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Attorneys for Plaintiffs
XanGo, LLC and DBC, LLC

**IN THE UNITED STATES DISTRICT COURT
 DISTRICT OF UTAH, CENTRAL DIVISION**

XANGO, LLC, a Utah limited liability company,)
 and DBC, LLC, a Utah limited liability company,)
 Plaintiffs,)

v.)

NEW VISION USA, INC., an Arizona)
 corporation, d/b/a NEW VISION)
 INTERNATIONAL, INC., NEW VISION)
 INTERNATIONAL HOLDINGS, INC., an)
 Arizona corporation, ARIZONA PRODUCTION)
 & PACKAGING, LLC, an Arizona limited)
 liability company, VEMMA NUTRITION)
 COMPANY, an Arizona corporation, BRT)
 HOLDINGS, LLC, an Arizona limited liability)
 company, NVI PARTNERS, INC., an Arizona)
 corporation, NVI PARTNERS II, an Arizona)
 partnership, NVI PARTNERS III, an Arizona)
 partnership, VEMMA PARTNERS, an Arizona)
 partnership, and BENSON K. BOREYKO,)
 individually and as an officer of the companies,)
 Defendants.)

Civil Action No. 2:04 CV00405 TC

Judge Tena Campbell

**SECOND AMENDED
 COMPLAINT FOR PATENT
 INFRINGEMENT AND UNFAIR
 COMPETITION**

JURY DEMANDED

FILED
 DISTRICT COURT
 205 MAY 12 A 13 47
 SALT LAKE CITY, UTAH
 [Signature]

COMPLAINT

Plaintiffs XanGo, LLC and DBC, LLC, for their Complaint against Defendants New Vision USA, Inc., d/b/a New Vision International, Inc., New Vision International Holdings, Inc., Arizona Production & Packaging, LLC, Vemma Nutrition Company, BRT Holdings, LLC, NVI Partners, Inc., NVI Partners II, NVI Partners III, Vemma Partners, and Benson K. Boreyko, allege as follows:

Nature Of The Action

1. This is a civil action arising under the Patent Laws of the United States (35 U.S.C. § 1 *et seq.*) and under Section 43(a) of the Lanham Act (15 U.S.C. § 1125(a)), for damages and injunctive relief as provided in 35 U.S.C. § 281 and §§ 283-285 and 15 U.S.C. §§ 1116 and 1117.

The Plaintiffs

2. Plaintiff XanGo, LLC is a limited liability company organized and existing under the laws of the State of Utah with a principal place of business at 3098 W. Executive Parkway, Lehi, Utah 84043.

3. Plaintiff DBC, LLC is a limited liability company organized and existing under the laws of the State of Utah with a principal place of business at 3098 W. Executive Parkway, Lehi, Utah 84043.

The Defendants

4. On information and belief, Defendant New Vision USA, Inc. is a corporation organized and existing under the laws of the State of Arizona with a principal place of business

at 8322 E. Hartford Dr., Scottsdale, Arizona 85255, and sometimes does business as New Vision International, Inc.

5. On information and belief, Defendant New Vision International Holdings, Inc. is a corporation organized and existing under the laws of the State of Arizona with a principal place of business at 8322 E. Hartford Dr., Scottsdale, Arizona 85255.

6. On information and belief, Defendant Arizona Production & Packaging, LLC is a limited liability company organized and existing under the laws of the State of Arizona with a principal place of business at 1102 W. Southern Ave., Suite 4, Tempe, Arizona 85282.

7. On information and belief, Defendant Vemma Nutrition Company is a corporation organized and existing under the laws of the State of Arizona with a principal place of business at 8322 E. Hartford Dr., Scottsdale, Arizona 85255.

8. On information and belief, Defendant BRT Holdings, LLC is a limited liability company organized and existing under the laws of the State of Arizona with a principal place of business at 1102 W. Southern Ave., Suite 4, Tempe, Arizona 85282.

9. On information and belief, Defendant NVI Partners, Inc. is a corporation organized and existing under the laws of the State of Arizona with a principal place of business at 8322 E. Hartford Dr., Scottsdale, Arizona 85255.

10. On information and belief, Defendant NVI Partners II is an Arizona partnership with a principal place of business at 8322 E. Hartford Dr., Scottsdale, Arizona 85255.

11. On information and belief, Defendant NVI Partners III is an Arizona partnership with a principal place of business at 8322 E. Hartford Dr., Scottsdale, Arizona 85255.

12. On information and belief, Defendant Vemma Partners is an Arizona partnership with a principal place of business at 8322 E. Hartford Dr., Scottsdale, Arizona 85255.

13. On information and belief, Defendant Benson K. Boreyko ("BK Boreyko") resides at 11457 E. Bella Vista Dr., Scottsdale, Arizona 85259 and has a principal place of business at 8322 E. Hartford Dr., Scottsdale, Arizona 85255.

14. On information and belief, Defendants do substantial business in this district.

Jurisdiction

15. This Court has jurisdiction of this action under 15 U.S.C. § 1121(a), 28 U.S.C. §§ 1331 and 1338(a).

Venue

16. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391(b), 1391(c) and 1400(b).

Background

Plaintiffs' Patent In Suit

17. On May 4, 2004, U.S. Patent No. 6,730,333 ("the '333 patent"), entitled "Nutraceutical Mangosteen Composition," was duly and legally issued to DBC, LLC, as the assignee of inventors Aaron R. Garrity, Gordon A. Morton, and Joseph C. Morton. DBC, LLC has title to the '333 patent. A copy of the '333 patent is attached to this Second Amended Complaint as Exhibit A.

18. DBC, LLC has licensed the '333 patent to XanGo, LLC.

19. DBC, LLC and XanGo, LLC collectively have the exclusive right to make, use, sell, and offer to sell the inventions of the '333 patent and have the right to sue and recover for past, present, and future infringement of the '333 patent.

20. XanGo, LLC sells a nutraceutical beverage, which is covered by the '333 patent, under the trademark XanGo™. The XanGo™ beverage has achieved remarkable commercial success since it was introduced in November of 2002.

Plaintiffs' Trade Dress

21. The XanGo™ beverage is sold in both interstate and international commerce.

22. XanGo, LLC has gained a substantial and loyal following of customers and distributors. The customers and distributors of XanGo, LLC rely upon the established reputation of XanGo, LLC and the XanGo™ beverage.

23. Plaintiffs have developed a distinctive trade dress for the XanGo™ beverage consisting of, *inter alia*, distinctive color combinations and features and distinctive containers in which bottles of the XanGo™ beverage are distributed (the "XanGo trade dress").

24. Plaintiffs have established valuable goodwill and have acquired valuable rights in the XanGo trade dress.

25. The XanGo trade dress is not functional.

26. The XanGo trade dress is distinctive and has acquired secondary meaning in the relevant market.

Defendants' Willful Violation Of Plaintiffs' Patent Rights

27. Defendants have infringed the '333 patent, induced others to infringe the '333 patent, and contributed to the infringement of the '333 patent, and continue to infringe, induce

the infringement of, and contribute to the infringement of the '333 patent, in violation of 35 U.S.C. § 271.

28. Defendants have made, used, offered to sell, and sold nutraceutical compositions that infringe one or more claims of the '333 patent in violation of 35 U.S.C. § 271 ("infringing products"). The infringing products include Essential Vitamins Plus, Essential Vitamins Plus Mangosteen, and Vemma Nutrition Program. Defendants continue to make, use, offer to sell, and sell infringing products.

29. Defendants have made and continue to make products with methods that infringe one or more claims of the '333 patent in violation of 35 U.S.C. § 271 ("infringing methods"). The products made with infringing methods include Essential Vitamins Plus, Essential Vitamins Plus Mangosteen, and Vemma Nutrition Program.

30. On information and belief, Defendants have offered to sell, sold, and imported components of the infringing products and materials for practicing the infringing methods, which are a material part of the inventions of the '333 patent, knowing the same to be especially made or especially adapted for use in an infringement of the '333 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, in violation of 35 U.S.C. § 271.

31. Defendants have actively induced and continue to actively induce the manufacture of, use of, offer to sell, and sale of infringing products and infringing methods in violation of 35 U.S.C. § 271. Defendants have actively induced and continue to actively induce the importation of components of the infringing products and materials for practicing the infringing methods, which are a material part of the inventions of the '333 patent, knowing the same to be especially

made or especially adapted for use in an infringement of the '333 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, in violation of 35 U.S.C. § 271.

32. On information and belief, Defendants are engaging, and will continue to engage, in willful and deliberate infringement of the '333 patent, inducement to infringe the '333 patent, and contributory infringement of the '333 patent.

Defendants' Unfair Competition

33. Defendants sell nutraceutical compositions, including Essential Vitamins Plus, Essential Vitamins Plus Mangosteen, and Vemma Nutrition Program, in direct competition with XanGo, LLC.

34. Defendants have competed, and are competing, unfairly with Plaintiffs. Defendants have adopted a trade dress that is substantially similar to the XanGo trade dress (the "infringing trade dress").

35. Defendants are likely to cause confusion, deception, and mistake among consumers through the use of the infringing trade dress.

36. On information and belief, Defendants had knowledge of Plaintiffs' rights in the XanGo trade dress before Defendants commenced the manufacture, promotion, and sale of Defendants' products bearing the infringing trade dress.

37. On information and belief, Defendants' use of the infringing trade dress was and is a willful and deliberate infringement of Plaintiffs' rights in the XanGo trade dress.

38. Defendants' use of the infringing trade dress has had the effect of wrongfully infringing upon Plaintiffs' rights in the XanGo trade dress and usurping the goodwill that Plaintiffs have established in the XanGo trade dress.

Relationships Among The Defendants

39. On information and belief, each of New Vision USA, Inc., New Vision International Holdings, Inc., Arizona Production & Packaging, LLC, Vemma Nutrition Company, BRT Holdings, LLC, NVI Partners, Inc., NVI Partners II, NVI Partners III, Vemma Partners, and BK Boreyko, either in person or through an agent, has made, offered to sell, sold, promoted, and/or imported ingredients for infringing products made with infringing methods and bearing infringing trade dress that have entered and continue to enter the State of Utah and this District through established streams of commerce, and/or induced others to do the same.

40. On information and belief, Defendants do not observe proper formalities and are not properly funded. Defendants' overall financial condition is not sound. Defendants' overall sales have fallen by about ninety percent (90%) in comparison to prior overall sales.

Interests In The Defendants

41. On information and belief, New Vision International Holdings, Inc. has issued 84,000,000 shares of Class A stock and 66,000,000 shares of class B stock, with Class A stockholders having voting rights, and Class B stockholders having no voting rights. BK Boreyko owns approximately seventy-five percent (75%) of the Class A stock in New Vision International Holdings, Inc., with the remaining shares of Class A stock owned by his two sisters. Only BK Boreyko owns more than twenty percent (20%) of the shares of New Vision International Holdings, Inc.

42. On information and belief, New Vision International Holdings, Inc. holds all of the stock in New Vision USA, Inc.

43. On information and belief, New Vision USA, Inc. and BK Boreyko have represented that BK Boreyko and his two sisters own New Vision USA, Inc., including representations on the web site www.newvision.com.

44. On information and belief, New Vision International Holdings, Inc. holds all of the stock in Vemma Nutrition Company.

45. On information and belief, Vemma Nutrition Company and BK Boreyko have represented that BK Boreyko and his two sisters own Vemma Nutrition Company, including representations on the web site www.govemma.com.

46. On information and belief, New Vision International Holdings, Inc. holds all of the stock in NVI Manufacturing, Inc.

47. On information and belief, BK Boreyko is a member of Arizona Production & Packaging, LLC. BK Boreyko owns about twenty-five percent (25%) of the company. No member of Arizona Production & Packaging, LLC owns a greater share of the company than BK Boreyko. The other members of Arizona Production & Packaging, LLC are Peter Reilly, Yibing Wang, BK Boreyko's brother, and BK Boreyko's two sisters. Mr. Reilly is the former president of New Vision USA, Inc. Mr. Wang is employed by New Vision USA, Inc. as director of research and development.

48. On information and belief, BK Boreyko is a member of BRT Holdings, LLC. No member of BRT Holdings, LLC owns a greater share of the company than BK Boreyko. The

other members of BRT Holdings, LLC are Mr. Reilly and Sheena Tejeda. Ms. Tejeda is employed by New Vision USA, Inc. as senior vice president.

49. On information and belief, BK Boreyko is an officer, director, and shareholder in NVI Partners, Inc. BK Boreyko's brother and two sisters are the other officers, directors and shareholders.

50. On information and belief, BK Boreyko is a partner in NVI Partners II. The other partners are BK Boreyko's brother and two sisters.

51. On information and belief, BK Boreyko is a partner in NVI Partners III. The other partners are BK Boreyko's two sisters.

New Vision International Holdings, Inc.

52. On information and belief, New Vision International Holdings, Inc. fails to properly observe corporate formalities.

53. On information and belief, New Vision International Holdings, Inc. is not properly funded.

54. On information and belief, the Articles of Incorporation for New Vision International Holdings, Inc. require that the corporation have a Board of Directors consisting of four persons. The Board of Directors, however, consists of only three persons: BK Boreyko and his two sisters. The Board of Directors does not meet regularly and does not keep regular minutes.

55. On information and belief, the bylaws for New Vision International Holdings, Inc. require that the corporation have the following officers: a president, at least one vice-president, a secretary, and a treasurer. The president and secretary cannot be the same person. Nevertheless,

BK Boreyko is both the president and secretary of the corporation and is the only officer of the corporation. The corporation lacks a vice-president and a treasurer as required by the Bylaws.

56. On information and belief, New Vision International Holdings, Inc. has no employees other than BK Boreyko. Employees of New Vision USA, Inc. are required to do work for New Vision International Holdings, Inc., even though they are not employed or compensated for the work by that entity.

57. On information and belief, there is a unity of interest, ownership, and control among New Vision International, Inc. and each of New Vision USA, Inc. and Vemma Nutrition Company, such that New Vision International, Inc. is the alter ego of New Vision USA, Inc. and Vemma Nutrition Company, individually and collectively.

58. On information and belief, New Vision International Holdings, Inc. is an agent for BK Boreyko.

New Vision USA, Inc.

59. On information and belief, New Vision USA, Inc. fails to properly observe corporate formalities.

60. On information and belief, New Vision USA, Inc. is not properly funded.

61. On information and belief, the Articles of Incorporation for New Vision USA, Inc. require that the corporation have a Board of Directors consisting of four persons. The Board of Directors, however, consists of only three persons: BK Boreyko and his two sisters. The Board of Directors does not meet regularly and does not keep regular minutes.

62. On information and belief, the bylaws for New Vision USA, Inc. require that the corporation have the following officers: a president, at least one vice-president, a secretary, and

a treasurer. The president and secretary cannot be the same person. Nevertheless, BK Boreyko is both the president and secretary of the corporation and is the only officer of the corporation. The corporation lacks a vice-president and a treasurer as required by the Bylaws.

63. On information and belief, employees of New Vision USA, Inc. are required to do work for New Vision International Holdings, Inc., even though they are not employed or compensated for the work by that entity.

64. On information and belief, employees of New Vision USA, Inc. are required to do work for Vemma Nutrition Company, even though they are not employed or compensated for the work by that entity.

65. On information and belief, employees of New Vision USA, Inc. are required to do work for Arizona Production & Packaging, LLC, even though they are not employed or compensated for the work by that entity.

66. On information and belief, employees of New Vision USA, Inc. are required to do work for BRT Holdings, LLC, even though they are not employed or compensated for the work by that entity.

67. On information and belief, employees of New Vision USA, Inc. are required to do work for NVI Partners Inc., NVI Partners II, NVI Partners III, and Vemma Partners, even though they are not employed or compensated for the work by those entities.

68. On information and belief, New Vision USA, Inc. has a policy against any person having an interest, directly or indirectly, in more than one "team membership" or, under limited circumstances, in more than at most two team memberships. Nevertheless, New Vision USA,

Inc. allows BK Boreyko, NVI Partners Inc., NVI Partners II, NVI Partners III, and Vemma Partners to operate in violation of that policy.

69. On information and belief, New Vision USA, Inc. is an agent for BK Boreyko and for New Vision International Holdings, Inc.

Vemma Nutrition Company

70. On information and belief, Vemma Nutrition Company fails to properly observe corporate formalities.

71. On information and belief, Vemma Nutrition Company is not properly funded.

72. On information and belief, the Articles of Incorporation for Vemma Nutrition Company require that the corporation have a Board of Directors consisting of four persons. The Board of Directors, however, consists of only three persons: BK Boreyko and his two sisters. The Board of Directors does not meet regularly and does not keep regular minutes.

73. On information and belief, the bylaws for Vemma Nutrition Company require that the corporation have the following officers: a president, at least one vice-president, a secretary, and a treasurer. The president and secretary may not be the same person. Nevertheless, BK Boreyko is both the president and secretary of the corporation and is the only officer of the corporation. The corporation lacks a vice-president and a treasurer as required by the Bylaws.

74. On information and belief, Vemma Nutrition Company has no employees other than BK Boreyko. Employees of New Vision USA, Inc. are required to do work for Vemma Nutrition Company, even though they are not employed or compensated for the work by that entity.

75. On information and belief, Vemma Nutrition Company was incorporated after Plaintiffs filed and served their First Amended Complaint in this action. Vemma Nutrition Company was incorporated in an effort to prevent Plaintiffs from recovering damages and other appropriate relief from Defendants for their unlawful acts as complained of herein. Observing the corporate form would sanction a fraud or promote an injustice

76. On information and belief, Vemma Nutrition Company has a policy against any person having an interest, directly or indirectly, in more than one “team membership” or, under limited circumstances, in more than at most two team memberships. Nevertheless, Vemma Nutrition Company allows BK Boreyko, NVI Partners Inc., NVI Partners II, NVI Partners III, and Vemma Partners to operate in violation of that policy.

77. On information and belief, Vemma Nutrition Company is an agent for BK Boreyko, New Vision International Holdings, Inc., and New Vision USA, Inc.

Arizona Production & Packaging, LLC

78. On information and belief, Arizona Production & Packaging, LLC fails to properly observe formalities as a limited liability company.

79. On information and belief, Arizona Production & Packaging, LLC is not properly funded.

80. On information and belief, Arizona Production & Packaging, LLC acquired the assets of NVI Manufacturing, Inc. in a transaction that was not properly at arms length.

81. On information and belief, New Vision USA, Inc. and BK Boreyko have represented that New Vision USA, Inc. owns the assets that Arizona Production & Packaging,

LLC acquired of NVI Manufacturing, Inc., including representations on the web site www.newvision.com.

82. On information and belief, Arizona Production & Packaging is an agent for BK Boreyko, New Vision International Holdings, Inc., New Vision USA, Inc., and Vemma Nutrition Company.

BRT Holdings, LLC

83. On information and belief, BRT Holdings, LLC fails to properly observe formalities as a limited liability company.

84. On information and belief, BRT Holdings, LLC is not properly funded.

85. On information and belief, BRT Holdings, LLC is an agent for BK Boreyko, New Vision International Holdings, Inc., New Vision USA, Inc., Vemma Nutrition Company, and Arizona Production & Packaging, LLC.

NVI Partners, Inc.

86. On information and belief, NVI Partners, Inc. fails to properly observe corporate formalities.

87. On information and belief, NVI Partners, Inc. is not properly funded.

88. On information and belief, NVI Partners, Inc. operates as a “distributor” or “team member” for New Vision USA, Inc. in violation of its corporate policies.

89. On information and belief, NVI Partners, Inc. operates as a “distributor” or “team member” for Vemma Nutrition Company in violation of its corporate policies.

90. On information and belief, NVI Partners, Inc. is an agent for BK Boreyko.

NVI Partners II

91. On information and belief, NVI Partners II is not properly funded.

92. On information and belief, NVI Partners II operates as a “distributor” or “team member” for New Vision USA, Inc. in violation of its corporate policies.

93. On information and belief, NVI Partners II operates as a “distributor” or “team member” for Vemma Nutrition Company in violation of its corporate policies.

94. On information and belief, NVI Partners II is an agent for BK Boreyko.

NVI Partners III

95. On information and belief, NVI Partners III is not properly funded.

96. On information and belief, NVI Partners III operates as a “distributor” or “team member” for New Vision USA, Inc. in violation of its corporate policies.

97. On information and belief, NVI Partners III operates as a “distributor” or “team member” for Vemma Nutrition Company in violation of its corporate policies.

98. On information and belief, NVI Partners III is an agent for BK Boreyko.

Vemma Partners

99. On information and belief, Vemma Partners is not properly funded.

100. On information and belief, Vemma Partners operates as a “distributor” or “team member” for New Vision USA, Inc. in violation of its corporate policies.

101. On information and belief, Vemma Partners operates as a “distributor” or “team member” for Vemma Nutrition Company in violation of its corporate policies.

102. On information and belief, Vemma Partners is an agent for BK Boreyko.

BK Boreyko

103. On information and belief, there is a unity of interest, ownership, and control among BK Boreyko and each of New Vision USA, Inc., New Vision International Holdings, Inc., Arizona Production & Packaging, LLC, Vemma Nutrition Company, BRT Holdings, LLC, NVI Partners, Inc., NVI Partners II, NVI Partners III, and Vemma Partners, such that BK Boreyko is the alter ego of the companies, individually and collectively.

104. On information and belief, BK Boreyko has stated that he has organized or will organize business entities that he controls in an attempt to prevent Plaintiffs from recovering damages or other relief in this action. Observing the corporate form with respect to any of the companies named as Defendants would sanction a fraud or promote an injustice.

105. On information and belief, BK Boreyko is the only member of 8322 E. Hartford Drive Associates, LLC, which owns the building located at 8322 E. Hartford Dr., Scottsdale, Arizona 85255. New Vision USA, Inc. and BK Boreyko have represented that New Vision USA, Inc. owns the building located at that address, including representations on the web site www.newvision.com.

106. On information and belief, the Federal Trade Commission ("FTC") has recognized the high degree of control exhibited by BK Boreyko over companies with which he is involved. The FTC issued a decision and order finding that BK Boreyko, individually or in concert with others, formulated, directed, or controlled the policies, acts, or practices of New Vision International, Inc., which is a predecessor to New Vision International Holdings, Inc., New Vision USA, Inc., and Vemma Nutrition Company.

107. The FTC's complaint charged that "the respondents have represented, expressly or by implication, that they possessed and relied upon a reasonable basis that substantiated the representations" that a product marketed as "God's Recipe can cure, prevent, treat, or mitigate Attention Deficit Disorder or its symptoms."

108. The FTC ordered that "respondents, directly or through any corporation, partnership, subsidiary, division, or other device" could not make any representation that "God's Recipe" could "cure, prevent, treat or mitigate Attention Deficit Disorder or its symptoms."

109. The FTC further ordered that "respondents . . . Benson K. Boreyko, for a period of five (5) years after the date of issuance of this order, shall each notify the Commission of the discontinuance of his current business or employment, or of his affiliation with any new business or employment. The notice shall include respondent's new business address and telephone number and a description of the nature of the business or employment and his duties and responsibilities."

COUNT I
WILLFUL INFRINGEMENT OF U.S. PATENT NO. 6,730,333

110. The allegations of paragraphs 1-111 above are incorporated for this Count I as though fully set forth herein.

111. Defendants have infringed the '333 patent, induced others to infringe the '333 patent, and contributed to the infringement of the '333 patent, and continue to infringe, induce the infringement of, and contribute to the infringement of the '333 patent in violation of 35 U.S.C. § 271.

112. On information and belief, Defendants are engaging, and will continue to engage, in willful and deliberate infringement of the '333 patent, which justifies an increase of three

times the damages to be assessed pursuant to 35 U.S.C. § 284 and, further, qualifies this as an exceptional case supporting the award of reasonable attorneys' fees pursuant to 35 U.S.C. § 285.

113. On information and belief, Defendants will continue to infringe, induce the infringement of, and contribute to the infringement of the '333 patent unless enjoined by this Court.

114. As a result of the aforementioned actions of Defendants, Plaintiffs have suffered and continue to suffer damages and irreparable harm.

COUNT II
FEDERAL UNFAIR COMPETITION

115. The allegations of paragraphs 1-116 above are incorporated for this Count II as though fully set forth herein.

116. Defendants have engaged and continue to engage in unfair competition in violation of Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).

117. On information and belief, Defendants willfully and deliberately have infringed upon Plaintiffs' rights in the XanGo trade dress and usurped the goodwill that Plaintiffs have established.

118. On information and belief, Defendants will continue to infringe upon Plaintiffs' rights in the XanGo trade dress and compete unfairly with Plaintiffs unless enjoined by this Court.

119. As a result of the aforementioned actions of Defendants, Plaintiffs have suffered and continue to suffer damages and irreparable harm.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs pray for relief as follows:

A. For judgment that Defendants have infringed, induced others to infringe, and contributed to the infringement U.S. Patent No. 6,730,333, and that Defendants' patent infringement is willful;

B. For judgment that Defendants have infringed Plaintiffs' rights in the XanGo trade dress and have competed unfairly with Plaintiffs, and that Defendants' trade dress infringement and unfair competition is willful and deliberate;

C. For a preliminary and permanent injunction prohibiting Defendants, their subsidiaries, divisions, agents, servants, employees, and those in privity and/or active concert or participation with Defendants from infringing, contributing to the infringement of, and inducing infringement of U.S. Patent No. 6,730,333, infringing the XanGo trade dress, and competing unfairly with Plaintiffs, and for all further and proper injunctive relief;

D. For a declaration that this case is an exceptional case under 35 U.S.C. § 285;

E. For an accounting and an award of all the profits and funds obtained by Defendants from their unlawful acts as complained of herein;

F. For an accounting and restitution in an amount to be determined at trial, and/or any interest in money or property, which have been acquired by Defendants from their unlawful acts as complained of herein;

G. For an award of compensatory damages in an amount to be determined at trial;

H. For an award of exemplary damages in an amount to be determined at trial;

I. For an award of damages for Defendants' patent infringement with interest, as well as costs and attorneys' fees pursuant to 35 U.S.C. § 285 or other applicable law;

J. For an award of treble damages pursuant to 35 U.S.C. § 284 and due to the willful nature of Defendants' patent infringement;

K. For an award of Defendant's profits and damages for Defendants' willful violations of Section 43(a) of the Lanham Act, to be trebled in accordance with 15 U.S.C. § 1117;

L. For an award of costs and attorneys' fees pursuant to 15 U.S.C. § 1117;

M. For an order placing reasonable but effective restrictions on the transactions and activities of Defendants so as to prevent fraud on the Court and so as to ensure the capacity of Defendants to pay, and the prompt payment of, any judgment entered against Defendants in this action; and

N. For an award of interests, costs, attorneys' fees and such other and further relief as this Court deems just and proper.

JURY DEMAND

Plaintiffs demand a trial by jury on all issues so triable in this Second Amended Complaint.

Dated: May 11, 2005

By:



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Attorneys for Plaintiffs
XanGo, LLC and DBC, LLC

CERTIFICATE OF SERVICE

I hereby certify that on this 11th day of May, 2005, I served on Defendants, the following document:

Second Amended Complaint for Patent Infringement and Unfair Competition.

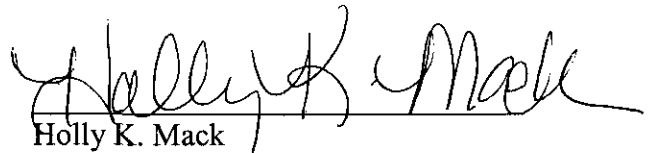
by causing a true and correct copy of the same to be delivered to their attorneys of record as follows:

by Federal Express:

Edwin B. Wainscott
Charles W. Jirauch
QUARLES & BRADY STREICH LANG LLP
One Renaissance Square
Two North Central Avenue
Phoenix, Arizona 85004-2391

by U.S. Mail:

Charles L. Roberts
WORKMAN NYDEGGER
1000 Eagle Gate Tower
60 East South Temple
Salt Lake City, UT 84111


Holly K. Mack



US00673033B1

(12) **United States Patent**
Garrity et al.

(10) **Patent No.:** **US 6,730,333 B1**

(45) **Date of Patent:** **May 4, 2004**

(54) **NUTRACEUTICAL MANGOSTEEN COMPOSITION**

(75) Inventors: **Aaron R. Garrity**, Pleasant Grove, UT (US); **Gordon A. Morton**, Springville, UT (US); **Joseph C. Morton**, Springville, UT (US)

(73) Assignee: **DBC, LLC**, Draper, UT (US)

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(57) **ABSTRACT**

Nutraceutical compositions derived from the fruit of the *Garcinia mangostana* L. or mangosteen plant are provided. The nutraceutical mangosteen compositions employ novel combinations of mangosteen fruit pulp and pericarp, and can be additionally complemented by selected juice concentrates to yield a composition for improving general health and wellness in humans.

81 Claims, No Drawings

US 6,730,333 B1

1

NUTRACEUTICAL MANGOSTEEN COMPOSITION

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to nutraceutical compositions derived from the fruit of the *Garcinia mangostana* L. plant, otherwise known as the mangosteen plant. More particularly, the present invention relates to nutraceutical compositions comprising a mixture of the pulp and pericarp of the mangosteen fruit.

2. Background and Related Art

The mangosteen tree (*Garcinia mangostana* L.) was named after the French explorer Laurent Garcin (1683-1751) and has been cultivated for a considerable time in tropical areas of the world. The tree is presumed to have originated in South-east Asia or Indonesia and has largely remained indigenous to the Malay Peninsula, Myanmar, Thailand, Cambodia, Vietnam, the Sunda Islands, and the Moluccas. Although the mangosteen fruit is highly praised as one of the best tasting of all tropical fruits, it is considered a minor tropical fruit, and the mangosteen tree has largely piqued purely botanical interests over the years.

The mangosteen tree is a slow-growing, smooth evergreen tree that ranges from 5 to 25 meters in height with a flaking black bark that contains a yellow, resinous latex. The mangosteen tree bears fruit when 6 to 20 years old, depending on location, and can continue to yield fruit for up to 100 years. The mangosteen fruit ripens to a dark reddish-violet to black-violet color and is normally smooth or marked with brownish scars. The pericarp, or rind, of the mangosteen fruit is thick, tough, and exudes a bitter yellowish resin. Only about 25 to 30% of the mangosteen fruit consists of the edible pulp or rind, with the remainder comprising the tough, bitter pericarp. Each mangosteen fruit usually varies in weight from 75 to 120 grams and normally contains 2 to 3 well-developed seeds.

Over the years, the mangosteen plant has been used in a number of different ways. The timber is used for cabinets, building materials, fencing and furniture. The pericarp, containing pectin, tannins, resins and a yellow latex, is used in tanning and dyeing leather black. The fruit pulp is mostly used as a dessert, but can also be canned or made into preserves. However, when removing the fruit pulp from the rind, care must be taken to prevent the tannins and resins of the cut pericarp from contacting the fruit pulp. The mangosteen rind, leaves and bark have also been used as ingredients in folk medicine in areas where the plant grows indigenously. The thick mangosteen rind is used for treating catarrh, cystitis, diarrhea, dysentery, eczema, fever, intestinal ailments, itch, and skin ailments. The mangosteen leaves are used by some natives in teas and other decoctions for diarrhea, dysentery, fever, and thrush. It is also known that concoctions of mangosteen bark can be used for genitourinary afflictions and stomatosis.

Some of the medicinal properties of the *Garcinia mangostana* L. plant have been the subject of pharmacological and clinical studies. These studies have isolated chemical constituents in the mangosteen leaves, wood, pericarp and seed aril, which were found to contain the following biologically active compounds, among others: 1,6-dihydroxy-3-methoxy-2-(3-methyl-2-butenyl) xanthone, 1,5,8-trihydroxy-3-methoxy-2-(3-methyl-2-butenyl) xanthone, maclurin, 1,3,6,7-tetrahydroxy xanthone, 1,3,6,7-tetrahydroxy xanthone-O- β -D-glucoside, chrysanthemin,

2

cyaniding-3-O- β -D-sophoroside, 8-deoxygartanin, 1,5-dihydroxy-2-isopentenyl-3-methoxy xanthone, 1,7-dihydroxy-2-isopentenyl-3-methoxy xanthone, 5,9-dihydroxy-8-methoxy-2,2-dimethyl-7-(3-methylbut-2-enyl) 2(H), 6(H)-pyrano-(3,2,6)-xanthen-6-one, fructose, gartinone A,B,C, D and E, gartinin, glucose, cis-hex-3-enyl acetate, 3-isomangostin, 3-isomangostin hydrate, 1-isomangostin, 1-isomangostin hydrate, kolanone, mangostin, β -mangostin, α -mangostin, mangostin-3,6-di-O-gulcoside, normangostin, sucrose, tannins, BR-xanthone-A, BR-xanthone-B, calabaxanthone demethylcalabaxanthone, 2-(γ,γ -dimethylallyl)-1,7-dihydroxy-3-methoxyxanthone, 2,8-bis-(γ,γ -dimethylallyl)-1,3,7-trihydroxyxanthone, 1,3,5,8-tetrahydroxy-2,4-diprenylxanthone, and mangostanol. Many of these chemical constituents are xanthenes, which are biologically active compounds that are receiving increasing interest in pharmacological studies for a variety of health benefits.

However, despite the pharmacological benefits of individual xanthone compounds and the native medicinal uses of the bark, leaves and rind of the mangosteen plant in South-east Asia and Indonesia, a nutraceutical composition containing the holistic benefits of the entire mangosteen fruit, including the fruit pulp and pericarp, is not known. In fact, it is recognized that when preparing the fruit pulp for consumption, care should be taken to separate from the delicious inner fruit pulp the outer pericarp with its resins and tannins, which are traditionally used to treat and stain leathers.

There exists a need in the nutritional arts for a nutraceutical composition that offers the health benefits of the entire mangosteen fruit, including the pulp and the pericarp. There also exists a need for a nutraceutical composition rich in natural xanthenes for treating a variety of human ailments and conditions in an efficacious manner. Further, there is a need in the art for a natural xanthone product that is economical to manufacture.

SUMMARY OF THE INVENTION

The present invention relates to nutraceutical compositions derived from the fruit of the *Garcinia mangostana* L., or mangosteen plant. More particularly, the present invention relates to efficacious nutraceutical compositions rich in natural xanthenes that include the pulp and the pericarp of the mangosteen fruit. These compositions preferably comprise a mixture of mangosteen fruit pulp and pericarp with selected juice concentrates. In addition, the present invention relates to methods of preparing nutraceutical compositions of *Garcinia mangostana* L. plant that yield efficacious health supplements rich in natural xanthenes. Further, the methods of preparing the mangosteen nutraceutical compositions are economical to operate.

A primary object of the present invention is to provide a nutraceutical composition that contributes to general human wellness and good health through a novel mixture of the pericarp and pulp of the fruit of the *Garcinia mangostana* L. plant. The effectiveness of this mixture is heightened through the addition of selected juice concentrates in varying amounts.

Another object of the present invention is to provide a nutraceutical composition that offers the holistic benefits of the entire mangosteen fruit and is an efficacious source of natural xanthone compounds.

An additional object of the present invention is to provide an antimicrobial and anti-inflammatory composition containing a therapeutic amount of natural xanthenes derived from the *Garcinia mangostana* L. plant.

US 6,730,333 B1

3

A further object of the present invention is to provide a antihone-rich natural product with antioxidative properties.

Another object of the present invention is to provide a nutraceutical composition of *Garcinia mangostana* L. plant with beneficial antibacterial action.

An additional object of the present invention is to provide a process for preparing nutraceutical compositions of the *Garcinia mangostana* L. plant yielding the holistic benefits of the unique combination of mangosteen fruit pulp and pericarp, either alone or with complementary and enhancing juice concentrates.

Yet another object of the present invention is to provide an economical process for manufacturing nutraceutical compositions of the entire fruit of the *Garcinia mangostana* L. plant.

The foregoing and other objects, advantages and characterizing features will become apparent from the following description of certain illustrative embodiments of the invention.

While the methods and processes of the present invention have proven to be particularly useful in the area of nutritional health supplements, those skilled in the art can appreciate that the methods and processes can be used in a variety of different applications and in a variety of different areas of manufacture to satisfy a wide-ranging variety of pharmaceutical and medicinal needs.

The above-described features and advantages of the present invention, as well as additional features and advantages, will be set forth or will become more fully apparent in the description that follows and in the appended claims. The novel features which are considered characteristic of this invention are set forth in the attached claims. Furthermore, the features and advantages of the invention may be learned by the practice of the invention, or will be obvious to one skilled in the art from the description, as set forth hereinafter.

DETAILED DESCRIPTION OF THE INVENTION

The present invention relates to nutraceutical compositions derived from the *Garcinia mangostana* L. plant, otherwise known as the mangosteen plant. In particular, the compositions of the invention described herein uniquely provide natural xanthone compounds through the combination of the pulp and pericarp of the mangosteen fruit, along with selected juice and other phytochemical ingredients. The invention also relates to processes for manufacturing the nutraceutical compositions described herein in an economical manner.

It is understood that the terminology used herein is used for the purpose of describing particular embodiments only, and is not intended to limit the scope of the present invention. It is also understood that, as used herein and in the appended claims, the singular forms "a," "an," and "the" include plural reference, unless the context clearly dictates otherwise. In the disclosure and in the claims, the term "nutraceutical" shall refer to "any compounds or chemicals that can provide dietary or health benefits when consumed by humans or animals."

Unless defined otherwise, all technical and scientific terms used herein have the same meanings as commonly understood by one of ordinary skill in the art to which this invention belongs. Preferred methods, compositions, and materials of the present invention are described herein, although any methods and materials similar or equivalent to

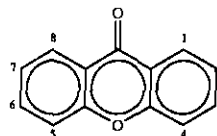
4

those described herein can be used in the practice or testing of the present invention. All references cited herein are incorporated by reference in their entirety.

The *Garcinia mangostana* L. plant, or mangosteen plant, is known for a variety of uses in the areas to which it is indigenous. For example, there are a number of folk medicines in South-east Asia and Indonesia that employ various decoctions of the leaves, root, and bark of the mangosteen plant, as well as of the pericarp of the mangosteen fruit. For example, according to the literature, the thick mangosteen pericarp can be used as an astringent or in various decoctions for treating catarrh, cystitis, diarrhea, dysentery, eczema, fever, intestinal ailments, itch, and skin ailments. Other medicinal uses of the leaves, root and bark would be known to one of skill in the art. Also, the outer pericarp of the mangosteen fruit, which contains pectins, tannins, resins and a yellow latex, is used for treating and staining leather black.

In contrast to the thick outer pericarp, the edible inner pulp of the mangosteen fruit is widely regarded for its exquisite taste. The inner pulp of a single mangosteen fruit usually consists of four to eight juicy, white-colored segments. When preparing the white pulp segments for consumption, care must be taken so as to not stain the pulp segments with the resins and tannins and other matter that oozes out of the cut outer pericarp. The need to keep the delicious white pulp separate from the dark purple, staining, bitter pericarp has long been known to those familiar with the mangosteen fruit.

Xanthones are biologically active plant phenols that naturally occur in a restricted group of plants. The general structure of a xanthone is:



From a biosynthetic standpoint, they are related to the flavonoids, being formed by the condensation of a phenylpropanoid precursor with two instead of three malonyl coenzyme A units. Xanthones possess significant pharmacological properties, including antidepressant, antitubercular, antimicrobial, antiviral, anti-inflammatory, cardiogenic, antileukemic, antitumor, antiulcer, antihypertensive, antiallergenic, and antirhinoviral activities and actions.

Pharmacological and botanical researchers have discovered that the medicinal properties of the mangosteen pericarp can be attributed to natural xanthones contained in the rind. The unrelated plant families Gentianaceae and Guttiferaceae are largely where naturally occurring hydroxanthones and their methyl ethers are found. The *Garcinia mangostana* L. plant, which contains a large number of naturally occurring xanthones, belongs within the Guttiferaceae family of plants.

Recent research has shown that the γ -mangostin compound, a natural xanthone found in the *Garcinia mangostana* L. plant, inhibits type A and type B monoamine oxidases as well as cyclooxygenase and prostaglandin E_2 synthesis. (Nakatani et al., 63 Biochemical Pharmacology 73-79 (2002)). Under normal conditions in the brain, the levels of prostaglandin E_2 (PGE_2) are very low or even undetectable. However, during episodes of tissue inflammation, multiple sclerosis, and AIDS-related

US 6,730,333 B1

5

dementia, PGE₂ levels rise, and can affect the activities of neurons, glial, and endothelial cells. High levels of PGE₂ also affect microglia/macrophage and lymphocyte functions. It is widely understood that the generation of prostaglandins is associated with inflammation, pain and fever.

Cyclooxygenase is the rate-limiting enzyme in prostaglandin production. There are two isoforms of cyclooxygenase (COX), constitutive (COX-1) and inducible (COX-2), which is expressed in response to inflammation stimuli. The xanthone γ -mangostin is found to directly inhibit activity of both COX isoforms as well as PGE₂ synthesis, which makes this xanthone desirable in the treatment of inflammatory conditions as well as symptoms of fever and pain. The nutraceutical compositions of the present invention offer therapeutic amounts of important xanthones, including γ -mangostin, from a natural source to provide increased health and general wellness in humans.

In the present invention, it has been discovered that a mixture of the mangosteen pericarp and fruit pulp in a single nutraceutical composition yields surprising health benefits. The efficacy of this xanthone-rich mixture of mangosteen pericarp and pulp is enhanced through the addition of selected juice and phytochemical ingredients, which are believed to synergistically react with the natural xanthone compounds. In a preferred embodiment of the invention, the mixture of mangosteen fruit pulp and pericarp is complemented by the addition of one or more juice concentrates selected from the group consisting of alfalfa juice concentrate, apple juice concentrate, apricot juice concentrate, banana juice concentrate, blueberry juice concentrate, cantaloupe juice concentrate, carrot juice concentrate, celery juice concentrate, cherry juice concentrate, cranberry juice concentrate, grape juice concentrate, grapefruit juice concentrate, green barley juice concentrate, green lettuce juice concentrate, kale juice concentrate, kiwi fruit juice concentrate, orange juice concentrate, papaya juice concentrate, parsley juice concentrate, pear juice concentrate, pear puree, pineapple juice concentrate, prune juice concentrate, raspberry juice concentrate, spinach juice concentrate, strawberry juice concentrate and tomato juice concentrate.

The nutraceutical compositions of the present invention deliver therapeutic amounts of natural xanthone compounds derived from the mangosteen fruit pulp and pericarp mixture. In one embodiment of the present invention, the mixture of mangosteen fruit pulp and pericarp is present in an amount ranging from between 3 and 50%, preferably between 5 and 25%, and most preferably between 10 and 20% of the total weight of mangosteen mixture and selected juice concentrates. In another embodiment of the invention, the nutraceutical composition comprising mangosteen fruit pulp and pericarp is formulated for oral administration. However, the present compositions can be delivered in any form known in the art, such as tablets, capsules, dispersions, solutions, suspensions, transdermal delivery systems, etc. If the mangosteen pericarp and fruit pulp mixture is complemented with selected juice concentrates, then a liquid beverage is a convenient delivery form, but other delivery forms are equally efficacious and would simply require the use of powders or other equivalent forms of the juice concentrates. Tablets or capsule forms of the present nutraceutical compositions can be prepared and coated by methods known to those of ordinary skill in the art. When the nutraceutical compositions of the present invention are presented in liquid beverage form, the ratio of water to mangosteen mixture and selected juice concentrates can be 1:1, preferably 3:1 and most preferably 4:1.

6

The nutraceutical compositions of the present invention can be produced through large-scale, economical operations. In one embodiment of the invented process, whole fruit from the *Garcinia mangostana* L. plant is picked and transported to a production facility. The fresh fruit can kept at ambient air temperatures during transportation or it can be frozen, depending on need. The entire mangosteen fruit, including the fruit pulp and pericarp, is then ground into a pulp and pericarp mixture using commercial grinding or mixing equipment. The resulting mixture of mangosteen fruit pulp and pericarp can then be further processed through the addition of one or more of the selected juice concentrates listed above. In preferred embodiments of the beverage form of the invention, the selected juice concentrates and water are then added to the mixture in accordance with the amounts, ranges and ratios specified above. The liquid nutraceutical compositions can then be treated, bottled or packaged for distribution to consumers using a variety of methods known to those of ordinary skill in the art, such as pasteurization, flash pasteurization, sterilization, UHT sterilization, pressure sealing, freezing, freeze drying, irradiating, etc. Dehydrated and other forms of the nutraceutical compositions can also be prepared using standard techniques.

The effectiveness in improving general health and wellness of the nutraceutical mangosteen compositions described herein is demonstrated from the following clinical examples, which are listed for illustrative purposes only and are not meant to be limiting instances of therapeutic use. A therapeutic composition of the mangosteen fruit pulp and pericarp mixture was prepared according to the embodiments described herein. Each subject ingested 3 ounces of the beverage daily for a three week period. The following qualitative results were obtained:

EXAMPLE 1

The subject was a 62-year-old female suffering from chronic back pain, nausea and chronic vertigo. Prior to the study, the back pain was treated with oral doses of morphine three times a day. After a regiment of the mangosteen nutraceutical composition, the subject experienced improved energy, less nausea and a decrease in the vertigo symptoms.

EXAMPLE 2

The subject was a 56-year-old male suffering from chronic obstructive pulmonary disease, muscle aches, fatigue and dysythemia. After a regiment of the mangosteen nutraceutical composition, the subject experienced improvement in mood, energy and muscle aches in the shoulders and back.

EXAMPLE 3

The subject was a 55-year-old male suffering from irritable bowel syndrome. After a regiment of the mangosteen nutraceutical composition, the subject experienced regularization of bowel movements.

EXAMPLE 4

The subject was a 30-year-old male suffering from chronic neck pain, familial hyperlipidemia, fatigue and insomnia. After a regiment of the mangosteen nutraceutical composition, the subject experienced improved energy and a decrease in low-density lipoproteins.

EXAMPLE 5

The subject was a 52-year-old male suffering from hypokalemia, fatigue and weight gain. After a regiment of

US 6,730,333 B1

7

the mangosteen nutraceutical composition, the subject experienced improved energy and a normalization of potassium levels.

EXAMPLE 6

The subject was a 63-year-old female suffering from degenerative arthritis, C-difficile colitis, fatigue, decreased appetite hypokalemia, and numbness of the fingers and toes. After a regiment of the mangosteen nutraceutical composition, the subject experienced improvement in colitis, reduction of pain in wrists and hands and a normalization of potassium levels.

EXAMPLE 7

The subject was a 66-year-old male suffering from a severe allergy reaction causing desquamation of palms, fingers, soles of feet and the inside of the mouth and esophagus. After a regiment of the mangosteen nutraceutical composition, the subject was completely cured.

EXAMPLE 8

The subject was a 57-year-old male suffering from malaise, muscle aches, hepatitis, glomerulonephritis, diabetes and hyperlipidemia. After a regiment of the mangosteen nutraceutical composition, the subject experienced a 30 point decrease in low-density lipoproteins, a 10 point increase in high-density lipoproteins, improved energy, a 14-pound weight loss and the malaise was eliminated.

EXAMPLE 9

The subject was a 30-year-old male suffering from a chronic dermal rash. After a regiment of the mangosteen nutraceutical composition, the rash was completely eliminated.

EXAMPLE 10

The subject was a 25-year-old female suffering from low energy levels. After a regiment of the mangosteen nutraceutical composition, the subject experienced increased energy.

EXAMPLE 11

The subject was a 28-year-old female suffering from extreme fatigue and depression. After a regiment of the mangosteen nutraceutical composition, the subject experienced a significant increase in energy.

EXAMPLE 12

The subject was a 26-year-old female suffering from irritable bowel syndrome. After a regiment of the mangosteen nutraceutical composition, the subject experienced a decrease in cramping and stool frequency and increased energy.

EXAMPLE 13

The subject was a 32-year-old male marathon runner and iron man competitor. After a regiment of the mangosteen nutraceutical composition, the subject experienced increased energy levels.

EXAMPLE 14

The subject was a 70-year-old female suffering from severe arthritis. After a regiment of the mangosteen nutraceutical composition, the subject experienced complete elimination of arthritic symptoms and increased energy.

8

The present invention may be embodied in other specific forms without departing from its spirit or essential characteristics. The described embodiments are to be considered in all respects only as illustrative and not restrictive. The scope of the invention is, therefore, indicated by the appended claims rather than by the foregoing description. All changes that come within the meaning and range of equivalency of the claims are to be embraced within their scope.

What is claimed is:

1. A nutraceutical beverage comprising:
pericarp from fruit of a *Garcinia mangostana* L. tree;
a first juice from fruit of a *Garcinia mangostana* L. tree;
and
at least one second juice selected from the group consisting of fruit juice and vegetable juice.
2. The nutraceutical beverage of claim 1, wherein said at least one second juice comprises fruit juice.
3. The nutraceutical beverage of claim 2, wherein said fruit juice is comprised of at least one of apple juice, apricot juice, banana juice, blueberry juice, cantaloupe juice, cherry juice, cranberry juice, grape juice, grapefruit juice, kiwi fruit juice, orange juice, papaya juice, pear juice, pear puree, pineapple juice, prune juice, raspberry juice and strawberry juice.
4. The nutraceutical beverage of claim 1, wherein said at least one second juice comprises vegetable juice.
5. The nutraceutical beverage of claim 4, wherein said vegetable juice is comprised of at least one of alfalfa juice, carrot juice, celery juice, green barley juice, green lettuce juice, kale juice, parsley juice, spinach juice and tomato juice.
6. The nutraceutical beverage of claim 1, wherein said pericarp from fruit of a *Garcinia mangostana* L. tree is processed from whole fruit pericarp.
7. The nutraceutical beverage of claim 6, wherein said pericarp comprises ground pericarp.
8. The nutraceutical beverage of claim 6, wherein said pericarp comprises powdered pericarp.
9. The nutraceutical beverage of claim 2 and claim 3, wherein said fruit juice comprises juice from concentrate.
10. The nutraceutical beverage of claim 4 and claim 5, wherein said vegetable juice comprises juice from concentrate.
11. The nutraceutical beverage of claim 1, wherein said juice comprises juice from concentrate.
12. The nutraceutical beverage of claim 11, wherein said juice from concentrate is comprised of at least one of apple juice, blueberry juice, cherry juice, cranberry juice, grape juice, pear juice, pear puree, raspberry juice and strawberry juice.
13. The nutraceutical beverage of claim 11, wherein said juice from concentrate is comprised of at least one of blueberry juice, cherry juice, cranberry juice, grape juice and pear juice.
14. The nutraceutical beverage of claim 6, claim 7 and claim 8 wherein said second juice is comprised of juice from concentrate.
15. The nutraceutical beverage of claim 11, wherein a percentage by weight of said pericarp from fruit of a *Garcinia mangostana* L. tree and said juice from fruit of a *Garcinia mangostana* L. tree is approximately 3% to 50% of a total weight of said pericarp from fruit of a *Garcinia mangostana* L. tree, said juice from fruit of a *Garcinia mangostana* L. tree and said juice from concentrate.
16. The nutraceutical beverage of claim 11, wherein a percentage by weight of said pericarp from fruit of a *Garcinia mangostana* L. tree and said juice from fruit of a

US 6,730,333 B1

9

Garcinia mangostana L. tree is approximately 5% to 25% of a total weight of said pericarp from fruit of a *Garcinia mangostana* L. tree, said juice from fruit of a *Garcinia mangostana* L. tree and said juice from concentrate.

17. The nutraceutical beverage of claim 11, wherein a percentage by weight of said pericarp from fruit of a *Garcinia mangostana* L. tree and said juice from fruit of a *Garcinia mangostana* L. tree is approximately 10% to 20% of a total weight of said pericarp from fruit of a *Garcinia mangostana* L. tree, said juice from fruit of a *Garcinia mangostana* L. tree and said juice from concentrate.

18. The nutraceutical beverage of claim 11, wherein a ratio of water to said pericarp from fruit of a *Garcinia mangostana* L. tree, said juice from fruit of a *Garcinia mangostana* L. tree and said juice from concentrate is approximately 1:1.

19. The nutraceutical beverage of claim 11, wherein a ratio of water to said pericarp from fruit of a *Garcinia mangostana* L. tree, said juice from fruit of a *Garcinia mangostana* L. tree and said juice from concentrate is approximately 3:1.

20. The nutraceutical beverage of claim 11, wherein a ratio of water to said pericarp from fruit of a *Garcinia mangostana* L. tree, said juice from fruit of a *Garcinia mangostana* L. tree and said juice from concentrate is approximately 4:1.

21. A nutraceutical beverage comprising:

pericarp from fruit of a *Garcinia mangostana* L. tree;
a first juice from fruit of a *Garcinia mangostana* L. tree;
and

a second juice, comprising at least one of apple juice; blueberry juice; cherry juice; cranberry juice; grape juice; pear juice; pear puree; raspberry juice; and strawberry juice.

22. The nutraceutical beverage of claim 21, wherein said second juice comprises juice from concentrate.

23. The nutraceutical beverage of claim 22, wherein a percentage by weight of said pericarp and said first is approximately 3% to 50% of a total weight of said pericarp, said first juice and said second juice.

24. The nutraceutical beverage of claim 22, wherein a percentage by weight of said pericarp and said first is approximately 5% to 25% of a total weight of said pericarp, said first juice and said second juice.

25. The nutraceutical beverage of claim 22, wherein a percentage by weight of said pericarp and said first is approximately 10% to 20% of a total weight of said pericarp, said first juice and said second juice.

26. The nutraceutical beverage of claim 22, wherein a ratio of water to said pericarp, said first juice and said second juice is approximately 1:1.

27. The nutraceutical beverage of claim 22, wherein a ratio of water to said pericarp, said first juice and said second juice is approximately 3:1.

28. The nutraceutical beverage of claim 22, wherein a ratio of water to said pericarp, said first juice and said second juice is approximately 4:1.

29. A nutraceutical composition, comprising:

pericarp from fruit of a *Garcinia mangostana* L. tree; and
at least one fruit or vegetable juice other than mangosteen juice combined with said pericarp into a nutraceutical composition.

30. The nutraceutical composition of claim 29, wherein said at least one juice comprises fruit juice.

31. The nutraceutical composition of claim 30, wherein said fruit juice is comprised of at least one of apple juice,

10

blueberry juice, cherry juice, cranberry juice, grape juice, pear juice, pear puree, raspberry juice and strawberry juice.

32. The nutraceutical composition of claim 29, wherein said at least one juice comprises vegetable juice.

33. The nutraceutical composition of claim 32, wherein said vegetable juice is comprised of at least one of alfalfa juice, carrot juice, celery juice, green barley juice, green lettuce juice, kale juice, parsley juice, spinach juice and tomato juice.

34. The nutraceutical composition of claim 29, further comprising processed fruit pulp from fruit of a *Garcinia mangostana* L. tree.

35. The nutraceutical composition of claim 29, wherein said at least one juice comprises juice from concentrate.

36. The nutraceutical composition of claim 29, wherein said at least one juice comprises a juice powder.

37. The nutraceutical composition of claim 29, wherein said nutraceutical composition comprises a syrup.

38. The nutraceutical composition of claim 29, wherein said nutraceutical composition comprises a powdered drink mix.

39. The nutraceutical composition of claim 29, wherein said nutraceutical composition comprises a tablet.

40. The nutraceutical composition of claim 29, wherein said nutraceutical composition comprises a capsule.

41. The nutraceutical composition of claim 29, wherein the percentage by weight of said pericarp and said juice is approximately 3% to 50% of the total weight of said nutraceutical composition.

42. The nutraceutical composition of claim 29, wherein the percentage by weight of said pericarp and said juice is approximately 5% to 25% of the total weight of said nutraceutical composition.

43. The nutraceutical composition of claim 29, wherein the percentage by weight of said pericarp and said juice is approximately 10% to 20% of the total weight of said nutraceutical composition.

44. A nutraceutical beverage comprising:

processing fruit of a *Garcinia mangostana* L. tree;

processing pericarp from fruit of a *Garcinia mangostana* L. tree;

providing at least one fruit or vegetable juice other than mangosteen juice; and

combining said processed fruit pulp, said processed pericarp and said at least one fruit or vegetable juice into a mixture.

45. The method of claim 44, wherein said providing comprises providing fruit juice.

46. The method of claim 45, wherein said providing comprises providing at least one of apple juice, apricot juice, banana juice, blueberry juice, cantaloupe juice, cherry juice, cranberry juice, grape juice, grapefruit juice, kiwi fruit juice, orange juice, papaya juice, pear juice, pear puree, pineapple juice, prune juice, raspberry juice and strawberry juice.

47. The method of claim 44, wherein said providing comprises providing vegetable juice.

48. The method of claim 47, wherein said providing comprises providing at least one of alfalfa juice, carrot juice, celery juice, green barley juice, green lettuce juice, kale juice, parsley juice, spinach juice and tomato juice.

49. The method of claim 44, further comprising flash pasteurizing said mixture.

50. The method of claim 44, wherein said providing comprises providing a fruit or vegetable concentrate.

51. The method of claim 50, further comprising providing a percentage by weight of said processed fruit pulp and said processed pericarp in an amount of approximately 3% to

US 6,730,333 B1

11

50% of the total weight of said processed fruit pulp, said processed pericarp and said juice concentrate.

52. The method of claim 50, further comprising providing a percentage by weight of said processed fruit pulp and said processed pericarp in an amount of approximately 5% to 25% of the total weight of said processed fruit pulp, said processed pericarp and said juice concentrate.

53. The method of claim 50, further comprising providing a percentage by weight of said processed fruit pulp and said processed pericarp in an amount of approximately 10% to 20% of the total weight of said processed fruit pulp, said processed pericarp and said juice concentrate.

54. The method of claim 50, further comprising providing a ratio of water to said processed fruit pulp, said processed pericarp and said juice concentrate of approximately 1:1.

55. The method of claim 50, further comprising providing a ratio of water to said processed fruit pulp, said processed pericarp and said juice concentrate of approximately 3:1.

56. The method of claim 50, further comprising providing a ratio of water to said processed fruit pulp, said processed pericarp and said juice concentrate of approximately 4:1.

57. The method of claim 44, further comprising forming said mixture into a syrup.

58. The method of claim 44, further comprising forming said mixture into a powdered drink mix.

59. The method of claim 44, further comprising forming said mixture into a tablet.

60. The method of claim 44, further comprising forming said mixture into a capsule.

61. The method of claim 44, further comprising forming said mixture into a beverage.

62. A method of preparing a nutraceutical composition, comprising:

grinding fruit from a *Garcinia mangostana* L. tree;
grinding pericarp from a *Garcinia mangostana* L. tree;
providing at least one juice concentrate other than mangosteen juice concentrate; and
combining said ground fruit pulp, said ground pericarp and said at least one juice concentrate other than mangosteen juice concentrate into a mixture.

63. The method of claim 62, wherein said providing comprises providing fruit juice concentrate.

64. The method of claim 63, wherein said providing comprises providing at least one of apple juice concentrate, apricot juice concentrate, banana juice concentrate, blueberry juice concentrate, cantaloupe juice concentrate, cherry juice concentrate, cranberry juice concentrate, grape juice concentrate, grapefruit juice concentrate, kiwi fruit juice concentrate, orange juice concentrate, papaya juice concentrate, pear juice concentrate, pear puree concentrate, pineapple juice concentrate, prune juice concentrate, raspberry juice concentrate and strawberry juice concentrate.

65. The method of claim 62, wherein said providing comprises providing vegetable juice concentrate.

66. The method of claim 65, wherein said providing comprises providing at least one of alfalfa juice concentrate, carrot juice concentrate, celery juice concentrate, green barley juice concentrate, green lettuce juice concentrate, kale juice concentrate, parsley juice concentrate, spinach juice concentrate and tomato juice concentrate.

12

67. The method of claim 62, further comprising providing a percentage by weight of said ground fruit pulp and said ground pericarp in an amount of approximately 3 to 50% of said mixture.

68. The method of claim 62, further comprising providing a percentage by weight of said ground fruit pulp and said pericarp in an amount of approximately 5 to 25% of said mixture.

69. The method of claim 62, further comprising providing a percentage by weight of said ground fruit pulp and said ground pericarp in an amount of approximately 10 to 20% of said mixture.

70. The method of claim 62, further comprising providing a ratio of water to said ground fruit pulp, said ground pericarp and said at least one juice concentrate other than mangosteen juice concentrate of approximately 1:1.

71. The method of claim 62, further comprising providing a ratio of water to said ground fruit pulp, said ground pericarp and said at least one juice concentrate other than mangosteen juice concentrate of approximately 3:1.

72. The method of claim 62, further comprising providing a ratio of water to said ground fruit pulp, said ground pericarp and said at least one juice concentrate other than mangosteen juice concentrate of approximately 4:1.

73. A method for preparing a nutraceutical beverage, comprising:

grinding whole pericarp from a *Garcinia mangostana* L. tree for form ground whole pericarp;

providing at least one fruit or vegetable juice other than mangosteen juice;

mixing said ground whole pericarp with said at least one fruit or vegetable juice other than mangosteen juice to form a liquid pericarp mixture; and
bottling said liquid pericarp mixture.

74. The method of claim 73, further comprising pasteurizing said liquid pericarp mixture before said bottling step.

75. The method of claim 73, further comprising providing a ratio of water to said liquid pericarp mixture of approximately 1:1.

76. The method of claim 73, further comprising providing a ratio of water to said liquid pericarp mixture of approximately 3:1.

77. The method of claim 73, further comprising providing a ratio of water to said liquid pericarp mixture of approximately 4:1.

78. The method of claim 73, wherein said providing comprises providing fruit juice.

79. The method of claim 78, wherein said providing comprises providing at least one of apple juice, apricot juice, banana juice, blueberry juice, cantaloupe juice, cherry juice, cranberry juice, grape juice, kiwi fruit juice, orange juice, papaya juice, pear juice, pear puree, pineapple juice, prune juice, raspberry juice and strawberry juice.

80. The method of claim 73, wherein said providing comprises providing vegetable juice.

81. The method of claim 80, wherein said providing comprises providing at least one of alfalfa juice, carrot juice, celery juice, green barley juice, green lettuce juice, kale juice, parsley juice, spinach juice and tomato juice.

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