

Request for Reconsideration after Final Action

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SERIAL NUMBER	85365741
LAW OFFICE ASSIGNED	LAW OFFICE 114
MARK SECTION (no change)	
ARGUMENT(S)	
<p>On November 13, 2012, the Examining Attorney issued a Final Office Action based on Section 23(c) and Section 2(e)(1). Applicant hereby submits this Request for Reconsideration concurrently with a Notice of Appeal of the Final Office Action dated November 13, 2012. Applicant respectfully requests that the Examining Attorney withdraw the Final Office Action and allow Applicant's mark to be registered on the Principle Register or at least the Supplemental Register for the reasons stated below.</p> <p>I. INTRODUCTION</p> <p>Applicant objects to the November 13, 2012 Office Action. First, the Examining Attorney appends the November 13, 2012 Office Action and never once in the Examiner's lengthy argument, does the Examiner specifically reference one of Applicant's arguments. Applicant has been inundated with a broad and lengthy assortment of Internet evidence with no reference to Applicant's arguments. This evidence corresponds to the Examining Attorney's arguments. Second, and even worse, the Examining Attorney repeatedly references cited in previous Office Actions, again failing to connect specific references to specific arguments. The Examining Attorney argues that TABATA BOOTCAMP is generic and then reverses position and argues that the mark creates a strong association with Mr. Tabata. These arguments are contradictory, thereby leaving Applicant with confusion over the actual meaning of the mark.</p> <p>Applicant respectfully requests that the Examining Attorney at least amend the Final Office Action to clearly refer to which argument asserted by the Examiner. While Applicant respectfully requests the Final Office Action be amended with clear arguments, supported by specific reference, Applicant will do its best to reduce the confusion by first clearly stating each argument clearly supported by specific references, and thereafter respond to the Examiner's statements.</p> <p>II. APPLICANT'S MARK AS A WHOLE IS NOT GENERIC</p> <p>a. THE TERM "TABATA" IS GENERIC AS USED IN THE MARK</p> <p>The term "TABATA" as used in Applicant's mark is generic because it refers to a specific method of exercise, a type of goods or services. The two prong test for establishing whether a mark is generic is as follows: (1) what goods or services are at issue, and (2) does the relevant public understand the designation <i>primarily</i> to refer to that generic goods or services. TMEP § 1209.01(c)(i) (citing the two-step inquiry as outlined). The Tabata method of exercise is common in the fitness industry. It is an exercise that uses short periods of intense exercise followed by even shorter periods of rest. Thus, the generic meaning of the Tabata method of exercise. Moreover, the relevant public understands Tabata to refer to the method of</p>	

of intense exercise followed by even shorter periods of rest. Interestingly, Applicant found a case that has : the Applicant's assertion that Tabata is generic. *See Pilates Inc. vs. Current Concepts Inc.*, 57 USPQ2d 11 (2000). The *Pilates* case found that despite the method of exercise referred to as "Pilates" being based on the Pilates, the term "Pilates" is now generic because the public understands Pilates to refer to a specific method source of goods or services. Similar to the *Pilates* case, Tabata is generic as it also refers to a specific method source of goods or services. And, most importantly, the public understands Tabata to refer to a specific method source of goods or services.

As early as 1996, Izumi Tabata studied the effects of a method of exercise that uses short periods of even shorter periods of rest. *See Tabata, Effects of Moderate-Intensity Endurance and High-Intensity Interval Capacity and VO2max*, National Institutes of Health (1996), <http://www.ncbi.nlm.nih.gov/pubmed/8897392>. (At intervening 17 years, Mr. Tabata has done nothing to claim or police the term Tabata as a trademark. Also, Mr. Tabata did not invent the method of exercise. In fact, Mr. Tabata laughs at the idea that the training method because he is not the inventor of the method; instead, Coach Irisawa was the person who pioneered the training of Carl Forest at paragraph 11. The public appears to have been trying to find a short-hand way to refer to the Tabata studied – it would certainly be a mouthful to constantly have to refer to the Tabata method of exercise that uses short periods of intense exercise followed by even shorter periods of rest." Given that Mr. Tabata exercise and has not claimed or policed the term "Tabata" as a mark for the last 17 years, the term Tabata exercise is in the public domain and is a generic term as it refers to the above mentioned method of exercise.

In addition to Applicant's above argument, Applicant would like to respectfully direct the Examining Attorney attached Grant of Protection from Japan for the mark TABATA BOOTCAMP. While this evidence is by Examining Attorney, Applicant sincerely urges the Examiner to consider Japan's Grant of Protection for to point out that Japanese trademark law has similar rules as the U.S. for determining whether a mark/term Tabata being a Japanese national, the Japanese Trademark Office allowed the TABATA BOOTCAMP mark.

b. THE TERM "BOOTCAMP" IS SUGGESTIVE AS USED IN THE MARK

The term "BOOTCAMP" is suggestive as it relates to the Applicant's mark. At the very least, Applicant term "BOOTCAMP" is at least descriptive of Applicant's services. Applicant's services are directed to education package of services directed to optimizing a client's fitness goals based on the underlying tenants of the Tabata Described another way, "BOOTCAMP" as used in Applicant's mark is suggestive for "conducting live classroom workshops for introducing professional physical fitness instructors in training protocols in the field of fitness its goods/services.)

Applicant acknowledges that the term "bootcamp" is a widely used term among a number of general the term "bootcamp" is used descriptively when it refers to the training of civilians. The term "bootcamp" ; ways to describe an intense course of training. The only case in which the term "bootcamp" may have been used to refer to the initial indoctrination, physical fitness training, and basic instruction for new recruits in the attached Internet evidence shows the definition of "boot camp" from a number of respectable Internet dictionaries evidence shows that "boot camp" is generally defined as (1) a training camp for military recruits, or (2) a collection training techniques applied to military recruits to teach usually youthful offenders socially acceptable patterns www.thefreedictionary.com; www.meriam-webster.com; www.dictionary.reference.com; and www.macmillan.com (Exhibit 2). There is not a single reference that refers to the term "bootcamp" as "conducting live classroom

workshops for introducing professional physical fitness instructors in training protocols in the field of fitness

Now the question is whether the relevant public understands that BOOTCAMP as used in Applicant's mark "conducting live classroom and on-line seminars and workshops for introducing professional physical fitness instructors in training protocols in the field of fitness"? The answer - **NO**. For the above-mentioned reasons, the term "BOOTCAMP" is suggestive for "conducting live classroom and on-line seminars and workshops for introducing professional physical fitness instructors in training protocols in the field of fitness." Assuming *arguendo* that "BOOTCAMP" is not suggestive of Applicant's goods and/or services, the term "BOOTCAMP" is certainly not generic and is at least descriptive of Applicant's goods and/or services.

c. GENERIC TERMS COMBINED WITH SUGGESTIVE OR DESCRIPTIVE TERMS

As previously discussed, the term "TABATA" is generic and the term "BOOTCAMP" is suggestive of Applicant's mark. Therefore, Applicant's mark is protectable under Trademark Law. However, even assuming the terms "TABATA" and "BOOTCAMP" were generic, the entire mark, TABATA BOOTCAMP, would not be generic. The Federal Circuit has set out the following standard to test whether a compound word is generic. *See In re Dietrich*, 240 F.3d 1341, 1345 (Fed. Cir. 2001). First, the PTO must prove that the public understands the individual terms. Second, the PTO must prove that the public understands that the joining of the individual terms into a phrase has a meaning to the term. *Id.* If, and only if, both of these elements are shown, would the general public be deemed to refer primarily to the genus of goods or services described by the individual terms. *Id.* In other words, the term "BOOTCAMP" as a whole must be generic to be denied protection. As established above, the term "BOOTCAMP" is instead, suggestive of Applicant's goods and/or services. Therefore, Applicant's mark is entitled to protection.

III. RESPONSE TO EXAMINING ATTORNEY'S ASSERTIONS

a. PROCEDURAL BACKGROUND

The Examining Attorney refused registration of Applicant's mark – TABATA BOOTCAMP – on the grounds that it is generic under § 23(c) of the Trademark Act for being generic. To support the Examiner's assertion that the mark is generic, the Examining Attorney cites the two-step inquiry outlined in the TMEP § 1209.01(c)(i), recited as follows:

Determining whether a mark is generic requires a two-step inquiry: (1) What is the genus of goods or services at issue? (2) Does the relevant public understand the designation *primarily* to refer to the genus of goods and/or services?

See Office Actions dated April 10, 2012 and November 13, 2012. (Emphasis added).

In the April 10, 2012 Office Action, the Examining Attorney applies the above-stated two-step inquiry for determining whether a mark is generic. First the Examining Attorney states that "the class of genus of the services is Tabata training or bootcamp." The Examining Attorney states that "[t]he relevant public would understand this designation [Applicant's mark, TABATA BOOTCAMP] to refer primarily to this class or genus of services because, as the attached article and Internet evidence indicate, 'bootcamp' are widely used to refer to fitness training." Note that the Examining Attorney does not refer to the attachments referred to in the Office Action.

In further support of the Examining Attorney's position, the Examiner states in the November 13, 2012 Office Action that "the word 'Tabata' in the mark refers to a form of high intensity interval training named after researcher Izumi Tabatake. 'Tabata' is widely used to refer to interval fitness training. . . ." Additionally, in the November 13, 2013 Office Action, the Examining Attorney states that the "wording 'bootcamp' means intense physical fitness training or exercise typically of short duration [and that] the term 'bootcamp' is widely used to refer to fitness training in general." Using similar reasoning, in the April 10, 2012 Office Action, the Examining Attorney appears to again conclude that (1) the genus of goods and/or services is Tabata training or bootcamp.

training or bootcamp(s) and (2) that the relevant public would understand Applicant's mark, TABATA BOOTCAMP, as referring to this class or genus of services based on articles and Internet evidence attached to the Office Actions.

It appears that the Examining Attorney is basing the rationale that the mark is generic on the terms "Tabata" and "bootcamp(s)." Tabata is widely used to refer to fitness training. This basis is insufficient as the test for whether a term is generic is whether the term is used to describe a certain good or service, but whether the term is understood by the relevant public to be limited to that good or service refers to the genus of goods and/or services at issue.

b. THE EXAMINING ATTORNEY'S GENUS CLASSIFICATION IS INCORRECT FOR TABATA BOOTCAMP SERVICES

As a preliminary matter, Applicant respectfully disagrees with the Examining Attorney's classification/genus of services at issue. The Examining Attorney stated in the April 10, 2012 Office Action that "the class of genus of the bootcamp(s)." Based on the Examiner's above-mentioned definition of the term Tabata, e.g., the "word 'Tabata' is a form of high intensity interval training," it appears that the Tabata training service the Examining Attorney is classifying as high intensity interval training a student or client would undergo under the direction of a professional instructor. Applicant describes its services as "educational services namely, conducting live classroom and on-line seminars introducing **professional fitness instructors to training protocols** in the field of fitness." (Emphasis added.) Applicant is educating fitness professionals in the specific areas of physical fitness, namely high intensity aerobic classes of interval training. The services educate instructors in training protocols that give these professional instructors and/or classes in Applicant's total service package as the service package relates to or is associated with the method of interval training. Not only is the genus related to educating professional trainers in training protocols, but also related to a package of services/tools provided by the Applicant to the professional trainer that are directed towards achieving goals based on the underlying tenants of the Tabata method of high intensity interval training. Moreover, the Applicant's services as it relates to the mark TABATA BOOTCAMP are not limited to just introducing professional instructors to the method of interval training but could include protocols other than the Tabata protocol.

In summary, it appears as though the Examining Attorney is classifying the genus of Applicant's services as high intensity interval training whereby professional instructors actually put students through the rigors of high intensity interval training. The genus of Applicant's services is directed to educating fitness professionals in a package of services directed towards achieving goals based on the tenants of a number of exercise protocols, including the Tabata method of exercise.

c. THE COMPOUND WORD "TABATA BOOTCAMP" IS NOT GENERIC

The Examining Attorney argues that Applicant's mark as a whole is generic and, therefore, not protectable. However, because both the terms "TABATA" and "BOOTCAMP" are found to be generic, the entire mark, TABATA BOOTCAMP, is generic. The Federal Circuit has set out the following standard to test whether a compound word is generic: *Operating Corp.*, 240 F.3d 1341, 1345 (Fed. Cir. 2001). First, the PTO must prove that the public understands the compound word to be generic. *Id.* Second, the PTO must prove that the public understands that the joining of the individual terms connotes additional meaning to the term. *Id.* If, and only if, both of these elements are shown, would the general public understand the phrase to refer primarily to the genus of goods or services described by the individual terms. *Id.*

The entire phrase TABATA BOOTCAMP as a whole must be generic to be denied protection. The Office has made a *prima facie* case that the joining of the individual terms TABATA and BOOTCAMP into a phrase does not create a new meaning for the term. See *e.g.* *Hunt Masters, Inc. v. Landry's Seafood Restaurant, Inc.*, 240 F.3d 251, 254, 57 U.S.P.Q.2d 1001 (9th Cir. 1999) (determining whether a mark is generic, courts should not parse terms to determine that they are made up of individual terms). See also *Filipino Yellow Pages, Inc. v. Asian Journal Pubs., Inc.*, 198 F.3d 1143, 53 U.S.P.Q.2d 1001 (9th Cir. 1999) (determining whether a mark is generic, courts should not parse terms to determine that they are made up of individual terms).

asserting that the applied-for-mark may falsely suggest a connection with an individual known as Izumi Tabata, however, as previously established in Section I, the term “Tabata” is generic exercise. Therefore, the relationship between Applicant and Izumi Tabata is moot. Moreover, Applicant for an Office Action to argue both that a mark is generic and then argue that the mark creates a false connection if the mark is generic

In further corroboration that the term Tabata is generic, the *Pilates* case cited above lends support that the Tabata method of exercise. Where a claimed mark is generic, there can be no false connection. *See* *Inc.*, 3 USPQD2 1671, 1676 (TTAB 1987) (finding that where a name does not point uniquely and unmistakably to a particular person or “persona,” there can be no false suggestion). Moreover, in contrast to the *Pilates* case, Mr. Tabata’s method of exercise. As evidenced in an article submitted by Mr. Tabata and team in the scientific, peer-reviewed journal *Science in Sports & Exercise*, the team merely studied and compared two different intermittent exercise protocols: one for regular use by coaches of top level Japanese speed skaters. *See* Izumi Tabata et al., 3 *Medicine & Science in Sports & Exercise*, 390, 391 (1997) (stating “[w]e have studied two different intermittent exercises that have been used frequently as training exercise by top athletes involved in speed skating lasting 1 min or less. Two different intermittent exercise protocols that are regularly used by coaches of top level Japanese speed skaters have been compared.”). In fact, Mr. Tabata laughs at the idea that the training method became named after him, the inventor of the method; instead, Coach Irisawa was the person who pioneered the training method. *See* Docket Entry No. 11. Additionally, when Mr. Tabata was approached by Applicant’s attorney, Mr. Carl Forest, to use the Tabata name in connection with exercise services provided by Applicant, Mr. Tabata indicated that he would not accept payment because he did not invent the exercise method. *See id.* When a person represents a particular domain and then further acts in a manner consistent with that understanding, then the term in the public domain is generic. *e.g.*, *BellSouth Corp. v. White Directory Publishers, Inc.*, 42 Supp. 2d 598, 606 and 610 (M.D.N.C. 1999). In addition to Applicant’s above argument that no false connection exists, Applicant would like to respectfully draw the Attorney’s attention to the attached Grant of Protection from Japan for the mark TABATA BOOTCAMP. In the absence of any binding on the Examining Attorney, Applicant sincerely urges the Examiner to consider Japan’s Grant of Protection for the mark TABATA BOOTCAMP. Applicant would like to point out that Japanese trademark law has similar “false connection” rules as the United States. Being a Japanese national, the Japanese Trademark Office did not consider the term “Tabata” to be connected with exercise.

V. CONCLUSION

For the foregoing reasons, Applicant respectfully request withdrawal of all rejections and registration of TABATA BOOTCAMP in the Supplemental Register.

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DESCRIPTION OF EVIDENCE FILE	Exhibit 1 - http://www.ncbi.nlm.nih.gov/pubmed/8897392 Exhibit 2 - Definitions c Tabata Study Japanese Registration - Copy of Japanese Registration Declaration of Declaration of Jeff Tuller
CORRESPONDENCE SECTION	
ORIGINAL ADDRESS	CARL A. FOREST PATTON BOGGS LLP SUITE 4900 1801 CALIFORNIA STREET DENVER Colorado (CO) US 80129
NEW CORRESPONDENCE SECTION	
NAME	CARL A. FOREST
FIRM NAME	PATTON BOGGS LLP
INDIVIDUAL ATTORNEY	

DOCKET/REFERENCE NUMBER	021542.0373T1US
INTERNAL ADDRESS	1801 CALIFORNIA STREET
STREET	SUITE 4900
CITY	DENVER
STATE	Colorado
ZIP/POSTAL CODE	80129
COUNTRY	United States
PHONE	303-830-1776
FAX	303-894-0239
EMAIL	IPDocketing@pattonboggs.com;mecarter@pattonboggs.com;tcope@pattonboggs.c
AUTHORIZED EMAIL COMMUNICATION	Yes
SIGNATURE SECTION	
RESPONSE SIGNATURE	/Margaret E. Carter/
SIGNATORY'S NAME	Margaret E. Carter
SIGNATORY'S POSITION	Attorney of Record, TX Bar Member
SIGNATORY'S PHONE NUMBER	214-758-1541
DATE SIGNED	05/13/2013
AUTHORIZED SIGNATORY	YES
CONCURRENT APPEAL NOTICE FILED	NO
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Request for Reconsideration after Final Action To the Commissioner for Trademarks:

Application serial no. **85365741** has been amended as follows:

ARGUMENT(S)

In response to the substantive refusal(s), please note the following:

On November 13, 2012, the Examining Attorney issued a Final Office Action based on Section 23(c) and 2(a) or alternatively Section 2(e)(1). Applicant hereby submits this Request for Reconsideration concurrently with a Notice of Appeal to the Final Office Action dated November 13, 2012. Applicant respectfully requests that the Examining Attorney withdraw the rejections and allow Applicant's mark to be registered on the Principle Register or at least the Supplemental Register for the reasons set forth below.

I. INTRODUCTION

Applicant objects to the November 13, 2012 Office Action. First, the Examining Attorney appends 208 attachments to the Office Action and never once in the Examiner's lengthy argument, does the Examiner specifically reference one of the 208 attachments. Applicant has been inundated with a broad and lengthy assortment of Internet evidence with no reference as to what attachment corresponds to the Examining Attorney's arguments. Second, and even worse, the Examining Attorney refers to additional scores of references cited in previous Office Actions, again failing to connect specific references to specific arguments. Third, the Office Action argues that TABATA BOOTCAMP is generic and then reverses position and argues that the mark creates a false impression of connection with Mr. Tabata. These arguments are contradictory, thereby leaving Applicant with confusion over the actual rejection.

Applicant respectfully requests that the Examining Attorney at least amend the Final Office Action to indicate which attachment(s) refer to which argument asserted by the Examiner. While Applicant respectfully requests the Final Office Action be amended to provide clear arguments, supported by specific reference, Applicant will do its best to reduce the confusion by first making positive arguments, each argument clearly supported by specific references, and thereafter respond to the Examiner's statements.

II. APPLICANT'S MARK AS A WHOLE IS NOT GENERIC

a. THE TERM "TABATA" IS GENERIC AS USED IN THE MARK

The term "TABATA" as used in Applicant's mark is generic because it refers to a specific method of exercise and not to a source of goods or services. The two prong test for establishing whether a mark is generic is as follows: (1) what is the genus of the goods and/or services at issue, and (2) does the relevant public understand the designation *primarily* to refer to that genus of goods and/or services? *See* TMEP §

1209.01(c)(i) (citing the two-step inquiry as outlined). The Tabata method of exercise is commonly known as the method of exercise that uses short periods of intense exercise followed by even shorter periods of rest. Thus, the genus of goods and/or services is the Tabata method of exercise. Moreover, the relevant public understands Tabata to refer to the method of exercise that uses short periods of intense exercise followed by even shorter periods of rest. Interestingly, Applicant found a case that has some similar facts that supports the Applicant's assertion that Tabata is generic. *See Pilates Inc. vs. Current Concepts Inc.*, 57 USPQ2d 1174, 1174, 1183-1190 (S.D.N.Y. 2000). The *Pilates* case found that despite the method of exercise referred to as “Pilates” being based on the distinct teachings by Joseph Pilates, the term “Pilates” is now generic because the public understands Pilates to refer to a specific method of exercise and not the source of goods or services. Similar to the *Pilates* case, Tabata is generic as it also refers to a specific method of exercise and not to a source of goods or services. And, most importantly, the public understands Tabata to refer to a specific method of exercise and not the source of goods or services.

As early as 1996, Izumi Tabata studied the effects of a method of exercise that uses short periods of intense exercise followed by even shorter periods of rest. *See Tabata, Effects of Moderate-Intensity Endurance and High-Intensity Intermittent Training on Anaerobic Capacity and VO2max*, National Institutes of Health (1996), <http://www.ncbi.nlm.nih.gov/pubmed/8897392>. (Attached as Exhibit 1). In the intervening 17 years, Mr. Tabata has done nothing to claim or police the term Tabata as a trademark. Also, in contrast to the *Pilates* case, Mr. Tabata did not invent the method of exercise. In fact, Mr. Tabata laughs at the idea that the training method became named after him because he is not the inventor of the method; instead, Coach Irisawa was the person who pioneered the training method. *See Declaration of Carl Forest* at paragraph 11. The public appears to have been trying to find a short-hand way to refer to the method of exercise that Mr. Tabata studied – it would certainly be a mouthful to constantly have to refer to the Tabata method of exercise as “that method of exercise that uses short periods of intense exercise followed by even shorter periods of rest.” Given that Mr. Tabata did not invent the method of exercise and has not claimed or policed the term “Tabata” as a mark for the last 17 years, the term Tabata as it relates to methods of exercise is in the public domain and is a generic term as it refers to the above mentioned method of exercise.

In addition to Applicant's above argument, Applicant would like to respectfully direct the Examining Attorney's attention to the attached Grant of Protection from Japan for the mark TABATA BOOTCAMP. While this evidence is by no means binding on the Examining Attorney, Applicant sincerely urges the Examiner to consider Japan's Grant of Protection for the mark. Applicant would like to point out that Japanese trademark law has similar rules as the U.S. for determining whether a mark/term is “generic”, and despite Mr. Tabata being a Japanese national, the Japanese Trademark Office allowed the TABATA BOOTCAMP mark.

b. THE TERM "BOOTCAMP" IS SUGGESTIVE AS USED IN THE MARK

The term "BOOTCAMP" is suggestive as it relates to the Applicant's mark. At the very least, Applicant strongly asserts that the term "BOOTCAMP" is at least descriptive of Applicant's services. Applicant's services are directed to educating fitness professionals in a package of services directed to optimizing a client's fitness goals based on the underlying tenants of the Tabata method of exercise.

Described another way, "BOOTCAMP" as used in Applicant's mark is suggestive for "conducting live classroom and on-line seminars and workshops for introducing professional physical fitness instructors in training protocols in the field of fitness." (Applicant's description of its goods/services.)

Applicant acknowledges that the term "bootcamp" is a widely used term among a number of genera. However, in almost all cases, the term "bootcamp" is used descriptively when it refers to the training of civilians. The term "bootcamp" generally is just one of many ways to describe an intense course of training. The only case in which the term "bootcamp" may have become generic is when the term is used to refer to the initial indoctrination, physical fitness training, and basic instruction for new recruits in the armed services. The attached Internet evidence shows the definition of "boot camp" from a number of respectable Internet dictionaries. The attached Internet evidence shows that "boot camp" is generally defined as (1) a training camp for military recruits, or (2) a correctional facility that uses the training techniques applied to military recruits to teach usually youthful offenders socially acceptable patterns of behavior. *See e.g.*, www.thefreedictionary.com; www.meriam-webster.com; www.dictionary.reference.com; and www.macmillandictionary.com. (Attached as Exhibit 2). There is not a single reference that refers to the term "bootcamp" as "conducting live classroom and on-line seminars and workshops for introducing professional physical fitness instructors in training protocols in the field of fitness."

Now the question is whether the relevant public understands that BOOTCAMP as used in Applicant's mark *primarily* refers to "conducting live classroom and on-line seminars and workshops for introducing professional physical fitness instructors in training protocols in the field of fitness"? The answer - **NO**. For the above-mentioned reasons, the term "BOOTCAMP" as used in Applicant's mark is suggestive for "conducting live classroom and on-line seminars and workshops for introducing professional physical fitness instructors in training protocols in the field of fitness." Assuming *arguendo* that "BOOTCAMP" is not suggestive for Applicant's goods and/or services, the term "BOOTCAMP" is certainly not generic and is at least descriptive of Applicant's goods and/or services.

c. GENERIC TERMS COMBINED WITH SUGGESTIVE OR DESCRIPTIVE TERMS ARE PROTECTABLE

As previously discussed, the term "TABATA" is generic and the term "BOOTCAMP" is suggestive as these terms apply to Applicant's mark. Therefore, Applicant's mark is protectable under Trademark Law. However, even assuming *arguendo* that both the terms "TABATA" and "BOOTCAMP" were generic, the entire mark, TABATA BOOTCAMP, would not be generic by default. The Federal Circuit has set out the following standard to test whether a compound word is generic. *See In re Dial-A-Mattress Operating Corp.*, 240 F.3d 1341, 1345 (Fed. Cir. 2001). First, the PTO must prove that the public understands the individual terms to be generic. *Id.* Second, the PTO must prove that the public understands that the joining of the individual terms into a phrase does not confer additional meaning to the term. *Id.* If, and only if, both of these elements are shown, would the general public be deemed to understand the phrase to refer primarily to the genus of goods or services described by the individual terms. *Id.* In other words, the entire phrase TABATA BOOTCAMP as a whole must be generic to be denied protection. As established above, the term "BOOTCAMP" is not generic, but, instead, suggestive of Applicant's goods and/or services. Therefore, Applicant's mark is entitled to

protection under the Trademark laws.

III. RESPONSE TO EXAMINING ATTORNEY'S ASSERTIONS

a. PROCEDURAL BACKGROUND

The Examining Attorney refused registration of Applicant's mark – TABATA BOOTCAMP – on the Supplemental Register under § 23(c) of the Trademark Act for being generic. To support the Examiner's assertion that the mark is generic, the Examining Attorney cites the two-step inquiry outlined in the TMEP § 1209.01(c)(i), recited as follows:

Determining whether a mark is generic requires a two-step inquiry: (1) What is the genus of the goods and/or services at issue? (2) Does the relevant public understand the designation *primarily* to refer to that genus of goods and/or services?

See Office Actions dated April 10, 2012 and November 13, 2012. (Emphasis added).

In the April 10, 2012 Office Action, the Examining Attorney applies the above-stated two-step inquiry for determining whether a mark is generic. First the Examining Attorney states that "the class of genus of the services is Tabata training or bootcamp(s)." Second, the Examining Attorney states that "[t]he relevant public would understand this designation [Applicant's mark, TABATA BOOTCAMP] to primarily refer to this class or genus of services because, as the attached article and Internet evidence indicates, the terms 'Tabata' and 'bootcamp' are widely used to refer to fitness training." Note that the Examining Attorney does not refer to anyone of the over 200 attachments referred to in the Office Action.

In further support of the Examining Attorney's position, the Examiner states in the November 13, 2012 Office Action that the "word 'Tabata' in the mark refers to a form of high intensity interval training named after researcher Izumi Tabata. . . [and] that the term 'Tabata' is widely used to refer to interval fitness training. . . ." Additionally, in the November 13, 2013 Office Action, the Examining Attorney states that the "wording 'bootcamp' means intense physical fitness training or exercise typically completed over a short duration [and that] the term 'bootcamp' is widely used to refer to fitness training in general." Using similar wording in the April 10, 2012 Office Action, the Examining Attorney appears to again conclude that (1) the genus of goods and/or services at issue is Tabata training or bootcamp(s) and (2) that the relevant public would understand Applicant's mark, TABATA BOOTCAMP, to primarily refer to this class or genus of services based on articles and Internet evidence attached to the Office Actions.

It appears that the Examining Attorney is basing the rationale that the mark is generic on the terms "Tabata" and "bootcamp" being widely used to refer to fitness training. This basis is insufficient as the test for whether a term is generic is not whether the term is widely used to describe a certain good or service, but whether the term is understood by the relevant public to be the designation that *primarily* refers to the genus of goods and/or services at issue.

b. THE EXAMINING ATTORNEY'S GENUS CLASSIFICATION IS INCORRECT FOR APPLICANT'S SERVICES

As a preliminary matter, Applicant respectfully disagrees with the Examining Attorney's classification/genus of the goods and/or services at issue. The Examining Attorney stated in the April 10,

2012 Office Action that “the class of genus of the services is Tabata training or bootcamp(s).” Based on the Examiner’s above-mentioned definition of the term Tabata, e.g., the “word ‘Tabata’ in the mark refers to a form of high intensity interval training,” it appears that the Tabata training service the Examining Attorney is referring to is the actual high intensity interval training a student or client would undergo under the direction of a professional instructor. In contrast, however, Applicant describes its services as “educational services namely, conducting live classroom and on-line seminars and workshops for introducing **professional fitness instructors to training protocols** in the field of fitness.” (Emphasis added.) The genus is more akin to educating fitness professionals in the specific areas of physical fitness, namely high intensity aerobic classes based on the Tabata method of interval training. The services educate instructors in training protocols that give these professional instructors the tools to guide persons and/or classes in Applicant’s total service package as the service package relates to or is associated with the basic tenants of the Tabata method of interval training. Not only is the genus related to educating professional trainers in training protocols, the training protocols are related to a package of services/tools provided by the Applicant to the professional trainer that are directed to optimizing a client’s fitness goals based on the underlying tenants of the Tabata method of high intensity interval training. Moreover, the services offered by the Applicant as it relates to the mark TABATA BOOTCAMP are not limited to just introducing professional instructors to the Tabata method of interval training but could include protocols other than the Tabata protocol.

In summary, it appears as though the Examining Attorney is classifying the genus of Applicant’s services as being directed to classes whereby professional instructors actually put students through the rigors of high intensity interval training. However, in actuality, the genus of Applicant’s services is directed to educating fitness professionals in a package of services directed to optimizing a client’s fitness goals based on the tenants one of a number of exercise protocols, including the Tabata method of exercise

c. THE COMPOUND WORD “TABATA BOOTCAMP” IS NOT GENERIC

The Examining Attorney argues that Applicant’s mark as a whole is generic and, therefore, not protectable. However, assuming *arguendo* that both the terms “TABATA” and “BOOTCAMP” are found to be generic, the entire mark, TABATA BOOTCAMP, is not by default generic. The Federal Circuit has set out the following standard to test whether a compound word is generic. *See In re Dial-A-Mattress Operating Corp.*, 240 F.3d 1341, 1345 (Fed. Cir. 2001). First, the PTO must prove that the public understands the individual terms to be generic. *Id.* Second, the PTO must prove that the public understands that the joining of the individual terms into a phrase does not confer additional meaning to the term. *Id.* If, and only if, both of these elements are shown, would the general public be deemed to understand the phrase to refer primarily to the genus of goods or services described by the individual terms. *Id.*

The entire phrase TABATA BOOTCAMP as a whole must be generic to be denied protection. The Office Actions have failed to set out a *prima facie* case that the joining of the individual terms TABATA and BOOTCAMP into a phrase does not confer additional meaning to the term. *See e.g.* Hunt Masters, Inc. v. Landry’s Seafood Restaurant, Inc., 240 F.3d 251, 254, 57 U.S.P.Q.2d 1884 (4th Cir. 2001) (“In determining whether a mark is generic, courts should not parse terms to determine that they are made up

of generic components."); *Filipino Yellow Pages, Inc. v. Asian Journal Pubs., Inc.*, 198 F.3d 1143, 53 U.S.P.Q.2d 1001 (9th Cir. 1999) (rejecting view that combination of generic words must be generic; reversing finding that mark FILIPINO YELLOW PAGES is generic); *In re American Fertility Soc'y*, 188 F.3d 1341, 1347, 51 U.S.P.Q.2d 1832 (Fed. Cir. 1999) (vacating Board holding that SOCIETY FOR REPRODUCTIVE MEDICINE is generic where Board had found only that component parts of the phrase were generic); *In re Tennis Industry Ass'n*, 102 U.S.P.Q.2d 1671 (T.T.A.B. 2012) (TENNIS INDUSTRY ASSOCIATION not generic when considered as a whole); *In re Country Music Ass'n*, 100 U.S.P.Q.2d 1824 (T.T.A.B. 2011) (finding COUNTRY MUSIC ASSOCIATION not generic for association services promoting country music); *In re American Institute of Certified Public Accountants*, 65 U.S.P.Q.2d 1972 (holding that the Federal Circuit's opinion in *American Fertility Society* "preclude[s] the Patent and Trademark Office from finding a multi-word phrase to be generic, when the only available evidence is that the components are, individually, generic").

As previously argued, the Applicant strongly defends against classifying the term "BOOTCAMP" as being generic as it is used in the Applicant's mark. Regardless, the previous Office Actions have failed to establish a *prima facie* case that the words as a whole are generic. The November 13, 2012 Office Action focuses most of its attention in arguing that just because the exact wording of the mark has not been used in the fitness industry is not dispositive that the mark isn't generic. The Examiner appears to be making this argument in response to an argument the Applicant supposedly made, but that is not contained in any of the Applicant's Response to Office Actions. In any manner, the Examiner's argument is not sufficient to establish a *prima facie* case that the mark as a whole is generic because the argument does not establish that the public understands that the joining of the individual terms into a phrase does not confer additional meaning to the term.

The Examiner further argues in the closing comments, that "the attached evidence universally shows that the combined wording 'tabata bootcamp' is in fact in widespread use as the name of interval fitness training created by Izumi Tabata's research." Again, Applicant takes exception to the Examiner's sweeping reference to over 200 attachments as providing evidence. Moreover, Applicant disagrees with the Examining Attorney's categorization that the wording "tabata bootcamp" is in widespread use and takes exception to the Examining Attorney's confusion of the issues by appearing to assert that the term Tabata is generic while also referencing Mr. Izumi Tabata as being the researcher responsible for Tabata fitness (in Applicant's opinion, the Examiner does this to lay ground work for the Examiner's later contradictory argument for false connection between Applicant's mark and Mr. Izumi Tabata).

While there may be an occasional instance of the reference to "tabata bootcamp" on the internet, this evidence is also not sufficient to establish that the combined wording of the mark is generic because the evidence does not establish that the public understands that the joining of the individual terms into a phrase does not confer additional meaning to the term. In fact, almost all of the uses of the term are by parties that are licensees of Savvier, indicating that the combined wording does indeed confer additional meaning over the individual terms by themselves. *See* Declaration of Jeff Tuller at paragraphs 5-7 (stating that 7 of the 10 Internet sites attached to the Office Action as evidence of Tabata Bootcamp being in widespread use, are actually licensees of the TABATA BOOTCAMP mark owned by Savvier, LP).

For the above-mentioned reasons, the Examiner has not established that the combined words "TABATA BOOTCAMP" are generic.

d. ALTERNATIVE REJECTION UNDER SECTION 2(E)(1)

The Examining Attorney issued an additional rejection under Section 2(e)(1) that would be in alternative to the rejection under 23(c). The Examiner stated that should an appellate tribunal find that the applied-for mark is not generic, then the Examiner maintains the refusal of registration because the applied-for mark is merely descriptive of Applicant's services. Applicant respectfully asserts that this basis of rejection is moot as Applicant has previously requested the mark be registered on the Supplemental Register if the mark is found to be descriptive.

IV. NO FALSE CONNECTION EXISTS

The Examining Attorney issued an additional rejection under 2(a) of the Trademark Act in alternative to section 23(c) discussed above, asserting that the applied-for-mark may falsely suggest a connection with an individual known as Izumi Tabata. Applicant is not associated with Izumi Tabata, however, as previously established in Section I, the term "Tabata" is generic as it applies to methods of exercise. Therefore, the relationship between Applicant and Izumi Tabata is moot. Moreover, Applicant asserts that it is inappropriate for an Office Action to argue both that a mark is generic and then argue that the mark creates a false connection because a mark cannot create a false connection if the mark is generic. In further corroboration that the term Tabata is generic, the *Pilates* case cited above lends support that the term TABATA is generic for the Tabata method of exercise. Where a claimed mark is generic, there can be no false connection. See *NASA v. Bully Hill Vineyards, Inc.*, 3 USPQD2 1671, 1676 (TTAB 1987) (finding that where a name does not point uniquely and unmistakably to that party's personality or "persona," there can be no false suggestion). Moreover, in contrast to the *Pilates* case, Mr. Tabata did not invent the method of exercise. As evidenced in an article submitted by Mr. Tabata and team in the scientific, peer-review journal *Medicine & Science in Sports & Exercise*, the team merely studied and compared two different intermittent exercise protocols that were already in regular use by coaches of top level Japanese speed skaters. See Izumi Tabata et al., 3 *Medicine & Science in Sports & Exercise*, *Metabolic Profile of High Intensity Intermittent Exercises*, 390, 391 (1997) (stating "[w]e have studied metabolic profiles of high-intensity intermittent exercises that have been used frequently as training exercise by top athletes involved in high intensity exercise lasting 1 min or less. Two different intermittent exercise protocols that are regularly used by coaches of top level Japanese speed skaters have been compared."). In fact, Mr. Tabata laughs at the idea that the training method became named after him because he is not the inventor of the method; instead, Coach Irisawa was the person who pioneered the training method. See Declaration of Carl Forest at paragraph 11. Additionally, when Mr. Tabata was approached by Applicant's attorney, Mr. Carl Forest, to accept payment for the use of the Tabata name in connection with exercise services provided by Applicant, Mr. Tabata indicated that he felt it would be inappropriate for him to accept payment because he did not invent the exercise method. See *id.* When a person represents that a term is in the public domain and then further acts in a manner consistent with that understanding, then the term in the public domain is a generic term. See *e.g.*, *BellSouth Corp. v. White Directory Publishers, Inc.*, 42 Supp. 2d 598, 606 and 610 (M.D.N.C. 1999).

In addition to Applicant's above argument that no false connection exists, Applicant would like to respectfully direct the Examining Attorney's attention to the attached Grant of Protection from Japan for the mark TABATA BOOTCAMP. While this evidence is by no means binding on the Examining Attorney, Applicant sincerely urges the Examiner to consider Japan's Grant of Protection for the mark. Applicant would like to point out that Japanese trademark law has similar "false connection" rules as the U.S., and despite Mr. Tabata being a Japanese national, the Japanese Trademark Office did not consider the term "Tabata" to be connected to any person.

V. CONCLUSION

For the foregoing reasons, Applicant respectfully request withdrawal of all rejections and registration of TABATA BOOTCAMP on the Supplemental Register.

EVIDENCE

Evidence in the nature of Exhibit 1 - <http://www.ncbi.nlm.nih.gov/pubmed/8897392> Exhibit 2 - Definitions of boot camp Exhibit 3 - 1997 Tabata Study Japanese Registration - Copy of Japanese Registration Declaration of Carl Forest Exhibit A Declaration of Jeff Tuller has been attached.

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CORRESPONDENCE ADDRESS CHANGE

Applicant proposes to amend the following:

Current:

CARL A. FOREST
PATTON BOGGS LLP
SUITE 4900
1801 CALIFORNIA STREET
DENVER
Colorado (CO)
US
80129

Proposed:

CARL A. FOREST of PATTON BOGGS LLP, having an address of
1801 CALIFORNIA STREET SUITE 4900 DENVER, Colorado 80129
United States
IPDocketing@pattonboggs.com;mecarter@pattonboggs.com;tcope@pattonboggs.com;ipfiles04@pattonbog
303-830-1776
303-894-0239
The attorney docket/reference number is 021542.0373T1US.

SIGNATURE(S)

Request for Reconsideration Signature

Signature: /Margaret E. Carter/ Date: 05/13/2013

Signatory's Name: Margaret E. Carter

Signatory's Position: Attorney of Record, TX Bar Member

Signatory's Phone Number: 214-758-1541

The signatory has confirmed that he/she is an attorney who is a member in good standing of the bar of the highest court of a U.S. state, which includes the District of Columbia, Puerto Rico, and other federal territories and possessions; and he/she is currently the applicant's attorney or an associate thereof; and to the best of his/her knowledge, if prior to his/her appointment another U.S. attorney or a Canadian attorney/agent not currently associated with his/her company/firm previously represented the applicant in this matter: (1) the applicant has filed or is concurrently filing a signed revocation of or substitute power of attorney with the USPTO; (2) the USPTO has granted the request of the prior representative to withdraw; (3) the applicant has filed a power of attorney appointing him/her in this matter; or (4) the applicant's appointed U.S. attorney or Canadian attorney/agent has filed a power of attorney appointing him/her as an associate attorney in this matter.

The applicant is not filing a Notice of Appeal in conjunction with this Request for Reconsideration.

Mailing Address: CARL A. FOREST
PATTON BOGGS LLP
1801 CALIFORNIA STREET
SUITE 4900
DENVER, Colorado 80129

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[Med Sci Sports Exerc.](#) 1996 Oct;28(10):1327-30.

Effects of moderate-intensity endurance and high-intensity intermittent training on anaerobic capacity and VO2max.

Tabata I, Nishimura K, Kouzaki M, Hirai Y, Ogita F, Miyachi M, Yamamoto K.

Department of Physiology and Biomechanics, National Institute of Fitness and Sports, Kagoshima Prefecture, Japan.

Abstract

This study consists of two training experiments using a mechanically braked cycle ergometer. First, the effect of 6 wk of moderate-intensity endurance training (intensity: 70% of maximal oxygen uptake (VO2max), 60 min.d-1, 5 d.wk-1) on the anaerobic capacity (the maximal accumulated oxygen deficit) and VO2max was evaluated. After the training, the anaerobic capacity did not increase significantly ($P > 0.10$), while VO2max increased from 53 \pm 5 ml.kg-1 min-1 to 58 \pm 3 ml.kg-1.min-1 ($P < 0.01$) (mean \pm SD). Second, to quantify the effect of high-intensity intermittent training on energy release, seven subjects performed an intermittent training exercise 5 d.wk-1 for 6 wk. The exhaustive intermittent training consisted of seven to eight sets of 20-s exercise at an intensity of about 170% of VO2max with a 10-s rest between each bout. After the training period, VO2max increased by 7 ml.kg-1.min-1, while the anaerobic capacity increased by 28%. In conclusion, this study showed that moderate-intensity aerobic training that improves the maximal aerobic power does not change anaerobic capacity and that adequate high-intensity intermittent training may improve both anaerobic and aerobic energy supplying systems significantly, probably through imposing intensive stimuli on both systems.

PMID: 8897392 [PubMed - indexed for MEDLINE]

MeSH Terms

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Training effects on endurance capacity [J Strength Cond Res. 2009]

Aerobic and anaerobic changes with high-intensity interval training [J Strength Cond Res. 2011]

Review Ventilatory threshold and its determinants [Med Sci Sports Exerc. 1989]

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High-intensity intermittent exercise and fat loss [J Obes. 2011]

High-intensity interval training improves metabolic health [Eur J Appl Physiol. 2010]

Physical therapists as providers of exercise prescription [Cardiopulm Phys Ther J. 2008]

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boot camp

n.

1. A training camp for military recruits.
2. A correctional facility that uses the training techniques applied to military recruits to teach usually youthful offenders socially acceptable patterns of behavior.

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boot camp

n

1. *US slang* a basic training camp for new recruits to the US Navy or Marine Corps
2. (Sociology) a centre for juvenile offenders, with a strict disciplinary regime, hard physical exercise, and community labour programmes

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boot' camp

n.

a camp for training U.S. Navy or Marine recruits.

[1940–45, *Amer.*]

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Noun 1. boot camp - camp for training military recruits

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[armed forces](#), [armed services](#), [military](#), [military machine](#), [war machine](#) - the military forces of a nation; "their military is the largest in the region"; "the military machine is the same one we faced in 1991 but now it is weaker"



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boot camp *noun*

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- 1 : a navy or marine corps camp for basic training
 - 2 : a disciplinary facility or program in which young offenders are forced to participate in a rigidly structured routine
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First Known Use of BOOT CAMP

1916

Rhymes with BOOT CAMP

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Sergiusz Patela · Wroclaw, Poland

I have found this announcement: "Optical Fibre, and FTTX Bootcamps forming NOW. This Bootcamp is designed to take the fibre optic and outside plant staff of your company through an intensive program that will drill down to the specifics of these complimenting technologies."

I wonder, when training course/facility should be called school or workshop, an when it becomes "a bootcamp".

Reply · 1 · Like · Follow Post · April 2, 2011 at 1:00am



Bootcamp Matt Lyons · Works at Royal Marines Commando

Totally agree.I actually run Bootcamps,im an ex Royal Marine Commando and it pisses me off no end when companies,especially other "bootcamps" advertising themselves so,say we are non-military run!Look up the definition!!

Reply · 1 · Like · May 3, 2011 at 2:37pm



Fernando Reeve · Follow Following · Top Commenter

There is nut case in southamerica that registered the word Bootcamp with a K instead of the C and he believes that nobody can use the word Bootcamp anymore, not even associated with the word Fitness, such as "Whatever name" Fitness Bootcamps because it is in his same line of business, and that the word Bootcamp sounds the same with his Bootcamp with K. Can he do that with a word that is almost 100 year old and pride and part of the DNA of our honorable US and UK soldiers?

Reply · Like · October 23, 2012 at 9:53pm



Posting as Theresa Hearing Cope (Not you?)



Marta Carlisano · Indiana University

Is it one word or two? Or does it not matter?

Reply · 2 · Like · Follow Post · July 19, 2011 at 1:23pm



Posting as Theresa Hearing Cope (Not you?)



Gloria Mazure · 2009-1974: Times Union, Albany: design, layout and copy editor; freelance travel writer and book reviewer for Times Union at Albany Times Union

boot camp-style rehab... how many hyphens?

Reply · Like · Follow Post · August 4, 2011 at 6:33am



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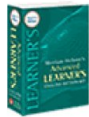


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boot camp

noun U.S. Navy, Marines.
a camp for training recruits.

Origin:
1940-45, Americanism

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World English Dictionary

boot camp

— n
1.slang (US) a basic training camp for new recruits to the US Navy or Marine Corps
2.a centre for juvenile offenders, with a strict disciplinary regime, hard physical exercise, and community labour programmes

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"In short, camp mocks bad taste;
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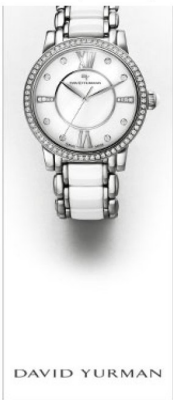
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Boot camp is always a great word to know.

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So is **lollapalooza**. Does it mean:

- ☐ a children's mummer's parade, as on the Fourth of July, with prizes for the best costumes.
- ☐ an extraordinary or unusual thing, person, or event; an exceptional example or instance.

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Word Origin & History

Etymonline

boot camp

1944, U.S. Marines slang, said to be from boot as slang for "recruit," which supposedly dates from the Spanish-American War and is a synecdoche from boots, leggings worn by U.S. sailors.

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superfluity of ineffective gestures—finger-twitching and hip-switching, hand-rubbing or hip-protruding—we label the sum total as camp. Mae West, whose nasally provocative delivery, eye-rolling, lip-pursing, and pelvic tics parody the conventional invitation to dalliance, is never out of control and is camp, pure and simple.... Camp was also the stock-in-trade of Carmen Miranda, whose retina-searing Technicolor get-ups, skyscraper headdresses bearing a season's fruit harvest, clomping platform shoes and garbled English projected in a voice that could be heard on Mars all came together beautifully in her campy personification of Exaggeration. Had we been blessed with the Brazilian Bombshell's own blazing interpretation of Joan of Arc, the grotesque, if fascinating, result would surely have been kitsch."

-Curtis F. Brown



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boot camp - definition

NOUN [COUNTABLE]



Pronunciation

Word Forms

- 1 a place where young criminals are treated very strictly and have to do hard physical exercise

Thesaurus entry for this meaning of boot camp

- 2 a camp for training people who have just joined the US armed forces

Thesaurus entry for this meaning of boot camp

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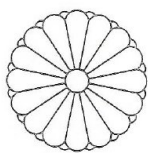
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国際登録第1107006号
(INTERNATIONAL REGISTRATION NUMBER)

商標
(THE MARK)

TABATA BOOTCAMP

指定商品又は指定役務並びに商品及び役務の区分
(LIST OF GOODS AND SERVICES)

41 Educational services, namely, conducting live classroom and on-line seminars and workshops for introducing professional fitness instructors to training protocols in the field of fitness.

商標権者
(OWNER OF
THE TRADEMARK RIGHT)

SAVVIER, LP
Suite 130, 5790 Fleet Street
Carlsbad CA 92008 (United
States of America)

国際登録日
(INTERNATIONAL REGISTRATION DATE)

09.01.2012

登録日
(REGISTRATION DATE)

平成24年11月 9日 (November 9, 2012)

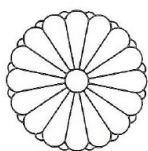
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(COMMISSIONER, JAPAN PATENT OFFICE)

深野弘行





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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Trademark Application Serial No. 85/365741)	Examiner: Edward Fennessy
Applicant: Savvier, LP)	Docket No: 21542.0373T1US
Mark: TABATA BOOTCAMP)	Filing Date: July 7, 2011

DECLARATION OF CARL FOREST

1. I, Carl Forest, am a partner in Patton Boggs LLC, which is representing Savvier LP in the above matter. All statements made herein of my own knowledge are true, and all statements made on information and belief are believed to be true.

2. I am over the age of 18 and have personal knowledge of the facts stated herein and could and would competently testify to those facts if requested to do so.

3. I submit this Declaration to present to the Examiner facts concerning the registerability of the above-identified mark in an authenticated manner.

4. In a previous Office Action in this or a related trademark case, the Examiner requested that we obtain the permission of Isumi Tabata to use his name in association with the Savvier, LP trademark.

5. Sometime in 2011, I called Professor Tabata at Ritsumeikan University and spoke with him.

6. I identified myself to Professor Tabata and informed Professor Tabata that one of my clients would like to use his name in connection with one of its services. I also informed Professor Tabata that my client would pay him appropriately for use of his name.

7. I further informed Professor Tabata that my client would like him to perform some research on the effectiveness of one of the specific protocols that is presented in classes taught by my client.

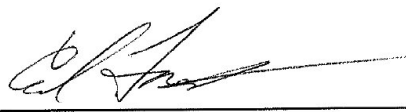
8. Professor Tabata told me that, contrary to belief, he had not invented the so-called Tabata method of exercise, and, therefore, he had no interest in being paid for use of his name.

9. I tried to persuade Professor Tabata to allow us to pay him to use his name. His English was not perfect, and the connection was not great, but after ten minutes of discussion, I understood that Professor Tabata thought it would be inappropriate on his part to accept payment for use of the term Tabata.

10. Attached as Attachment A to this Declaration is a page from the Ritsumeikan University web site.

11. I note that in the third paragraph, Professor Tabata states that "Although Coach Irisawa pioneered the idea, it somehow became named after me (laughs)". This is consistent with my understanding that Professor Tabata does not claim any right in the name Tabata for the training regime which involves a rotation of short bursts of maximum effort followed by short periods of rest.

12. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001, and that such willful false statements and the like may jeopardize the validity of the application or document or any registration resulting therefrom.

Date: 05/13/2013 By: 
Carl Forest

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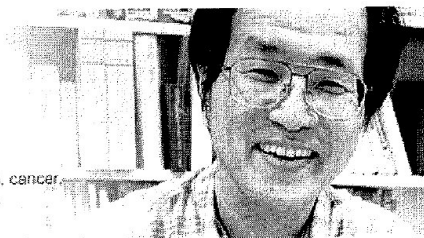
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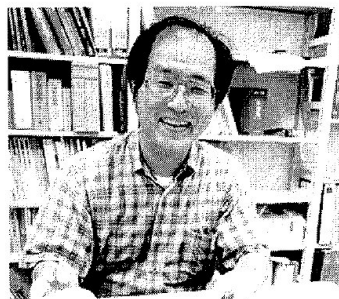
Interview with

the Founder of the World-Renowned Tabata Protocol

Professor Tabata, well known for his research into high-intensity intermittent training, is a former researcher at the National Institute for Health and Nutrition and currently a professor and researcher at Ritsumeikan University's newly established Faculty of Sport and Health Science. Please visit the [Faculty of Sport and Health Science's English Website](#) for more details.

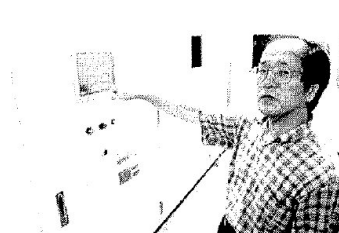
Could you tell us a little bit about your background?

Aside from my education in Japan, I studied for two years in Norway, and for a year in the United States at Washington University in St Louis. During this time I learned a variety of analysis techniques that I could use to develop my own research in sport and health science. Later on, I worked as a training coach for the Japanese speed skating team. At the time, the head coach had developed a training technique where the athletes would exercise in short bursts of high-intensity, and I was asked to analyze the effectiveness of this training regime. Now that I am at Ritsumeikan I can contribute to furthering research into such regimes, since my former position at the National Institute for Health and Nutrition did not allow for a great amount of freedom in researching this subject.



You are perhaps most famously known for the "Tabata Protocol," could you explain a little about this training regime's origin and characteristics?

During my time working with the Japanese speed skating team, the head coach, Mr. Irisawa Koichi, had me analyze the effectiveness of his training regime that involved a rotation of short burst of maximum effort followed by short periods of rest. Although Coach Irisawa pioneered the idea, somehow it became named after me (laughs). The current regime consists of repetitions of 20 seconds of intense work, followed by 10 seconds of rest. This means that, excluding warming up and cooling down, the exercise can be completed in only 4 minutes if repeated 8 times, more than enough to make even a fit person exhausted. The idea has become bigger than I imagined and now if you search this on Google, you will get about 200,000 hits.



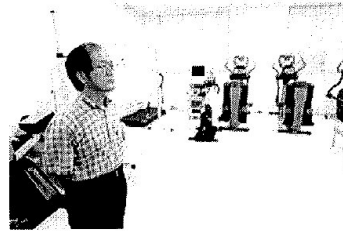
EXHIBIT

"A"

In general there were two types of exercises, low-intensity exercises for longer periods of time that improved endurance, and exercises such as sprints that improve your ability to sprint, but have no effect on aerobics or endurance. In contrast, the Tabata Protocol draws on the advantages of each.

One of the papers you contribute to, entitled “Metabolic Profile of High Intensity Intermittent Exercises,” has been cited over 100 times in academic journals, and been referenced in popular American textbooks. Why do you think this training regime has become so extraordinarily popular?

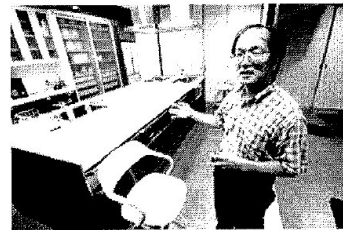
Originally I thought this type of training was just for speed skaters or other highly motivated athletes because it is very painful and tiring. However, I found that there were groups of people interested in building muscle and therefore doing short high-intensity exercises that trained their muscle, but not those exercises that improved their aerobic training. When this regime came along, they began to realize they could train both at the same time. Moreover, this exercise takes just a few minutes.



I found this exercise can improve the aerobics and aerobic metabolism of athletes, but I must continue to collect data. Many people theorize its positive effects, but we don't absolutely know for sure, thus I came to Ritsumeikan to further the body of research into such exercises.

How do the new facilities help with your research?

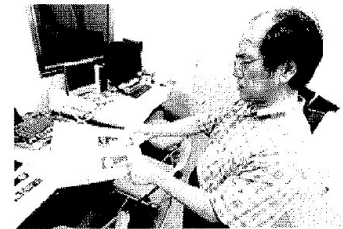
One example would be a chamber in our building that measures oxygen intake. Normally this would be done using a small hose and mouthpiece, but here we have a large room that acts essentially as a big mouthpiece. Air flows constantly through this chamber, allowing for constant measurements of the consumption of oxygen, and the output of carbon dioxide. Here we can measure the difference of consumption over a longer period of time in an environment that's comfortable for the test subject. Often textbooks say that when you do low-intensity exercises you can consume more fat, but when you do high-intensity exercises you consume primarily carbohydrates. My plan is first to have subjects perform the exercise, then have them rest in this room and measure differences in energy consumption in different states. Research subjects often spend some time here, eat dinner and then stay overnight, remaining until about noon the next day. Since they don't have to constantly wear a mask it's much easier on them.



In addition to this chamber, we have rooms that can become hypoxic, where less oxygen is available, or hyperoxic, where oxygen is increased. Here we are capable of testing how this affects the performance of athletes.

In addition to affecting athletes, what kind of research have you done that has implications for the general public?

One subject I am interested in is the production of glucotransporter 4, a protein found in skeletal muscles, and how it can benefit diabetes patients. When one exercises, this glucotransporter moves from inside the muscle to the membrane of the muscle, facilitating the entry of glucose into the muscle. This is important for diabetes patients as it can improve their glucose metabolism, hence why diabetes patients are encouraged to exercise. In my research I have been using rats to study the effects of the Tabata Protocol on the movement of glucotransporter 4 by having the rat perform 20 seconds of intensive swimming, allowing ten seconds of rest, and repeating this as necessary. What we found in these trials is that high-intensity exercises are also effective for producing more glucotransporter 4. In one study it was shown that people with twenty-one days of bed rest decreased the glucotransporter 4 in their thigh muscles by twenty percent whereas those who performed just ninety seconds of resistance training daily showed an increase of twenty percent. My colleagues also found that in diabetic patients this kind of training increases glucotransporter 4 and glucose metabolism.



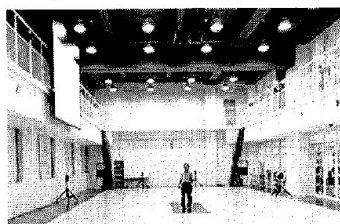
For the aging population in Japan, how would these kinds of exercises be applicable?

Such high-intensity exercise is exhausting, so it's not good for those simply interested in general promotion of their health. We had another exercise where we made a rat swim only three times only and found glucotransporter 4 increased the same amount, whether the exercise was repeated three times or eight. I think this is because the biochemical signal for an increase of glucotransporter 4 is based on the activity of enzymes which increased to the

same level regardless of the decrease in repetitions. Now I'm trying to do lower intensity tests on humans as well.

In other words, you have first performed tests on animals, and now you are moving onto humans?

Since the exercise is a little bit dangerous for those other than seasoned athletes, I would advise beginners to start at a low intensity, and stay within their comfort zone. Once they feel they are getting stronger, they can then increase the intensity little by little.



Do you have any words for international students interested in your research?

We have plans to recruit many international students, particularly from East Asia, but I also hope that some post-doctoral students will come and join us as well. We hope to learn alongside such new students and we hope they will learn a lot from being here as well.

PAGE UP

www.ritsumei.ac.jp/eng/html/research/areas/feat-researchers/interview/izumi_t.html/

Medicine & Science in Sports & Exercise:

[March 1997 - Volume 29 - Issue 3 - pp 390-395](#)

Applied Sciences: Physical Fitness and Performance

Metabolic profile of high intensity intermittent exercises

**TABATA, IZUMI; IRISAWA, KOUICHI; KOUZAKI, MOTOKI;
NISHIMURA, KOUJI; OGITA, FUTOSHI; MIYACHI, MOTOHIKO**



Author Information

Department of Physiology and Biomechanics, National Institute of Fitness and Sports, Kanoya City, Kagoshima Prefecture, 891-23 JAPAN; and The Japanese National Speed Skating Team, National Skating Union of Japan, Kishi Memorial Hall, Shibuya City, Tokyo 150, JAPAN

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Address for all correspondence: I. Tabata, Ph.D., Laboratory of Exercise Physiology, Division of Health Promotion, National Institute of Health and Nutrition, 1-23-1 Toyama, Shinjuku City, Tokyo 162, Japan. E-mail: tabata@nih.go.jp.

Present address for K. Nishimura: General Research and Development Section, Product Development Department, Moon-Star Chemical Corporation, Kurume City, Fukuoka Prefecture, 830-91 Japan.

Present address for M. Kouzaki: Graduate School, University of Tokyo, 3-8-1 Komaba, Meguro City, Tokyo, 153 Japan.

Present address for M. Miyachi: Department of Health and Sports Sciences, Kawasaki University of Medical Welfare, 288 Matsushima, Kurashiki City, Okayama Prefecture, 701-01 Japan.



Abstract

To evaluate the magnitude of the stress on the aerobic and the anaerobic energy release systems during high intensity bicycle training, two commonly used protocols (IE1 and IE2) were examined during bicycling. IE1 consisted of one set of 6-7 bouts of 20-s

exercise at an intensity of approximately 170% of the subject's maximal oxygen uptake ($\dot{V}O_{2\max}$) with a 10-s rest between each bout. IE2 involved one set of 4-5 bouts of 30-s exercise at an intensity of approximately 200% of the subject's $\dot{V}O_{2\max}$ and a 2-min rest between each bout. The accumulated oxygen deficit of IE1 ($69 \pm 8 \text{ ml} \cdot \text{kg}^{-1}$, mean \pm SD) was significantly higher than that of IE2 ($46 \pm 12 \text{ ml} \cdot \text{kg}^{-1}$, $N = 9$, $p < 0.01$). The accumulated oxygen deficit of IE1 was not significantly different from the maximal accumulated oxygen deficit (the anaerobic capacity) of the subjects ($69 \pm 10 \text{ ml} \cdot \text{kg}^{-1}$), whereas the corresponding value for IE2 was less than the subjects' maximal accumulated oxygen deficit ($P < 0.01$). The peak oxygen uptake during the last 10 s of the IE1 ($55 \pm 6 \text{ ml} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$) was not significantly less than the $\dot{V}O_{2\max}$ of the subjects ($57 \pm 6 \text{ ml} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$). The peak oxygen uptake during the last 10 s of IE2 ($47 \pm 8 \text{ ml} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$) was lower than the $\dot{V}O_{2\max}$ ($P < 0.01$). In conclusion, this study showed that intermittent exercise defined by the IE1 protocol may tax both the anaerobic and aerobic energy releasing systems almost maximally.

During high intensity exercise, ATP is resynthesized by both aerobic and anaerobic processes [\(17,18\)](#). The ability to resynthesize ATP may limit performance in many kinds of sports. Thus, the focus for training of athletes participating in sports involving high intensity exercise should be on improving the athletes' ability to release energy both aerobically and anaerobically. It is conceivable that the more demanding the training is the greater the fitness benefit will be. In this study we were interested in how commonly used specific exercises tax the anaerobic and aerobic energy release systems.

The aerobic energy release has traditionally been determined by measuring the oxygen uptake during exercise [\(1,8,10,12,13\)](#). By measuring the oxygen uptake and comparing that value with the subjects' maximal oxygen uptake ($\dot{V}O_{2\max}$), the stress on the aerobic energy release can be evaluated during training. The anaerobic energy release, depending on phosphocreatine breakdown and lactate production, is probably limited by lactate accumulation in the working muscles [\(18\)](#).

Until recently, methods for quantifying the anaerobic energy release have been inadequate, and therefore little information is available on the anaerobic energy release during exercise. We have proposed that the accumulated oxygen deficit, first introduced by Krogh and Lindhard [\(11\)](#), is an accurate measure of the anaerobic energy release during continuous exercise such as treadmill running [\(16,19\)](#) and bicycling [\(7,17\)](#). This principle may also allow quantification of the anaerobic energy release during high intensity exercises. Therefore, the metabolic profiles of high intensity exercise may also be evaluated by determining the accumulated oxygen deficit during high intensity exercises and comparing that entity with the subjects' anaerobic capacity [\(16,20\)](#).

Previously reported profiles of high intensity exercises were limited to exhausting continuous exercises [\(16,20\)](#). We have studied metabolic profiles of high-intensity intermittent exercises that have been used frequently as training exercise by top athletes involved in high intensity exercise lasting 1 min or less. Two different intermittent exercise protocols that are regularly used by coaches of top level Japanese speed skaters have been compared.

MATERIALS AND METHODS

Subjects. Nine young male students majoring in physical education volunteered for the study (Table 1). They were members of varsity tennis, baseball, basketball, football (soccer), or swimming teams. After receiving an explanation of the purposes, potential benefits, and risks associated with participating, the students gave their written consent.

#	Age (yr)	Height (cm)	Weight (kg)	$\dot{V}O_{2max}$ (ml·kg ⁻¹ ·min ⁻¹)	Anaerobic Capacity (ml·kg ⁻¹)
9	22 ± 1	171 ± 6	69.3 ± 4.5	57 ± 6	68 ± 9

Values are means ± SD. $\dot{V}O_{2max}$: the maximal oxygen uptake.
Anaerobic capacity: maximal accumulated oxygen deficit.

Table 1

The protocol for the experiment and the procedures involved were approved by the Ethics Committee at the National Institute of Fitness and Sports in Kanoya.

Protocol. All experiments as well as pretests were conducted on a mechanically braked cycle ergometer (Monark, Sweden) at 90 rpm. Each test was preceded by a 10-min warm-up at approximately 50% of the subject's $\dot{V}O_{2max}$.

Pretest. For each subject the oxygen uptake was measured during the last 2 min of six to nine different 10-min bouts of exercise at constant power. The power used during each bout ranged between 39 and 87% of the subject's $\dot{V}O_{2max}$. In addition, the power required to exhaust each subject in 2-3 min was established. These pretests were carried out on 3-5 separate days.

Intermittent exercises. Two intermittent exercise protocols (IE1 and IE2) were compared in terms of aerobic and anaerobic energy release.

The protocol for IE1 was bouts of 20-s exercise carried out at an intensity of 170% of the subject's $\dot{V}O_{2max}$. Each bout was separated by 10-s rest, and the procedure was repeated 6-7 times to exhaustion. The protocol for IE2 was bouts of 30-s exercise carried out at an intensity of 200% of the subject's $\dot{V}O_{2max}$. Each bout was separated by 2 min of rest, and the procedure was repeated 4-5 times to exhaustion. For both protocols, the criterion for exhaustion was that the subjects were unable to maintain the pedaling frequency at or above 85 rpm near the end of the bout.

Expired gas was collected continuously every 10 s by Douglas bags during the exercise and rest periods to measure the oxygen uptake.

Methods

$\dot{V}O_{2max}$. After a linear relationship between the exercise intensity and the steady-state oxygen uptake had been determined in the pretests, the oxygen uptake was measured for the last two or three 30-s intervals during several bouts of supramaximal intensity exercise that lasted for 2-4 min. The highest $\dot{V}O_2$ observed was taken as the subject's $\dot{V}O_{2max}$ ⁽²²⁾.

Anaerobic capacity. Anaerobic capacity, taken as the maximal accumulated oxygen deficit during 2-3 min of exhaustive bicycle exercise, was determined according to the method of Medbø et al. ⁽¹⁶⁾. The exercise intensity chosen to allow the subjects to reach exhaustion

within the desired duration (2-3 min) was established on pretests. To determine the anaerobic capacity, the subjects exercised at the preset power to exhaustion.

Methods of analysis. Fractions of oxygen and carbon dioxide in the expired air were measured by a mass spectrometer (MGA-1100, Perkin-Elmer, Norwalk, CT). The gas volume was measured by a gasometer (Shinagawa Seisakusho, Shinagawa, Tokyo, Japan).

Calculations. For each subject linear relationships between the oxygen demand and power ($r = 0.998 \pm 0.001$) were established from the measured steady-state oxygen uptake at different powers during the pretests. The Y-intercept, the slope, and the error of regression ($S_{y,x}$) were $6.0 \pm 0.9 \text{ ml} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$, $218 \pm 7 \mu\text{l} \cdot \text{J}^{-1}$, and $0.7 \pm 0.1 \text{ ml} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$, respectively.

Accumulated oxygen deficit during 2-3 min of exhaustive exercise. The oxygen demand during the 2-3 min exhausting exercise was estimated by linear extrapolations of these relationships to the power used during the experiment. The accumulated oxygen demand was taken as the product of the estimated oxygen demand and the duration of the exercise, while the accumulated oxygen uptake was taken as the measured oxygen uptake integrated over the duration of exercise. The accumulated oxygen deficit was taken as the difference between these two entities.

Accumulated oxygen deficit during exhaustive intermittent exercise. For the intermittent exercise the oxygen demand during exercise was taken from the linear extrapolations of the oxygen demand versus power relationship established during the pretest (Fig. 1). The oxygen deficit during each bout of the exercise was taken as the difference between the oxygen demand and the oxygen uptake during the intermittent exercise. The excess post-exercise oxygen consumption (EPOC), which reflects a recovery of the body's oxygen stores and possibly some resynthesis of phosphocreatine during the rest periods, was calculated to be the difference between measured oxygen uptake during the rest periods and resting oxygen demand (2,3). The oxygen demand at rest between each bout of the exercise was set equal to the resting oxygen uptake measured before the experiment. Finally, the accumulated oxygen deficit during exhaustive intermittent exercise was calculated to be the difference between the sum of the oxygen deficit during each bout of the intermittent exercises and the sum of EPOC during the rest period between bouts of the intermittent exercise.

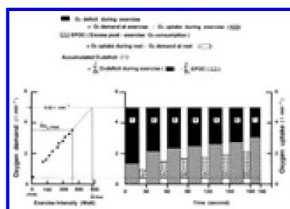


Figure 1-Principle o...

Statistics. Values are shown as means \pm SD. The data were statistically analyzed using a repeated-measures one-way ANOVA to determine the degree of significance among the groups. The significance level for all comparisons was set at $P < 0.05$.

RESULTS

Six of the nine subjects completed the sixth bout of the exercise at the intensity of the subjects' 170% $\dot{V}O_{2\max}$ (IE1 protocol), while the other three subjects became exhausted during the seventh bout of the exercise. For the IE2 protocol, seven subjects completed the fourth bout of exercise at the intensity of the subject's 200% $\dot{V}O_{2\max}$, while the other two subjects became exhausted during the fifth set of the exercise. Total exercise time was not different between the two protocols (IE1: 126 ± 6 s, IE2: 126 ± 10 s). The total work output for IE1 (1.05 ± 0.16 kJ \cdot kg $^{-1}$) was significantly less than that of IE2 (1.26 ± 0.15 kJ \cdot kg $^{-1}$) ($P < 0.001$).

The accumulated oxygen deficit of IE1 was significantly higher than that of IE2 (69 ± 8 ml \cdot kg $^{-1}$ versus 46 ± 12 ml \cdot kg $^{-1}$, respectively, $P < 0.01$) (Fig. 2). The accumulated oxygen deficit of IE1 was not significantly different from the anaerobic capacity of the subjects, whereas the accumulated oxygen deficit of IE2 was only 67% of the anaerobic capacity ($P < 0.01$).

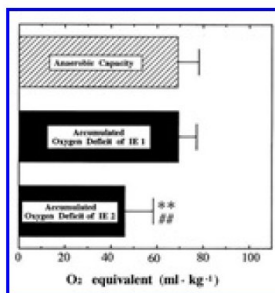


Figure 2-Accumulated...

The peak oxygen uptake during the last 10 s of the IE1 (55 ± 6 ml \cdot kg $^{-1}\cdot$ min $^{-1}$) was not statistically different from the subjects' $\dot{V}O_{2\max}$ (Fig. 3). On the other hand, the peak oxygen uptake of the last 10 s of IE2 (47 ± 8 ml \cdot kg $^{-1}\cdot$ min $^{-1}$) was much less than the $\dot{V}O_{2\max}$ ($P < 0.01$).

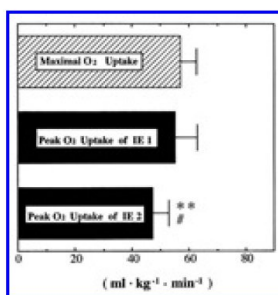


Figure 3-Peak oxygen...

DISCUSSION

The main finding of this study was that, of the two intermittent exercise protocols examined, both the accumulated oxygen deficit and the oxygen uptake were close to the maximum obtainable for IE1 but not for IE2.

We have shown that the accumulated oxygen deficit measures the anaerobic energy release during continuous high-intensity bicycling⁽¹⁷⁾. To our knowledge, a corresponding approach has not been used until now for intermittent high-intensity bicycling. In the present study, the accumulated oxygen deficit for repeated bouts of exercise was calculated by assuming that in the recovery periods between each bout the oxygen uptake in excess of the resting value (EPOC^(2,3)) is used for recovery of energy stores at a 1:1 ratio. This is likely to be correct for restoring the oxygen stores and for the resynthesis of phosphocreatine. First, near infrared spectroscopy study of HbO₂, a method of evaluating changes in oxygen level in tissue, showed that time constant of this measure calculated from the values obtained after exhausting exercise is approximately 30 s⁽¹⁴⁾. Therefore, in IE2 the stores may have been fully replenished during each 2-min rest and that it is used over again during each of the exercise bouts thereafter. Consequently, repeated use of stored oxygen is important for the IE2 but not for the IE1. Second, Bogdanis et al.⁽⁴⁾ showed that there was a significant phosphocreatine recovery within 2 min of rest. If the concentrations of phosphocreatine and ATP in muscle fluctuate by approximately 10 mmol·kg⁻¹ wet muscle mass during each of the 30-s bouts of IE2, the phosphocreatine concentration may have nearly recovered to the pre-exercise value, while phosphocreatine in muscle may not have recovered fully during the 10-s rest in IE1 protocol. It should be noted that the calculation may not be correct if resynthesis of lactate to glycogen takes place during each rest period since this process takes 2-3 times more energy as ATP than what is released when glycogen is broken down to lactate. However, resynthesis of glycogen takes from many minutes to more than 1 h and is probably of little importance for a rest period lasting 10 s or 2 min. For example, Hermansen and Vaage⁽⁹⁾, studying the recovery of muscle glycogen after exhausting bouts of exercise, found no resynthesis during the first 5 min of recovery. Therefore, calculating the accumulated oxygen deficit for repeated bouts of exercise as was done here should probably reflect the net anaerobic energy release during the intermittent bouts of high-intensity bicycling.

In this study we have used the accumulated oxygen deficit as a measure of the net anaerobic energy release during high intensity bicycling, and we have compared the entities obtained during different types of exercise. The reasoning behind our approach follows. During a 2-3 min exhausting bout of exercise, there is a breakdown of phosphocreatine and production of lactate, and exhaustion is probably reached when the muscle lactate concentration reaches about 30 mmol·kg⁻¹ wet muscle mass^(18,23). During intermittent exercise lactate is produced and phosphocreatine broken down during each bout. In the rest period, there is no further lactate production, but some phosphocreatine may be resynthesized by aerobic processes, at least during the 2-min rest period of IE2⁽⁴⁾. It is conceivable that as the muscle lactate concentration reaches a certain level the subjects are no longer able to exercise at the preset power and are thus exhausted. Interestingly, the accumulated oxygen deficit of IE1 equaled the subjects' accumulated maximal oxygen deficit. This observation may suggest that at exhaustion the muscle lactate concentration was as high as at the end of the 2-3 min exhausting bout.

As in the previous studies^(16,17), the oxygen demand at a high power was extrapolated from a linear relationship between power and the steady-state oxygen uptake at moderate intensities. Recently, Zoladz et al.⁽²⁴⁾ reported nonlinear effects at high powers. However, as shown in [Figure 1](#), our data clearly show that the steady-state oxygen uptake increased linearly by power within the range measured (39 and 87% of the subject's $\dot{V}O_{2max}$).

Therefore, it is probably reasonable to estimate energy demand at the high intensity from the regression line between power and oxygen uptake established at moderate intensities.

For most physical properties the more demanding the training is the greater the improvement of the property. Therefore, we were interested in how much the current training exercises stress the anaerobic and aerobic energy releasing systems by comparing accumulated oxygen deficit and oxygen uptake during the exercise to the anaerobic capacity and the $\dot{V}O_{2\max}$, respectively. The results from this investigation showed that the accumulated oxygen deficit during IE1 equaled the anaerobic capacity and thus seemed to stress the anaerobic energy system maximally. Furthermore, it recruited the oxygen delivery system almost maximally since the oxygen uptake measured during the last part of IE1 was not different from the $\dot{V}O_{2\max}$. On the other hand, neither the anaerobic nor aerobic systems seemed to be fully stressed during IE2. Therefore, for the purpose of improving both the anaerobic and aerobic energy releasing systems, IE1 seems superior to IE2.

We evaluated the two training protocols by comparing the net anaerobic energy release during the exercises. However, it may also be interesting to compare the total anaerobic energy release during the exercise because training effects may be dependent on the total anaerobic energy released during training. The calculated total oxygen deficit during exercise of IE2 ($154.4 \pm 16.4 \text{ ml}\cdot\text{kg}^{-1}$) was greater than that of IE1 ($99.5 \pm 12.1 \text{ ml}\cdot\text{kg}^{-1}$) ($P < 0.001$). Therefore, in terms of total anaerobic energy release, IE2 seems more demanding than IE1. It could be argued that this view is very important when we consider metabolic profile of training. However, since Medbø and Burgers⁽¹⁵⁾ showed that training with more oxygen deficit (their group A) was not more effective on the anaerobic capacity than the training with less oxygen deficit during training (their Group B), the total anaerobic energy released during training might not be a decisive factor to determine the effect of training on anaerobic capacity. Future training studies should be done to study whether the net oxygen deficit or the total anaerobic energy release during the training exercise is more effective factor than each other on anaerobic capacity.

High-intensity intermittent training has been shown to be a very effective means of increasing the maximal oxygen uptake⁽⁶⁾. In line with this, we have recently shown that 6 wk of training using IE1 protocol may increase the maximal oxygen uptake by 13%⁽²¹⁾. This increase is similar to that expected for intermittent training according to Fox⁽⁶⁾. It is conceivable that it is not the exercise intensity *per se* but the high oxygen uptake that is usually found during high-intensity intermittent training that results in the improved maximal oxygen uptake. If this interpretation is correct, IE1 may be one of the best possible training protocols for improving the aerobic energy releasing system since the oxygen uptake reached the maximal value. On the other hand, IE2 does not seem to stress the oxygen delivery system maximally, and this protocol may therefore be less effective than IE1 for improving the maximal oxygen uptake. However, we are not aware of any study examining the actual effect of training according to this protocol on the maximal oxygen uptake.

Each bout during IE2 was carried out at a higher intensity and for a longer duration than the bouts in IE1. Therefore, it could be hypothesized that the oxygen uptake during IE2 should be at least as high as during IE1. However, during the relatively long rest periods of 2 min during IE2 the oxygen uptake fell considerably. At the onset of a new exercise bout there is a delay before the oxygen uptake increases and approaches the maximum.

Training effects may be dependent on the total work done during training. With this view, it could be hypothesized that IE2 might be more effective than IE1 because the total work done during IE2 protocol was greater than of IE1. However, since the improvement of $\dot{V}O_{2\max}$ after intermittent running training is related not to running distance but to exercise intensity (5), it may be reasonable to assume that the high oxygen uptake obtained during some kinds of intermittent training leads to the significant stress on the aerobic system and results in the large increase in the maximal oxygen uptake.

On the other hand, since the moderate intensity endurance training, during which much more work is done in one training session than in a session following either IE1 or IE2 protocol, has no influence on the anaerobic capacity (21), the total work *per se* may not be an important parameter that predicts improvement of the anaerobic system after specific training regimens.

Many commonly used training regimens are based on little scientific evidence. We have, therefore, examined two different intermittent exercise protocols from the viewpoints of maximal aerobic power and the accumulated oxygen deficit. Our data suggest that one protocol seems superior to the other since IE1 appears to stress both the aerobic and anaerobic energy releasing systems maximally, while IE2 did not. It may therefore recommend that protocol IE1 is used rather than IE2. Our approach may be used for evaluating other training.

REFERENCES

1. Åstrand, P.-O. and B. Saltin. Oxygen uptake during the first minutes of heavy muscular exercise. *J. Appl. Physiol.* 16:971-976, 1961.
2. Bahr, R., I. Ingnes, O. Vaage, E. A. Newsholm, and O. M. Sejersted. Effect of duration of exercise on excess-post exercise oxygen consumption. *J. Appl. Physiol.* 62:485-490, 1987.
3. Bahr, R., O. Gronnerod, and O. M. Sejersted. Effect of supramaximal exercise on excess postexercise O_2 consumption. *Med. Sci. Sports Exerc.* 24:66-71, 1992.
4. Bogdanis, G. C., M. E. Nevill, L. H. Boobis, H. K. Lakomy, and A. M. Nevill. Recovery of power output and muscle metabolites following 30 s of maximal sprint cycling in man. *J. Physiol.(Lond.)* 482:467-480, 1995.
5. Fox, E. L., R. L. Bartels, C. E. Billings, D. K. Mathews, R. Bason, and W. M. Webb. Intensity and distance of interval training programs and changes in aerobic power. *Med. Sci. Sports* 5:18-22, 1973.
6. Fox, E. Sprint endurance training: methods and effects. In: *Sport Physiology*. Philadelphia: WB Saunders, 1979, pp. 192-241.
7. Gastin, P. B. and D. L. Lawson. Influence of training status on maximal accumulated oxygen deficit during all-out cycle exercise. *Eur. J. Appl. Physiol.* 69:321-330, 1994.

8. Hermansen, L. Oxygen transport during exercise in human subjects. *Acta Physiol. Scand.* (Suppl.) 399, 1973.
9. Hermansen, L. and O. Vaage. Lactate disappearance and glycogen synthesis in human muscle after maximal exercise. *Am. J. Physiol.* 233:E422-E429, 1977.
10. Karlsson, J. and B. Saltin. Oxygen deficit and muscle metabolites in intermittent exercise. *Acta Physiol. Scand.* 82:115-122, 1971.
11. Krogh, A. and J. Lindhard. The changes in respiration at the transition from work to rest. *J. Physiol. (Lond.)* 53:431-437, 1920.
12. Linnarsson, D., J. Karlsson, L. Fagraeus, and B. Saltin. Muscle metabolite and oxygen deficit with exercise in hypoxia and hyperoxia. *J. Appl. Physiol.* 36:399-402, 1972.
13. Margaria, R., R. D. Oliva, P. E. Di Prampero, and P. Cerretelli. Energy utilization in intermittent exercise of supramaximal intensity. *J. Appl. Physiol.* 26:752-756, 1969.
14. McCully, K. K., S. Iotti, K. Kendrick, et al. Simultaneous *in vivo* measurement of HbO₂ saturation and PCr kinetics after exercise in normal humans. *J. Appl. Physiol.* 77:5-10, 1994.
15. Medbø, J. I. and S. Burgers. Effect of training on the anaerobic capacity. *Med. Sci. Sports Exerc.* 22:501-507, 1990.
16. Medbø, J. I., A.-C. Mohn, I. Tabata, R. Bahr, O. Vaage, and O. M. Sejersted. Anaerobic capacity determined by maximal accumulated O₂ deficit. *J. Appl. Physiol.* 64:50-60, 1988.
17. Medbø, J. I. and I. Tabata. Relative importance of aerobic and anaerobic energy release during short-lasting exhaustive bicycle exercise. *J. Appl. Physiol.* 67:1881-1886, 1989.
18. Medbø, J. I. and I. Tabata. Anaerobic energy release in working muscle during 30 s to 3 min of exhausting bicycling. *J. Appl. Physiol.* 75:1654-1660, 1993.
19. Olsen, H. L., E. Raabo, J. Bangsbo, and N. H. Secher. Maximal oxygen deficit of sprint and middle distance runners. *Eur. J. Appl. Physiol.* 69:140-146, 1994.
20. Scott, C. B., F. B. Roby, T. G. Lohman, and J. C. Bunt. The maximally accumulated oxygen deficit as an indicator of anaerobic capacity. *Med. Sci. Sports Exerc.* 23:618-624, 1991.
21. Tabata, I., K. Nishimura, M. Kouzaki, et al. Effects of moderate intensity-endurance and high intensity-intermittent training on anaerobic capacity and 'VO_{2max}. *Med. Sci. Sports Exerc.*, 28:1327-1330, 1996.
22. Taylor, H. L., E. Buskirk, and A. Henshel. Maximal oxygen intake as an objective measure of cardiorespiratory performance. *J. Appl. Physiol.* 8:73-80, 1955.
23. Withers, B. T., W. M. Sherman, D. G. Claekjl, et al. Muscle metabolism during 30, 60 and 90 s of maximal cycling on an-air braked ergometer. *Eur. J. Physiol.* 63:354-362, 1991.

24. Zoladz, J. A., Rademaker, A. C. H. J., and A. J. Sargeant. Nonlinear relationship between O₂ uptake and power output at high intensities of exercise in humans. *J. Physiol.(Lond.)* 488:211-217, 1995.

ACCUMULATED OXYGEN DEFICIT; ANAEROBIC CAPACITY; MAXIMAL OXYGEN UPTAKE; BICYCLING

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International Journal of Sports Medicine
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10.1007/s00421-007-0540-6

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International Journal of Sports Medicine, 24(4): 291-297.

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Science & Sports

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Gharbi, A; Elabed, K; Latiri, I; Tabka, Z; Zbidi, A

Science & Sports, 25(1): 23-31.

10.1016/j.scispo.2009.05.002

[CrossRef](#)

Journal of Applied Physiology

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Journal of Applied Physiology, 94(2): 733-743.

10.1152/jappphysiol.00079.2002

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Canadian Journal of Applied Physiology-Revue Canadienne De Physiologie Appliquee, 29(3): 227-244.

International Sportmed Journal

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Journal of Sports Science and Medicine
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Journal of Sports Medicine and Physical Fitness
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Sports Medicine, 32(1): 53-73.

Strength and Conditioning Journal
Approaching physical preparation for youth team-sports players
Gamble, P
Strength and Conditioning Journal, 30(1): 29-42.

Scandinavian Journal of Medicine & Science in Sports
Impressive anaerobic adaptations in elite karate athletes due to few intensive intermittent sessions added to regular karate training
Ravier, G; Dugue, B; Grappe, F; Rouillon, JD
Scandinavian Journal of Medicine & Science in Sports, 19(5): 687-694.
10.1111/j.1600-0838.2008.00807.x

[CrossRef](#)

Medicina Dello Sport
Physiological adaptations to 8-week precompetitive training period in elite female judokas
Stojanovic, B; Ostojic, S; Patrik, D; Milosevic, Z

Medicina Dello Sport, 62(4): 415-424.

Medicina Dello Sport

Accumulated oxygen deficit comparison of different high-intensity intermittent exercises at moderate altitude - A descriptive

Ferliche, B; Delgado, M; Alvarez, J

Medicina Dello Sport, 56(2): 85-93.

Annals of Behavioral Medicine

Examining the validity of exercise guidelines for the prevention of morbidity and all-cause mortality

Winett, RA; Carpinelli, RN

Annals of Behavioral Medicine, 22(3): 237-245.

Canadian Journal of Applied Physiology-Revue Canadienne De Physiologie Appliquee

Critical velocity and time spent at a high level of VO₂ for short intermittent runs at supramaximal velocities

Dupont, G; Blondel, N; Lensel, G; Berthoin, S

Canadian Journal of Applied Physiology-Revue Canadienne De Physiologie Appliquee, 27(2): 103-115.

Journal of Sports Medicine and Physical Fitness

Time limit and time at (V) over dot O-2max, during a continuous and an intermittent run

Demarie, S; Koralsztein, JP; Billat, V

Journal of Sports Medicine and Physical Fitness, 40(2): 96-102.

International Journal of Sports Medicine

Neuro-muscular fatigue and recovery dynamics following anaerobic interval workload

Skof, B; Strojnik, V

International Journal of Sports Medicine, 27(3): 220-225.

10.1055/s-2005-865632

[CrossRef](#)

Sports Medicine

Training to enhance the physiological determinants of long-distance running performance? Can valid recommendations be given to runners and coaches based on current scientific knowledge?

Midgley, AW; McNaughton, LR; Jones, AM

Sports Medicine, 37(0): 857-880.

Sports Medicine

Is there an optimal training intensity for enhancing the maximal oxygen uptake of distance runners? Empirical research findings, current opinions, physiological rationale and practical recommendations

Midgley, AW; McNaughton, LR; Wilkinson, M

Sports Medicine, 36(2): 117-132.

Research Quarterly for Exercise and Sport

Specific Circuit Training in Young Judokas: Effects of Rest Duration

Baudry, S; Roux, P

Research Quarterly for Exercise and Sport, 80(2): 146-152.

Medicine and Science in Sports and Exercise
Metabolic profile of high intensity intermittent exercises - Response
Tabata, I
Medicine and Science in Sports and Exercise, 29(9): 1275-1276.

Canadian Journal of Applied Physiology-Revue Canadienne De Physiologie Appliquee
VO2 responses to different intermittent runs at velocity associated with VO(2)max
Millet, GP; Candau, R; Fattori, P; Bignet, F; Varray, A
Canadian Journal of Applied Physiology-Revue Canadienne De Physiologie Appliquee, 28
(3): 410-423.

European Journal of Applied Physiology
Effects of increased intensity of intermittent training in runners with differing VO2 kinetics
Millet, GP; Libicz, S; Borrani, F; Fattori, P; Bignet, F; Candau, R
European Journal of Applied Physiology, 90(): 50-57.
10.1007/s00421-003-0844-0

[CrossRef](#)

Strength and Conditioning Journal
A tactical metabolic training model for collegiate basketball
Taylor, J
Strength and Conditioning Journal, 26(5): 22-29.

International Journal of Sports Medicine
Reproducibility of time at or near VO2max during intermittent treadmill running
Midgley, AW; McNaughton, LR; Carroll, S
International Journal of Sports Medicine, 28(1): 40-47.
10.1055/s-2006-923856

[CrossRef](#)

Sports Medicine
The Maximal Accumulated Oxygen Deficit Method A Valid and Reliable Measure of
Anaerobic Capacity?
Noordhof, DA; de Koning, JJ; Foster, C
Sports Medicine, 40(4): 285-302.

Medicine and Science in Sports and Exercise
Metabolic profile of high intensity intermittent exercises
Gastin, PG
Medicine and Science in Sports and Exercise, 29(9): 1274-1275.

Medicine & Science in Sports & Exercise
[Physiological and Performance Effects of Low- versus Mixed-Intensity Rowing Training](#)
INGHAM, SA; CARTER, H; WHYTE, GP; DOUST, JH
Medicine & Science in Sports & Exercise, 40(3): 579-584.
10.1249/MSS.0b013e31815ecc6a
PDF (139) | [CrossRef](#)
Medicine & Science in Sports & Exercise
[Effects of 4-wk training using Vmax/Tmax on O2max and performance in athletes](#)
SMITH, TP; McNAUGHTON, LR; MARSHALL, KJ

Medicine & Science in Sports & Exercise, 31(6): 892-896.

Medicine & Science in Sports & Exercise

[The Quantity and Quality of Exercise for Healthy Adults](#)

Winett, RA; Carpinelli, RN

Medicine & Science in Sports & Exercise, 31(6): 916-917.

Medicine & Science in Sports & Exercise

[The Quantity and Quality of Exercise for Healthy Adults](#)

Gaesser, GA; Butterfield, GE; Powers, SK; Kraemer, WJ

Medicine & Science in Sports & Exercise, 31(6): 917-920.

The Journal of Strength & Conditioning Research

[Metabolic and Functional Responses Playing Tennis on Different Surfaces](#)

MURIAS, JM; LANATTA, D; ARCURI, CR; LAIÑO, FA

The Journal of Strength & Conditioning Research, 21(1): 112-117.

PDF (134)

The Journal of Strength & Conditioning Research

[Influence of Work-Interval Intensity and Duration on Time Spent at a High Percentage of \[latin capital V with dot above\]O₂max During Intermittent Supramaximal Exercise](#)

Wakefield, BR; Glaister, M

The Journal of Strength & Conditioning Research, 23(9): 2548-2554.

10.1519/JSC.ob013e3181bc19b1

PDF (252) | [CrossRef](#)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Trademark Applications Serial No.) Examiner: Edward Fennessy
85/365741)
) Docket No. 021542.0373T1US
)
Applicant: Savvier, LP)
)
Mark: TABATA BOOTCAMP)

DECLARATION OF JEFF TULLER

1. I, Jeff Tuller, am President of Savvier, Inc., which is the General Partner of Savvier, LP. All statements made herein of my own knowledge are true, and all statements made on information and belief are believed to be true.

2. I am over the age of 18 and have personal knowledge of the facts stated herein and could and would competently testify to those facts if requested to do so.

3. I submit this Declaration to present to the Examiner facts concerning the registerability of the above-identified mark in an authenticated manner.

4. I have read the Office Action dated November 13, 2012 provided by the Examiner in the above application. One of the grounds the Examiner asserted for rejecting the trademark application is that the mark is generic of the services for which we seek protection.

5. The Examiner cites ten Internet sites as evidence that the term "tabata bootcamp" is in widespread use for interval fitness training to help support the Examiner's argument that the mark TABATA BOOTCAMP is generic. However, seven out of the ten Internet sites referenced by the Examiner are actually instructors (or entities that employ instructors) that are licensed by Savvier, LP to train students and exercise participants in the exercise program under the trademark TABATA BOOTCAMP while using an exercise program educational kit under the trademark TABATA BOOTCAMP. The seven licensed trainers are (1) Stephanie Vlahos with Marshall Recreation Center in Huntington, WV; (2) Shannon Colavecchio in Tallahassee, FL; (3) Vanessa Cuthing with Level Performance Training in Orlando, FL; Serial No. 85/365741

Declaration of Jeff Tuller

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(4) Carolyn Gordon with Abellbodies in Washington D.C.; (5) Sue Conrad with fitnesscanbefun.com in San Luis Obispo; (6) Lori Alfred with Herdon Parks Community Center in Herdon, VA; and (7) Lisa Vande Voorde in Menlo Park.

6. Unfortunately, at the time of receiving the November 13, 2012, Office Action we were not aware that these licensed trainers were not giving proper notice that their use of the mark TABATA BOOTCAMP was a mark owned by Savvier, LP. Since becoming aware of the misuse of our mark TABATA BOOTCAMP, we are contacting the licensed trainers and informing them of their obligations under the license to give proper notice of Savvier's ownership of the TABATA BOOTCAMP mark.

7. We are also contacting the persons not licensed to use the TABATA BOOTCAMP Mark to demand that they cease using the mark.

8. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001, and that such willful false statements and the like may jeopardize the validity of the application or document or any registration resulting therefrom.

Date: May 15, 2013

By: 
Jeff Tuller, President of Savvier, Inc.