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[Gilead Sciences trade offers a 3.82% return in 43 days, or find similar option trades on Energen Corporation, NetSuite Inc., NVIDIA, and JetBlue](#) 11/04/2016 - 05:31 • [PR Newswire](#) • [Stocks](#)  
 Gilead Sciences trade offers a 3.82% return in 43 days, or find similar option trades on Energen Corporation, NetSuite Inc., NVIDIA, and JetBlue [PR Newswire](#) CHICAGO, Nov. 4, 2016 CHICAGO , Nov. 4, 2016 /[PRNewswire/](#) -- InvestorsObserver issues critical PriceWatch Alerts for GILD, JBLU, N, NVDA, and WATT. To see the high-return covered-call trades uncovered by InvestorsObserver's analysts, read the InvestorsObserver's PriceWatch Alert by selecting the corresponding link. GILD:...  
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 10/31/2016 - 17:09 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > [News](#)  
[ZacksInvestmentNews](#) posted a new video.



[Your Two Minute Earnings Preview for Gilead \(GILD\) Stock](#) 10/31/2016 - 17:09 • [ZacksInvestmentNews](#) • [Stocks](#)



The biotech world has been in a rough patch and investors are counting on Gilead to break the streak. However, investors might be disappointed as things aren't looking great heading into the report. Gilead: <https://www.zacks.com/stock/quote/GILD?cid=CS-YOUTUBE-FT-VID> Follow us on StockTwits: [stocktwits.com/ZacksResearch](https://stocktwits.com/ZacksResearch) Follow us on Twitter: [twitter.com/ZacksResearch](https://twitter.com/ZacksResearch) Like us on Facebook: [www.facebook.com/ZacksInvestmentResearch](https://www.facebook.com/ZacksInvestmentResearch)...

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10/31/2016 - 14:56 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[ZacksInvestmentNews](#) posted a new video.



[The Best Options Trade for Gilead \(GILD\) Earnings 10/31/2016 - 14:56](#) • [ZacksInvestmentNews](#) • [Stocks](#)

Join David Bartosiak at 1pm CST to see his thoughts on Gilead ahead of their earnings announcement, and he'll provide us insight on how to play the options market....

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10/21/2016 - 07:00 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[PR Newswire](#) published a news.



[Covered Call reports for Gilead Sciences, American Express, Petrobras, Merrimack Pharmaceuticals and Intra-Cellular Therapies include trade ideas that offer returns of 20% or more!](#) 10/21/2016 - 07:00 • [PR Newswire](#) • [Stocks](#)

Covered Call reports for Gilead Sciences, American Express, Petrobras, Merrimack Pharmaceuticals and Intra-Cellular Therapies include trade ideas that offer returns of 20% or more! [PR Newswire CHICAGO](#), Oct. 21, 2016 [CHICAGO](#), Oct. 21, 2016 /[PRNewswire/](#) -- InvestorsObserver issues critical PriceWatch Alerts for AXP, GILD, ITCI, MACK, and PBR. To see the high-return covered-call trades uncovered by InvestorsObserver's analysts, read the InvestorsObserver's PriceWatch Alert by selecting the...

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[PR Newswire](#) published a news.



[Gilead Sciences, Google Inc., Tesoro Corporation, Northern Trust Corporation, and Kinder Morgan and more offer option-trading opportunities that offer returns of more than 20%](#) 10/05/2016 - 05:31 • [PR Newswire](#) • [Stocks](#)

Gilead Sciences, Google Inc., Tesoro Corporation, Northern Trust Corporation, and Kinder Morgan and more offer option-trading opportunities that offer returns of more than 20% [PR Newswire CHICAGO](#), Oct. 5, 2016 [CHICAGO](#), Oct. 5, 2016 /[PRNewswire/](#) -- InvestorsObserver issues critical PriceWatch Alerts for GILD, GOOG, KMI, NTRS, and TSO. To see the high-return covered-call trades uncovered by InvestorsObserver's analysts, read the InvestorsObserver's PriceWatch Alert by selecting the corresponding...

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09/21/2016 - 05:31 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[PR Newswire](#) published a news.



[Gilead Sciences, Puma Biotechnology, Yum! Brands, Vmware, and McDonald's and more offer option-trading opportunities that offer returns of more than 20%](#) 09/21/2016 - 05:31 • [PR Newswire](#) • [Stocks](#)

Gilead Sciences, Puma Biotechnology, Yum! Brands, Vmware, and McDonald's and more offer option-trading opportunities that offer returns of more than 20% [PR Newswire CHICAGO](#), Sept. 21, 2016 [CHICAGO](#), Sept. 21, 2016 /[PRNewswire/](#) -- InvestorsObserver issues critical PriceWatch Alerts for GILD, MCD, PBYI, VMW, and YUM. To see the high-return covered-call trades uncovered by InvestorsObserver's analysts, read the InvestorsObserver's PriceWatch Alert by selecting the corresponding link. GILD:...

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09/08/2016 - 05:31 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[PR Newswire](#) published a news.



[Gilead Sciences, PayPal Holdings Inc., Delta Airlines, Kinder Morgan, and Ferrari N.V. and more offer option-trading opportunities that offer returns of more than 20%](#) 09/08/2016 - 05:31 • [PR Newswire](#) • [Stocks](#)

Gilead Sciences, PayPal Holdings Inc., Delta Airlines, Kinder Morgan, and Ferrari N.V. and more offer option-trading opportunities that offer returns of more than 20% [PR Newswire CHICAGO](#), Sept. 8, 2016 [CHICAGO](#), Sept. 8, 2016 /[PRNewswire/](#) -- InvestorsObserver issues critical PriceWatch Alerts for DAL, GILD, KMI, PYPL, and RACE. To see the high-return covered-call trades uncovered by InvestorsObserver's analysts, read the InvestorsObserver's PriceWatch Alert by selecting the corresponding link....

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09/01/2016 - 16:09 [GILEAD SCIENCES INC.](#) 66.52 USD +0.24% > News

[The Street TV](#) posted a new video.



[Gilead Sciences May Be at Risk of a 'Value Trap' 09/01/2016 - 16:09](#) • [The Street TV](#) • [Stocks](#)

TheStreet's Adam Feuerstein says shares of Gilead Sciences' may appear to be at a discounted price, but may be a value trap as investors grow frustrated after .....

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

Filed on May 24, 2016

Published in the *Official Gazette* on November 8, 2016

GILEAD SCIENCES, INC.,

Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 72**



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A Study of Trade Name Confusion

Author(s): Joseph Weitz

Source: *Journal of Marketing*, Vol. 25, No. 2 (Oct., 1960), pp. 54-56

Published by: Sage Publications, Inc.

Stable URL: <https://www.jstor.org/stable/1248612>

Accessed: 06-08-2019 14:52 UTC

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ROBERT FERBER, Editor  
University of Illinois

## A Study of Trade Name Confusion

### • JOSEPH WEITZ

How does one determine whether or not the public confuses one trade name with another? What kind of evidence can an established company obtain which will allay or support the fear that a new company has chosen a name so similar to its own that it creates confusion in the public's perception?

The author describes two techniques which might be used to establish the likelihood of confusion between two trade names.

**O**CCASIONALLY the situation arises where one company feels that the name of another company is so similar as to lead to confusion by the public. When this situation arises, the older company may believe that the name chosen by the second company was selected in order to trade on the reputation of the more established concern. Legal action is frequently taken with the hope that this action will lead the second company to change its name.

One of the problems arising in this situation is that the company which is instigat-

ing the action must show that there is "the likelihood" of confusion between the two names. Nowhere, to the writer's knowledge, is the meaning of "likelihood" spelled out nor are any generalized situations described where, if confusion occurs, the findings are acceptable in a court decision. The problem that arises is how to test the likelihood of confusion.

The following study is reported as a possible approach for companies confronted with this problem. These procedures were devised to study the likelihood of confusion between the names of two companies which we shall call Company A and Company A'.

Company A is an old, established firm. A new firm unrelated to Company A, but producing a similar product line was formed and named itself A'. Firm A felt that the name chosen by A' would lead to confusion in the minds of the consumers. The consumers of the products of both A and A' were the general public and purchasing agents in manufacturing plants. Two procedures were used to test the likelihood of confusion between these two names.

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He is the author of numerous articles in the field of selection, training, and attitude measurement, as well as co-author with Harry W. Karn of "An Introduction to Psychology" (John Wiley & Son, 1955).

**PROCEDURE 1  
RECOGNITION-CONFUSION**

Three samples of the general public were chosen in the East, the Midwest, and the Far West. No attempt was made at probability sampling in any of these regions, since the purpose of the study did not demand this type of sample. The only requirements for inclusion in this sample were that the respondent be a male and between the ages of 20 and 60. (Men were used since the names of these companies would be more familiar to men than women.)

The first procedure may be thought of as the Recognition-Confusion procedure. An interviewer handed a respondent a list with ten company names on it and instructed him as follows: "We are doing a survey of familiarity with company names; will you please study this list for a few moments?" The respondent was allowed to look at the list as long as he wished, but was encouraged to look at the list for at least twenty seconds. After he had studied the list, it was taken from him and a second list with twenty company names was handed to him with the instructions: "Now, will you please check the names of the companies which were on the first list and those which were not." (This form had one column headed "On List" and another headed "Not On List.")

Four different conditions were used in this part of the study.

1. Company A appeared on the first list, but did not appear on the second list; however, A' appeared on the second list. The purpose here was to see whether or not the respondent thought Company A' appeared on the first list. If so, it was felt that this indicated confusion.
2. The procedure here was similar to that in condition 1; however, A' was on the first list and A on the second list.
3. Again the procedure was the same except that A appeared on both the first and second list. The purpose here was to see whether or not it was difficult to recognize and identify the name of Company A. In other words, this was a control situation.
4. This was also a control situation in

which A' appeared on the first and also on the second list.

**Results of Recognition-Confusion Technique**

Condition 1. Eighty-five people were tested with this condition. Forty-two of them (49 per cent) showed confusion. That is, they identified A' as being on the original list when actually it was Company A.

Condition 2. Eighty-six people were tested with this condition. Forty-six of them (53 per cent) showed confusion. That is, they reported seeing Company A on the first list whereas in truth it had been Company A'.

In order to determine whether or not those who confused Company A and Company A' were different from the group who showed no confusion, an analysis was undertaken of the number of errors of omission made with respect to the other companies on the list. For conditions 1 and 2 the respondents who did not confuse Company A and Company A' made a total of 168 errors, whereas the group who showed confusion between Company A and Company A' made a total of only 153 errors. This is obviously not a significant difference, but certainly it does indicate that those who confused Company A and A' were no more confused about company names in general than those who did not confuse the two. There is also no significant difference between the number of individuals in the two groups who erred in the direction of saying companies were on the first list when they were not (that is, companies other than A and A').

The two control situations, conditions 3 and 4, where Company A appeared on both lists or Company A' appeared on both lists, resulted in very few errors in recognition of either one. For condition 3, twenty-two people were tested and only two of them failed to report that they had seen Company A on the first list.

For condition 4, twenty-four people were tested and only three failed to report that they had seen Company A' on the first list. These findings would indicate that either name A or A' is not particularly difficult to recognize and recall. In fact, in these con-

trol situations, recognition on both was just as good as recognition of any of the other company names.

**PROCEDURE 2**  
**IDENTIFICATION OF COMPANY NAMES**

The second approach used in studying this problem was undertaken with purchasing agents and buyers of manufacturing companies. All companies used in this part of the study were clients of Company A, but not necessarily of A'. This factor, if anything, should have reduced the possibility of confusion between the two companies.

In order to cover the purpose of the study, the questionnaire was put into the framework of a survey on trade journals. In half of the group, the respondent was instructed: "We are doing a survey on trade journals. I would like to *read* you a list of trade journals and have you tell me which ones you look at, which ones you read more carefully, and which ones you do not look at at all." Nine trade journal names were read to the respondent. He was then given these instructions: "Now I would like to *read* you a list of company names. For each company I mention, please tell me whether or not your firm has had any business contacts with them within the last year. By business contact, we mean either that your company has purchased one or more of their products or you have discussed their products with one of the firm's representatives." A list of nine companies was then read to the respondent. After he had said whether or not he had contact or whether he did not know the company, the interviewer said: "I would like to go through the list of those you have had contact with or are not sure of, and ask you to name one product that they manufacture or produce." The second company on the list was Company A' and the eighth was Company A. All interviewers were trained to read all of the company names clearly.

With the other half of the group the same procedure was followed, with the exception that the respondent was given the list of trade journals to *look* at, with the same questions asked and then the list of com-

pany names with the same questions previously described asked again. This procedure was to test the likelihood of visual as well as auditory confusion.

Forty interviews were held in twenty-one different equipment manufacturing companies. The interviewers were instructed to record all comments made concerning each of the companies.

**Results of Company Name-Identification Technique**

Of the twenty interviews using the auditory approach, nine of the respondents said that they did not know of Company A' or had had no contact. One respondent said he had contact with A', but named a product which Company A manufactures but not A'. Ten showed more evident signs of confusion—exemplified by such statements as, "Is that Company A?" on hearing A' read; or, on hearing the name A', saying that they had contact with them until the name of Company A was read to them. On hearing the name of Company A, they changed their original response to A'.

Using visual presentation, seven out of twenty showed fairly evident signs of confusion. Again, the confusion consisted of such things as checking having had contact with A' until the respondent came to Company A on the list, then changing his original response to A'.

It would appear, then, that approximately 50 percent of the sample showed some sign of confusion when the two names were presented verbally, and about 35 per cent when the two names were presented visually. Remembering that this is a highly knowledgeable audience being tested, note that even with this group there were signs of confusion.

It is not suggested here that these procedures present complete evidence of confusion or lack of it. These are two approaches, however, which might be used for evaluating the degree of confusion between two names. Also, the method might be useful with respect to establishment of a name for a new product which is not to be confused with existing products.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of application Serial Nos.:

Ser. No. 87/048,887 for the mark **GILEAD CAPITAL**

Ser. No. 87/048,941 for the mark **GILEAD CAPITAL LEADERSHIP INVESTING**

Filed on May 24, 2016

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GILEAD SCIENCES, INC.,

Opposer,

v.

GILEAD CAPITAL LP,

Applicant.

**Opposition No. 91233311 (Parent)**  
Opposition No. 91233327

**TRIAL TESTIMONY DECLARATION OF BRUCE E. STANGLE, PH.D.**

**OTX 73**

Finance

# Sometimes the Algos Buy the Wrong Stock

And sometimes investors get rewarded.

By Matt Levine

February 15, 2019 7:30 AM EST



*Predictably going up. Photographer: Dhiraj Singh/Bloomberg*

*This post originally appeared in Money Stuff.*



Well sure:

Auris Medical Holding AG got a surprise boost to its stock price Wednesday as investors mistakenly bought shares of the drug developer after Johnson & Johnson agreed to buy a similarly named robotics company for \$3.4 billion.

Auris Medical rose 9.4 percent at 10:40 a.m. in New York after earlier rising as much as 30 percent.

Auris is a \$13 million-ish market-cap hearing-loss-therapies company with the stock ticker EARS; about \$5 million worth of its stock traded yesterday based on, by all indications, mistaken identity. We have talked a few times about these sorts of name/ticker-confusion cases, because they are a delight. (We have, for instance, discussed whether it would be insider trading, if you knew in advance about the deal for the other Auris, to buy stock in this Auris.) It is a dumb little sideshow of market inefficiency. The general view of stock-market anomalies—predictable patterns in stock prices that violate notions of market efficiency—is that they are the result of behavioral factors embedded deep in human nature, psychological constants like risk aversion or herd-following or whatever. This one is: Sometimes humans make decisions before reading to the end of the sentence. Sounds like humans all right!

We mostly talk about these stories in dumb obvious contexts like this, where a microcap stock soars for no reason except that some private company with a similar name is in the news, and we have a laugh at the overeager algorithms and uninformed retail investors who buy the stock. But you can't laugh at all of those investors; I bet someone made a quick greater-fool profit yesterday on Auris. It could be perfectly rational for a fast algorithmic trader to buy Auris stock as soon as there's positive news about the other Auris, and then quickly flip it at a profit to a slower algorithm or retail trader who has also read the news. If you are an algorithm, you don't really care about why the stock is going up; you care that it is predictably going up. There is statistical evidence that stocks with similar ticker symbols are correlated with each other, and oh boy is there anecdotal

evidence that microcap stocks move dramatically on news about similarly-named private companies. Trading stocks based on predictable patterns of human stupidity is a perfectly sensible and well-established way to make money, even if it feels a bit sillier than trading them based on, you know, actual information about the company whose stock you're buying.

Anyway, when we talked about this stuff last month, I wrote "I am sure that I am going to get emails from markets professionals recounting the hilarious stories of the time they bought the wrong stock," and I got a few, but here is my absolute favorite (lightly edited for clarity):

In the late '90s, working as an analyst at a mid-single-digit-billions hedge fund, we were the top holder of Barnes & Noble. It was a top-5 position for us and we ran very concentrated at the top. Our portfolio manager decided he wanted to blow out of a small position in Treasury bills we had for some reason, so he called our head trader (who was one of the classic old-school traders, heavy accent, from one of the outer boroughs, whose highlight of the week was ordering the most expensive bottle of wine on the list when a sales-trader took him to dinner) and said Richie, sell the bonds, just move 'em, we are done with them. Richie somehow heard "sell the BARRRNnes" and proceeded to hit every bid available on BKS. Took a good 30 minutes til the whole investment team started wondering what was happening with BKS. Sadly a question to our own desk came after 20+ questions around the Street looking for info.

800,000 shares and 10 percent later, we finally sold our T-bills.

I'm not quite sure why you'd call T-bills "the bonds," or Barnes & Noble Inc. "the Barnes," but there you go. They bought back the stock.

Available at <https://www.bloomberg.com/opinion/articles/2019-02-15/who-won-from-the-ticker-mix-up-after-j-j-acquisition>