Title: COMPOSITIONS AND METHODS FOR INCREASING METABOLISM, THERMOGENESIS AND/OR MUSCULAR DEFINITION

Abstract: Compositions and methods for administering the same to humans are provided for the promotion of increasing a person's natural metabolic rate, increasing thermogenesis, increasing training intensity, increasing muscular definition, and/or decreasing water retention. Said compositions comprise green tea extract, anhydrous caffeine, theobroma cocoa extract, oolong tea extract, white tea extract, guarana, yerba mate powder, dandelion root extract, juniper berry powder, parsley powder, garcinia cambogia extract, cayenne pepper powder extract, n-acetyl-l-tyrosine, quercetin dehydrate, gynostemma pentaphyllum extract, vinpocetine and optionally thiamin, pyridoxine, picamilon, xanthinol nicotinate, garcinia cambogia extract and niacin.
Compositions and Methods for Increasing Metabolism, Thermogenesis and/or Muscular Definition

Field of the Invention

The present invention relates to compositions and methods for increasing a person's natural metabolic rate, increasing thermogenesis or decreasing water retention.

Summary of the Invention

In one aspect, the present invention comprises a composition of a first combination that comprises green tea extract, anhydrous caffeine, and guarana powder; a second combination that comprises dandelion root extract, and juniper berry powder; and a third combination that comprises N-acetyl-L-tyrosine, and gynostemma pentaphyllum. Additionally, the present invention may also comprise thiamin, pyridoxine, niacin, quercetin dehydrate, cayenne pepper powder, oolong tea extract, white tea extract, theobroma cacao extract, vinpocetine, yerba mate leaf powder, parsley powder extract, picamilone, and xanthinol nicotinate. In another aspect, the present invention provides methods for increasing the natural metabolic rate, burning calories, increasing thermogenesis and decreasing water retention in a subject utilizing the invention. In another aspect, the present invention provides methods of reducing body fat mass leading to weight loss and improving muscular definition in subjects.

Detailed Description of the Invention

The present invention, according to one embodiment, provides a composition for increasing a subject's natural metabolic rate and/or decreasing water retention, thus
reducing a subject’s body fat mass leading to weight loss and improving visible muscular definition. Certain embodiments of the present invention include diet supplements. According to other embodiments of the present invention, there is provided a composition that reduces body fat mass leading to weight loss, thus improving muscular definition. In one embodiment the present invention may allow a subject to burn more calories than the subject would otherwise burn (dramatically increasing thermogenesis), thereby reducing body fat mass leading to weight loss.

In another embodiment the present invention provides compositions and methods that decrease water retention in subjects. For example, the composition and method may provide a diuretic effect causing a person to retain less water than the person would otherwise retain, thereby providing weight loss and improving muscular definition.

In certain embodiments of the present invention, a composition and related methods comprise:

a first combination of one or more of theobroma extract, green tea extract, oolong tea extract, white tea extract, anhydrous caffeine, niacin, and yerba maté extract, and guarana extract;

a second combination of one or more of dandelion root extract, juniper berry powder, parsley powder (leaf) and cayenne pepper powder;

a third combination of one or more of N-acetyl-L-tyrosine, gynostemma pentaphyllum extract, and vinpocetine. Additionally, the present invention may also comprise thiamin, pyridoxine, picamilon, garcinia cambogia, and/or xanthinol nicotinate. In another embodiment, the present invention may further comprise
ingredients such as, thiamin or any salts or esters thereof, niacin, xantinol nicotinate, picamilone, and pyridoxine or a salt thereof in any of its pharmaceutically acceptable forms.

Compounds according to the present invention have been shown to have thermogenic effects. Catechin epigallocatechin-3-gallate (EGCG), a component of green tea, has been shown to possess the ability to give to rise to thermogenic effects. In one study (Berube-Parent S, Pelletier C, Dore J, Tremblay A. (2005) "Effects of encapsulated green tea and Guarana extracts containing a mixture of epigallocatechin-3-gallate and caffeine on 24 h energy expenditure and fat oxidation in men." Br J Nutr. Sep;94(3):432-6.) the energy expenditure and fat oxidation over a 24-hour time period employing components of the present invention was observed. Fourteen subjects took part in a randomized, placebo-controlled, double blind, crossover study. Each subject was tested 5 times in a metabolic chamber to measure 24-hour energy expenditure, substrate oxidation and blood pressure. During each stay, the subjects ingested a placebo or capsules containing components of the present invention 30 minutes before standardized meals. It was found that 24-hour energy expenditure increased significantly by about 750 kJ within all the treatment groups compared to placebo. This study found an increase in the 24-hour energy expenditure in the treatment groups. The resultant increase in energy expenditure via treatment with components comprising the present invention leads to an increase in the natural metabolic rate, the burning of calories, and an increase in thermogenesis.

Where the composition is in the nature of a diet supplement, the diet supplement may be consumed in any form. For instance, the dosage form of the diet supplement
may be as a powder beverage mix, a liquid beverage, a ready-to-eat bar or drink product, a capsule, a tablet, a caplet, or as a dietary gel.

Furthermore, the dosage form of the diet supplement in accordance with these embodiments may be provided in accordance with customary processing techniques for herbal and/or diet supplements in any of the forms mentioned above.

In one embodiment of the present invention, which is set forth in greater detail in Example 1 below, a composition is provided for increasing the natural metabolic rate, burning calories, increasing thermogenesis and decreasing water retention.

In a second embodiment of the present invention, which is set forth in greater detail in Example 2 below, a composition is provided for increasing the natural metabolic rate, burning calories, increasing thermogenesis and decreasing water retention.

The compositions according to the present invention may be employed in methods for increasing the natural metabolic rate, burning calories, increasing thermogenesis and decreasing water retention in subjects. The compositions of the present invention are particularly advantageous for athletes and bodybuilders to improve muscular definition. The dosage amount of the compositions according to the present invention which is administered to a subject may vary depending on the desired effect, the body weight and other characteristics of the subject. For example, in various embodiments, the compositions according to the present invention are administered to the subject on a daily basis. In another embodiment the compositions according to the present invention are administered to the subject three times daily.

The present invention also provides a method of increasing the natural metabolic
rate, burning calories, increasing thermogenesis and decreasing water retention in a subject. In one embodiment, the methods of the present invention include administering a composition to a subject. According to another embodiment of the present invention, methods for reducing body fat mass leading to weight loss and thus improving visible muscular definition are provided. In one embodiment, the administration of compositions according to the present invention allow a person's body to burn more calories than the person's body would otherwise burn (dramatically increasing thermogenesis), thereby reducing body fat mass leading to weight loss.

In example embodiments set forth below, the methods of the present invention provide for the administration of compositions according to the present invention that decrease water retention. For example, the administration of compositions according to the present invention may provide a diuretic effect causing a person to retain less water than the person would otherwise retain, thereby providing weight loss and improving muscular definition.

In embodiments described in the examples below, compositions and related methods comprising a first combination of one or more of theobroma extract, green tea extract, oolong tea extract, white tea extract, caffeine, niacin, and yerba maté extract, and guarana extract;

a second combination of one more of dandelion root extract, juniper berry powder, parsley powder (leaf), cayenne pepper powder, and xanthinol nicotinate;

a third combination of one or more of N-acetyl-L-tyrosine, gynostemma pentaphyllum extract, and vinpocetine. Additionally, the present invention may also comprise thiamin, pyridoxine, picamilone, garcinia cambogia extract, and/or xanthinol
nicotinate.

The compositions according to the present invention may be administered in methods for increasing the natural metabolic rate, burning calories, increasing thermogenesis and decreasing water retention. The methods of the present invention are particularly advantageous for athletes and bodybuilders to improve visible muscular definition. In certain embodiments, the methods of the present invention include a determination, and an administration, of an amount of a composition in accordance with factors such as the desired effect, the body weight and characteristics of the athlete. For example, in certain embodiments, the present invention includes methods of administering compositions according to the invention to subjects on a daily basis or three times daily.

Although the following example illustrates the practice of the present invention in example embodiments, the examples should not be construed as limiting the scope of the invention. Other embodiments will be apparent to one skilled in the art from consideration of the specification and example.

Example 1

As a first example, the following composition is provided: green tea extract (0.4440 g), caffeine anhydrous (0.3000 g), dandelion root powder (0.2500 g), parsley powder (0.2000 g), juniper berry powder (0.2000 g), cayenne pepper powder (0.1000 g), n-acetyl-l-tyrosine (0.1000 g), quercetin dehydrate (0.1000 g), picamilone HCl (0.1000 g), gynostemma pentaphyllum leaf exact (0.0350 g), niacin (0.0330 g), oolong tea dry leaf extract (0.0100 g), white tea dry leaf extract (0.0100 g), theobroma cocoa extract (0.0100 g), vinpocetine (0.0050 g), pyridoxine HCl (0.0020 g), thiamin
mononitrate (0.0015 g), guarana powder (0.0010 g), yerba maté leaf powder (0.0010 g),
gelatin, titanium dioxide, microcrystalline cellulose (0.0660 g), magnesium stearate
(0.0330 g), and silica (0.0165 g).

The example composition may be ingested 30 to 60 minutes prior to eating a
meal. The example composition can also be consumed prior exercise to increase and
athlete’s training intensity.

Example 2
As a second example, the following composition is provided: green tea extract
(0.440 g), caffeine anhydrous (0.3000 g), dandelion root powder (0.2500 g), parsley
powder (0.2000 g), juniper berry powder (0.200), cayenne pepper powder (0.100 g), n-
acetyl-l-tyrosine (0.1000 g), quercetin dehydrate (0.1000 g), xanthinol nicotinate (0.1000
g), gynostemma pentaphyllum leaf exact (0.0350 g), niacin (0.0330 g), oolong tea dry
leaf extract (0.0100 g), white tea dry leaf extract (0.0100 g), theobroma cacao extract
(0.0100 g), vinpocetine (0.0050 g), pyridoxine HCl (0.0020 g), thiamin mononitrate
(0.0015 g), guarana powder (0.0010 g), yerba maté leaf powder (0.0010), gelatin,
titanium dioxide, microcrystalline cellulose (0.0660), magnesium stearate (0.0330 g),
and silica (0.0165 g).

The example composition may be ingested 30 to 60 minutes prior to eating a
meal. The example composition can also be consumed prior exercise to increase and
athlete’s training intensity.
Claims:

What is claimed:

1. A composition comprising at least two of:
   a first combination that comprises Green Tea Extract, Anhydrous Caffeine, and Guarana Extract;
   a second combination that comprises Dandelion Root Extract, and Juniper Berry Powder; and
   a third combination that comprises N-Acetyl-L-Tyrosine, and Gynostemma Pentaphyllum.

2. A composition according to claim 1 furthering comprising Thiamin.

3. A composition according to claim 1 furthering comprising Pyridoxine.

4. A composition according to claim 1 furthering comprising Niacin.

5. A composition according to claim 1 further comprising Picamilone.

6. A composition according to claim 1 further comprising Xantinol Nicotinate.

7. A composition according to claim 1 further comprising Garcinia Cambogia extract.

8. A method for increasing the natural metabolic rate, burning calories, increasing thermogenesis or decreasing water retention in a subject comprising administering to the subject a composition according to claim 1.

9. A method for increasing the natural metabolic rate, burning calories, increasing thermogenesis or decreasing water retention in a subject comprising administering to the subject a composition according to claim 2.
10. A method for increasing the natural metabolic rate, burning calories, increasing thermogenesis or decreasing water retention in a subject comprising administering to the subject a composition according to claim 3.

11. A method for increasing the natural metabolic rate, burning calories, increasing thermogenesis or decreasing water retention in a subject comprising administering to the subject a composition according to claim 4.

12. A method for increasing the natural metabolic rate, burning calories, increasing thermogenesis or decreasing water retention in a subject comprising administering to the subject a composition according to claim 5.

13. A method for increasing the natural metabolic rate, burning calories, increasing thermogenesis or decreasing water retention in a subject comprising administering to the subject a composition according to claim 6.

14. A method for increasing the natural metabolic rate, burning calories, increasing thermogenesis or decreasing water retention in a subject comprising administering to the subject a composition according to claim 7.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER


According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)


Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used)

Delphin, Medline, CAPLUS, Techsource, USPTO, Espacenet. Search terms: green tea, caffeine, guarana, dandelion, juniper, thiamin, pyridoxine, niacin, vitamin B, picamilone, xantinol nicotinate, garcinia cambogia (continued on extra sheet)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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<tr>
<th>Category*</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to Claim No.</th>
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<tr>
<td>X</td>
<td>US 6277396 B1 (MAXIMUM HUMAN PERFORMANCE, INC) 21 August 2001 see whole document</td>
<td>1 to 14</td>
</tr>
<tr>
<td>X</td>
<td>US 2005/008690 A1 (MILLER FH) 13 January 2005 see whole document</td>
<td>1 to 7</td>
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[ ] Further documents are listed in the continuation of Box C. [X] See patent family annex.

Date of the actual completion of the international search: 21 June 2006 (21-06-2006)

Date of mailing of the international search report: 22 June 2006 (22-06-2006)

Name and mailing address of the ISA/CA

Canadian Intellectual Property Office

Place du Portage 1, C114 - 1st Floor, Box PCT

50 Victoria Street

Gatineau, Quebec K1A OC9

Facsimile No.: 001(819)953-2476

Authorized officer

Anne-Julie Boivin (819) 997-3091
Box No. II  Observations where certain claims were found unsearchable (Continuation of item 2 of the first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. [X] Claim Nos.: 8 to 14  
   because they relate to subject matter not required to be searched by this Authority, namely:
   
   Although claims 8 to 14 encompass a method of treatment of the human body which this Authority is not obliged to examine under Rule 39.1(iv) of the PCT, the search has been established on the basis of the alleged effects of the compositions referred to therein.

2. [ ] Claim Nos.:  
   because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. [ ] Claim Nos.:  
   because they are dependant claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III  Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

(See extra sheet)

1. [ ] As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. [ ] As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. [ ] As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claim Nos.:

4. [X] No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claim Nos.:
   
   1 to 14 (invention 1)

Remark on Protest  
[ ] The additional search fees were accompanied by the applicant’s protest and, where applicable, the payment of a protest fee.

[ ] The additional search fees were accompanied by the applicant’s protest but the applicable protest fee was not paid within the time limit specified in the invitation.

[ ] No protest accompanied the payment of additional search fees.
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<tr>
<td>US6277396 B1</td>
<td>21-08-2001</td>
<td>CN1150274C C</td>
<td>19-05-2004</td>
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<td>20-06-2000</td>
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Box No.3, continued:

The International Searching Authority found multiple inventions in this international application. Given that compositions comprising green tea extract, caffeine, guarana extract, dandelion root extract and juniper berry are already known in the prior art (e.g. see references US 2005/0008690 and US 6277396), there is no special technical feature shared amongst all claims that define a contribution over the prior art. Accordingly, the following alleged inventions have been identified:

Invention 1 - Claims 1 to 14 (partly) featuring compositions comprising green tea extract, anhydrous caffeine, guarana extract, dandelion root extract and juniper berry powder.

Invention 2 - Claims 1 to 14 (partly) featuring compositions comprising green tea extract, anhydrous caffeine, guarana extract, N-acetyl-tyrosine and gynostemma pentaphyllum.

Invention 3 - Claims 1 to 14 (partly) featuring compositions comprising dandelion root extract, juniper berry powder, N-acetyl-tyrosine and gynostemma pentaphyllum.

Invention 4 - Claims 1 to 14 (partly) featuring compositions comprising green tea extract, anhydrous caffeine, guarana extract, dandelion root extract, juniper berry powder, N-acetyl-tyrosine and gynostemma pentaphyllum.

Search terms, continued:

metabolism, metabolic rate, calory, thermogenesis, thermogenic, water retention, diuresis, diuretic, obesity, weight, body mass.