LITERATURE SEARCH SUMMARY FOR BITTER MELON

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23. Momordica charantia (bitter gourd) peel, pulp, seed and whole fruit extract inhibits mouse skin papillomagenesis.
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33. Role of Momordica charantia in maintaining the normal levels of lipids and glucose in diabetic rats fed a high-fat and low-carbohydrate diet
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42. Antihyperglycemic effects of three extracts from Momordica charantia
43. Hypotriglyceridemic and hypocholesterolemic effects of anti-diabetic Momordica charantia (karela) fruit extract in streptozotocin-induced diabetic rats
44. Hypoglycemic activity of the fruit of the Momordica charantia in type 2 diabetic mice
45. Prevention of carcinogen-induced mouse skin papilloma by whole fruit aqueous extract of Momordica charantia
46. Demonstration of the hypoglycemic action of Momordica charantia in a validated animal model of diabetes
47. Antidiabetic and adaptogenic properties of Momordica charantia extract: An experimental and clinical evaluation
48. Studies on hypoglycemic effects of fruit pulp, seed, and whole plant of Momordica charantia on normal and diabetic model rats
49. Characterization of anti-lymphoma factor from the bitter melon (Momordica charantia)
50. In vivo antitumor activity of the bitter melon (Momordica charantia)
51. Wound-healing property of Momordica charantia L. fruit powder
52. Effects of Momordica charantia fruit juice on islet morphology in the pancreas of the streptozotocin-diabetic rat.
54. Regeneration of beta cells in islets of Langerhans of pancreas of alloxan diabetic rats by acetone extract of Momordica charantia (Linn.) (bitter gourd) fruits
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56. Momordica charantia constituents and antidiabetic screening of the isolated major compounds
57. Effect of bitter gourd (Momordica charantia) on glycaemic status in streptozotocin induced diabetic rats
58. Protein extract from fruit pulp of Momordica Charantia with insulin secretagogue and insulinomimetic activities
59. Cancer preventive potential of Momordica charantia L. against benzo(a)pyrene induced fore-stomach tumourigenesis in murine model system.
60. A kinetic model for in-vitro intestinal uptake of L-tyrosine and D (+)-glucose across rat everted gut sacs in the presence of Momordica charantia, a medicinal plant used in traditional medicine against diabetes mellitus.

61. Effect of dietary intake of freeze dried bitter gourd (Momordica charantia) in streptozotocin induced diabetic rats.

62. ANALGESIC EFFECT OF MOMORDICA-CHARANTIA SEED EXTRACT IN MICE AND RATS

63. Antidiabetic activity of Momordica charantia seeds on streptozotocin induced diabetic rats

64. 07014872 Herbal nutraceutical formulation for diabetics and process for preparing the same

65. 06852695 Orally active fraction of momordica charantia, active peptides thereof, and their use in the treatment of diabetes

66. 06831162 Protein/polypeptide-k obtained from Momordica charantia and a process for the extraction thereof

67. 06787124 Therapeutic treatment for blood sugar regulation

68. 06391854 Orally active fraction of momordica charantia, active peptides thereof, and their use in the treatment of diabetes

69. 06379718 Use of plant extracts for treatment of acne and furuncle

70. 06183747 Use of plant Momordica charactia extracts for treatment of acne acid

71. 06127338 Orally active fraction of momordica charantia, active peptides thereof, and their use in the treatment of diabetes

72. 05484889 Plant protein useful for treating tumors and HIV infection

73. 2008000063/WO-A1 HERBAL PRODUCT COMPRISING CINNAMON AND BITTER MELON FOR TREATING DIABETES

74. 2007111294/WO-A1 HISTAMINE RELEASE INHIBITOR

75. 2005074954/WO-A1 SIMAROUBA AMARA AND/OR MOMORDICA CHARANTIA EXTRACTS FOR THE TREATMENT OF COCCIDIOSIS IN POULTRY

76. 2005009351/WO-A2 DIETARY SUPPLEMENT FOR PROMOTING CONTROL OF BLOOD-SUGAR LEVELS AND ASSOCIATED PATHOLOGY IN TYPE 2 DIABETICS

77. 2003020293/WO-A1 HEALTH-CARE PRODUCT FOR REGULATING BLOOD GLUCOSE AND ITS PREPARATION METHOD

78. 2001005417/WO-A1 USE OF PLANT EXTRACTS FOR TREATMENT OF ACNE AND FURUNCLE

79. 2000061619/WO-A1 PROTEIN/POLYPEPTIDE-K OBTAINED FROM


82. 199206106/WO-A1 A PLANT PROTEIN USEFUL FOR TREATING TUMORS AND HIV INFECTION, -199206106/WO-A1/


84. 07190004 JP FUCOIDAN-CONTAINING HEALTH SUPPLEMENTARY FOOD

85. 07191478 JP BITTER MELON SEED PROCESSED FOOD, OR FOOD OR DRUG FOR IMPROVING OR TREATING INFERTILITY AND PROCESS FOR PRODUCING THE SAME

86. 07151431 JP HEALTH FOOD AND METHOD FOR PRODUCING THE SAME

87. 06304767 JP MOMORDICA CHARANTIA PRESERVED IN SOYBEAN PASTE

88. 05295972 JP HEALTHY TEA OF POWDER OF ERYTHRINA VARIEGATA L. VAR. ORIENTALIS FOR DIET

89. 05229930 JP HEALTH FOOD HAVING LOOFA OR MOMORDICA CHARANTIA AS MAIN INGREDIENT AND METHOD FOR PRODUCING THE FOOD

90. 05130843 JP VEGETABLE JAM AND METHOD FOR PRODUCING THE SAME

91. 05130769 JP METHOD FOR PRODUCING SPARKLING WINE
92. 04097180 JP FOOD MIXED WITH MOMORDICA CHARANTIA
93. 03128571 JP DIABETIC MEDICINE AND HEALTH FOOD
94. 02205953 JP ANTITUMOR COMPOSITION
95. 01335494 JP ANGIOTENSIN-CONVERTING ENZYME INHIBITOR
96. 01095541 JP BITTERED CARBONATED BEVERAGE
97. 01713491/EP-A1 SIMAROUBA AMARA AND/OR MOMORDICA CHARANTIA EXTRACTS FOR THE TREATMENT OF COCCIDIOSIS IN POULTRY
98. 01707211/EP-A1 CERAMIDASE INHIBITOR
99. 01563842/EP-A1 Simarouba amara and/or Momordica charantia extracts for the treatment of coccidiosis in poultry
100. 1005274/EP-A1 ORALLY ACTIVE FRACTION OF MOMORDICA CHARANTIA, ACTIVE PEPTIDES THEREOF, AND THEIR USE IN THE TREATMENT OF DIABETES
102. 20070148186/US-A1 Simarouba amara and/or momordica charantia extracts for the treatment of coccidiosis in poultry
103. 20070122496/US-A1 Herbal composition for treatment of immunocompromised conditions
104. 20060172020/US-A1 Dietary supplement for promoting control of blood-sugar levels and associated pathology in type 2 diabetes
106. 20020151687/US-A1 Protein/polypeptide-k obtained from momordica charantia and a process for the extraction thereof

1.

The effect of **Momordica charantia** capsule preparation on glycemic control in type 2 diabetes mellitus needs further studies.

07-26 200717493509
NDN-234-1877-7889-4
MED
Nat Lib of Medicine
AUTHORS: Dans, Antonio Miguel Limcaco; Villarruz, Maria Vanessa C; Jimeno, Cecilia A; Javelosa, Mark Anthony U; Chua, Joel; Bautista, Rhida; Velez, Gwyneth Giselle B
JOURNAL NAME: J Clin Epidemiol
VOLUME: 60
NUMBER: 6
PUBLICATION DATE: 2007 Jun
PP 554-9
DOCUMENT TYPE: Journal Article; Randomized Controlled Trial
JOURNAL CODE: 8801383
JOURNAL SUBSET: MEDJSIM
ISSN: 0895-4356
CORPORATE AUTHOR: Department of Medicine, Philippine General Hospital Medicine, Taft Avenue, Manila, Philippines. tDans@zpdee.net
BACKGROUND AND OBJECTIVES: Momordica charantia, locally known as Ampalaya, is being widely used and advertised for its hypoglycemic effects. However, to date, no large clinical trial has been published on the efficacy of any type of preparation. The main objective of this study is to determine if addition of M. charantia capsules to standard therapy can decrease glycosylated hemoglobin (hemoglobin A1c or HbA1c) levels in diabetic patients with poor sugar control. STUDY DESIGN AND SETTING: A randomized, double-blind, placebo-controlled trial was conducted between April and September 2004 at the outpatient clinics of the Philippine General Hospital. The trial included 40 patients, 18 years old and above, who were either newly diagnosed or poorly controlled type 2 diabetics with A1c levels between 7% and 9%. On top of the standard therapy, the patients were randomized to either M. charantia capsules or placebo. The treatment group received two capsules of M. charantia three times a day after meals, for 3 months. The control group received placebo at the same dose. The primary efficacy endpoint was change in the A1c level in the two groups. The secondary efficacy endpoints included its effect on fasting blood sugar, serum cholesterol, and weight. Safety endpoints included effects on serum creatinine, hepatic transaminases (Alanine aminotransferase/ALT and Aspartate aminotransferase/AST), sodium, potassium, and adverse events. RESULTS: Baseline characteristics between the treatment and control groups were similar. The difference in mean change in A1c between the two groups was 0.22% in favor of M. charantia (95% CI: -0.40 to 0.84) with P=0.4825. There was no significant effect on mean fasting blood sugar, total cholesterol, and weight or on serum creatinine, ALT, AST, sodium, and potassium. There were few adverse events and these were generally mild. CONCLUSION: This is the first randomized controlled trial to shed light on the issue concerning the hypoglycemic effects of M. charantia. The investigators targeted a 1% decline in A1c at the outset with an estimated power of 88%. With the observed decline of 0.24%, the achieved power was only 11%. For this reason, we are unable to make a definite conclusion about the effectiveness of M. charantia. However, the results of this study can be used estimate the sample size for bigger studies.

2.

Bitter gourd (Momordica Charantia): A dietary approach to hyperglycemia.

06-49  200616910221
NDN- 234-1756-7295-0
MED
Nat Lib of Medicine
AUTHORS: Krawinkel, Michael B; Keding, Gudrun B
JOURNAL NAME: Nutr Rev
VOLUME: 64
NUMBER: 7 Pt 1
PUBLICATION DATE: 2006 Jul
PP 331-7
46 REFERENCES
DOCUMENT TYPE: Journal Article; Review
JOURNAL CODE: 0376405
JOURNAL SUBSET: MEDJSIM
ISSN: 0029-6643
CORPORATE AUTHOR: Department of International Nutrition, Institute of Nutritional Science, Justus-Liebig-University, Giessen, Germany. michael.krawinkel@uni-giessen.de
PUBLICATION COUNTRY: United States
LANGUAGE: English
Bitter gourd (Momordica charantia) is a vegetable with pantropical distribution. It contains substances with antidiabetic properties such as charantin, vicine, and polypeptide-p, as well as other unspecific bioactive components such as
antioxidants. Metabolic and hypoglycemic effects of bitter gourd extracts have been demonstrated in cell culture, animal, and human studies. The mechanism of action, whether it is via regulation of insulin release or altered glucose metabolism and its insulin-like effect, is still under debate. Adverse effects are also known. Nevertheless, bitter gourd has the potential to become a component of the diet or a dietary supplement for diabetic and prediabetic patients. Well-designed interdisciplinary research by nutritionists, medical doctors, and agronomists is needed before a dietary recommendation can be given and a product brought to the market.

3.

**Effects of *Momordica charantia* L. (Cucurbitaceae) on indomethacin-induced ulcer model in rats.**

07-25  200516252198  
NDN- 234-1874-7890-9  
MED  
Nat Lib of Medicine  
AUTHORS: OzbakıA Dengiz, Gounnur; Goursan, Nesrin  
JOURNAL NAME: Turk J Gastroenterol  
VOLUME: 16  
NUMBER: 2  
PUBLICATION DATE: 2005 Jun  
PP 85-8  
DOCUMENT TYPE: Journal Article  
JOURNAL CODE: 9515841  
JOURNAL SUBSET: MEDJSIM  
ISSN: 1300-4948  
CORPORATE AUTHOR: Department of Pharmacology, Medical Faculty, Ataturk University, Erzurum, Turkey.  
gozbakis@atauni.edu.tr  
PUBLICATION COUNTRY: Turkey  
LANGUAGE: English  

BACKGROUND/AIMS: Fruits of *Momordica charantia* L.-cucurbitaceae have been frequently used in folk medicine for rapid healing of cutaneous lesions and peptic ulcer, especially in Western Anatolia in Turkey. METHODS: The anti-ulcerogenic effect of the oily extract of *Momordica charantia* fruits was investigated in male Sprague-Dawley rats. Animals were separated into six groups. Distilled water (control group), famotidine (40 mg/kg), oily extracts (5 and 10 ml/kg), and vehicles (olive oil -5 and 10 ml/kg) were given orally (gavage). Thirty minutes later indomethacin (25 mg/kg) was administrated to all the groups. Six hours later, animals were killed with decapitation. For each stomach, ulcerated and total areas were measured (mm2). The ulcer indexes for each stomach and the ulcer inhibition rates for each group were calculated, after which the stomachs were evaluated pathologically (polymorphonuclear leukocytes infiltration).

RESULTS: Ulcer inhibition rates were as follows: famotidine -91.54%, oily extract (5 ml/kg) -53.80%, oily extract (10 ml/kg) -98.04%, vehicle (olive oil -5 ml/kg) -18.40%, and vehicle (olive oil -10 ml/kg) -88.02%. According to polymorphonuclear leukocytes infiltration, oily extract (10 ml/kg) and vehicle (10 ml/kg) had similar effects to famotidine. CONCLUSIONS: The olive oil extract of *M. charantia* fruit did show a protective effect macroscopically.

4.

**Combined treatment of sodium orthovanadate and *Momordica charantia* fruit extract prevents alterations in lipid profile and lipogenic enzymes in alloxan diabetic rats.**

65-06  200515724444  
NDN- 234-1596-5044-4  
MED  

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Momordica charantia Linn., commonly called bitter gourd, is a medicinal plant used in the Ayurvedic system of medicine for treating various diseases including diabetes mellitus. Sodium orthovanadate (SOV) is also well-known insulin mimetic and an antidiabetic compound. Our laboratory has been using reduced doses of SOV along with administration of herbal extracts to alloxan diabetic rats and has established this combination as a good antihyperglycemic agent. The present study was undertaken to investigate the effects of treatment of Momordica fruit extract (MFE) and sodium orthovanadate, separately and in combination, on serum and tissue lipid profile and on the activities of lipogenic enzymes in alloxan induced diabetic rats. The results show that there was a significant (p < 0.01) increase in serum total lipids, triglycerides and total cholesterol levels after 21 days of alloxan diabetic rats. In the liver and kidney of diabetic rats the levels of total lipids and triglycerides also increased significantly (p < 0.01) while levels of total cholesterol decreased significantly (p < 0.01 and p < 0.05, respectively). The lipogenic enzymes showed decreased activity in the diabetic liver, while in kidney they showed an increased activity. When compared with the controls these changes were significant. The treatment of alloxan diabetic rats with MFE and SOV prevented these alterations and maintained all parameters near control values. Most effective prevention was however observed in a combined treatment of Momordica with a reduced dose of SOV (0.2%). The results suggest that Momordica fruit extract and SOV exhibit hypolipidemic as well as hypoglycemic effect in diabetic rats and their effect is pronounced when administered in combination.

5.

**Beneficial effects of Momordica charantia** seeds in the **treatment** of STZ-induced diabetes in experimental rats.

06-15  200515930730
NDN- 234-1642-0557-2
MED
Nat Lib of Medicine
AUTHORS: Sathishsekhar, Dhanasekar; Subramanian, Sorimuthu
JOURNAL NAME: Biol Pharm Bull
VOLUME: 28
NUMBER: 6
PUBLICATION DATE: 2005 Jun
PP: 978-83
DOCUMENT TYPE: Journal Article
JOURNAL CODE: 9311984
JOURNAL SUBSET: MEDJSIM
ISSN: 0918-6158
CORPORATE AUTHOR: Department of Biochemistry and Molecular Biology, University of Madras, Chennai, India.
The aim of the present study was to evaluate the effect of the aqueous extract of seeds of two varieties, namely a country and hybrid variety of Momordica charantia (MCSE1 and MCSEt2) on oxidative stress in plasma and pancreas of streptozotocin (STZ) induced diabetic rats. Oral administration of each of the seed extracts at a dosage of 150 mg/kg body weight for 30 d resulted in a significant reduction in plasma glucose, thiobarbituric acid-reactive substances, lipid-hydroperoxides, alpha-tocopherol and significant improvement in ascorbic acid, reduced glutathione and insulin. The treatment also resulted in a significant reduction in thiobarbituric acid reactive substances, lipid-hydroperoxides, superoxide dismutase, catalase, glutathione peroxidase and significant improvement in reduced glutathione in pancreas of drug treated diabetic rats when compared to the untreated diabetic rats. On the basis of results obtained, it may be concluded that the treatment of Momordica charantia seed varieties may effectively normalize the impaired oxidative stress in streptozotocin induced-diabetes than the glibenclamide treated groups.

6.

**Beneficial effects and mechanism of action of Momordica charantia juice in the treatment of streptozotocin-induced diabetes mellitus in rat.**

64-96 200415362486
NDN- 234-1540-3801-7
MED
Nat Lib of Medicine
AUTHORS: Ahmed, I; Adeghate, E; Cummings, E; Sharma, A K; Singh, J
JOURNAL NAME: Mol Cell Biochem
VOLUME: 261
NUMBER: 1-2
PUBLICATION DATE: 2004 Jun
PP: 63-70
DOCUMENT TYPE: Journal Article
JOURNAL CODE: 0364456
JOURNAL SUBSET: MEDJSIM
ISSN: 0300-8177
CORPORATE AUTHOR: Department of Biological Sciences, University of Central Lancashire, Preston, England, UK.
PUBLICATION COUNTR: Netherlands
LANGUAGE: English

This study investigated the beneficial effects and mechanism of action of the juice of Momordica charantia in streptozotocin (STZ)-induced diabetes mellitus in rats. Diabetes mellitus was associated with significant (p < 0.01) time course reductions in body weight, plasma insulin and the number of insulin positive cells per islet and significant (p < 0.01) time course elevation in blood glucose and osmolarity and systolic blood pressure compared to age-matched healthy controls. Oral intake of M. charantia juice by STZ-induced diabetic rats partially reversed all the diabetes-induced effects measured. Daily oral administration of M. charantia juice to STZ-induced diabetic rats significantly (p < 0.01) reduced the Na+- and K+-dependent absorptions of glucose by the brush border membrane vesicles of the jejum compared to the responses obtained in STZ-induced diabetic rat. Either insulin (100 MM) or the fruit juice lyophilised extract (5 microg x ml(-1)) can stimulate 14C-D-glucose uptake in L6 myotubes. These effects were completely blocked by wortmannin, an inhibitor of phosphatidylinositol 3-kinase. High concentrations (10-200 microg x ml(-1)) of M. charantia juice extract inhibited 14C-D-glucose uptake in L6 myotubes compared to the control response. The effect of M. charantia treatment was also investigated on myelinated fibre abnormalities in the tibial nerve of STZ-induced diabetic and control rats. The results show that diabetes was associated with significant (p < 0.05) reduction in the mean cross-sectional myelinated fibre fibres, axonal area, myelin area and maximal fibre area compared to end controls. Treatment of STZ-induced diabetic rats with M. charantia juice normalised the structural abnormalities of peripheral nerves. The results
indicate that M. charantia can exert marked beneficial effects in diabetic rats, and moreover, it can regulate glucose uptake into jejunum membrane brush border vesicles and stimulate glucose uptake into skeletal muscle cells similar to the response obtained with insulin.

7.

**Bitter melon to control high blood sugar**

65-02 200415646680
NDN- 234-1577-0623-0
MED
Nat Lib of Medicine
JOURNAL NAME: Schweiz Rundsch Med Prax
VOLUME: 93
NUMBER: 50
PUBLICATION DATE: 2004 Dec 8
PP: 2118
DOCUMENT TYPE: Journal Article
JOURNAL CODE: 8403202
JOURNAL SUBSET: MEDJSIM
ISSN: 1013-2058
PUBLICATION COUNTRY: Switzerland
LANGUAGE: German

8.

**Effect of bitter melon (Momordica charantia Linn) on level and function of natural killer cells in cervical cancer patients with radiotherapy.**

64-69 200312678140
NDN- 235-1402-9176-8
MED
Nat Lib of Medicine
AUTHORS: Pongnikorn, Surathat; Fongmoon, Duriya; Kasinrerk, Watchara; Limtrakul, Porn-Ngam
JOURNAL NAME: J Med Assoc Thai
VOLUME: 86
NUMBER: 1
PUBLICATION DATE: 2003 Jan
PP: 61-8
DOCUMENT TYPE: Clinical Trial; Journal Article; Randomized Controlled Trial
JOURNAL CODE: 7507216
JOURNAL SUBSET: MEDJSIM
ISSN: 0125-2208
CORPORATE AUTHOR: Lampang Regional Cancer Center, Lampang 52000, Thailand.
PUBLICATION COUNTRY: Thailand
LANGUAGE: English

Cervical cancer patients have a defective immune system. There is a decrease of total white blood cell count including lymphocytes and natural killer (NK) cells. NK cells, one type of lymphocytes, play a role to eliminate cancer cells by antibody dependent cell mediated cytotoxicity (ADCC) mechanism. Previous studies have shown that P-glycoprotein (170 kDa, transmembrane protein) may be a transporter for cytokine releasing in ADCC mechanism. This study proposed to
explore the role of bitter melon intake in cervical cancer patients undergoing normal treatment (radiotherapy). Subjects were divided into three groups: 1) normal control (women 35-55 years, n = 35), 2) patient control (n = 30) and 3) patient treatment (n = 30) groups. Patient control and patient treatment groups were cervical cancer patients (stage II or III) treated with radiotherapy (without or with bitter melon ingestion). Blood samples of patient control and patient treatment groups were analyzed for NK cells percentage and P-glycoprotein level. Bitter melon is a Thai herb. Previous studies have shown that bitter melon can stimulate lymphocyte activity in vitro and in vivo (mouse). The authors hope that bitter melon could stimulate the increase of NK cells percentage and P-glycoprotein level on the membrane in blood samples from cervical cancer patients who ingest bitter melon. The results showed an increased percentage of NK cells in patient control and patient treatment groups. The increase in each group is significant (p < 0.05) when compared with the percentage of NK cells from second and third blood sampling time (after radiation with or without bitter melon intake for 45 and 90 days) with first blood sampling time (before treatment). The results also show a significant decrease of P-glycoprotein level (p < 0.05) in second and third blood sampling times when compared with first blood sampling time of the patient treatment group. There was no significant difference of P-glycoprotein (P-gp) level from first, second and third blood sampling times in patient control group. Bitter melon ingestion did not affect NK cell level but it affected the decrease of P-gp level on NK cell membrane.

9.

Treatment with extracts of *Momordica charantia* and Eugenia jambolana prevents hyperglycemia and hyperinsulinemia in fructose fed rats.

64-36 200111390126
NDN- 236-1303-5482-2
MED
Nat Lib of Medicine
AUTHORS: Vikrant, V; Grover, J K; Tandon, N; Rathi, S S; Gupta, N
JOURNAL NAME: J Ethnopharmacol
VOLUME: 76
NUMBER: 2
PUBLICATION DATE: 2001 Jul
PP: 139-43
DOCUMENT TYPE: Journal Article
JOURNAL CODE: 7903310
JOURNAL SUBSET: MEDJSIM
ISSN: 0378-8741
CORPORATE AUTHOR: Department of Pharmacology, All India Institute of Medical Science, Ansari Nagar, New Delhi, India.
PUBLICATION COUNTRY: Ireland
LANGUAGE: English

Insulin resistance has been implicated as a major contributor to the development of hyperglycemia in NIIDM patients. Herbal extracts of Momordica charantia (MC) and Eugenia jambolana (EJ) have been shown to reduce hyperglycemia in diabetic animal models and human patients. However, no work has been done so far to assess their effect on insulin resistance. This study was undertaken to study the effects of different doses (100,200 and 400 mg per day) of alcoholic and aqueous extracts of MC and EJ on the metabolic parameters (body weight and serum glucose, insulin and triglycerides levels) of fructose fed rats. Fructose feeding for 15 days increased serum glucose and insulin levels markedly and triglycerides levels marginally vs. control (75.46+/-.2.41 vs. 55.59+/-.2.89 mg/dl, 6.26+/-.1.27 vs. 15.04+/-.2.43 mg/dl and 50.93+/-.3.30 vs.41.1+/-.3.33 mg/dl, respectively). Treatment with 400 mg per day of aqueous extracts of MC and EJ for 15 days substantially prevented hyperglycemia and hyperinsulinemia induced by a diet high in fructose (63.52+/-.2.9 and 66.46+/-.2.2 vs. 75.46+/-.2.4, respectively).
10. **Beneficial effects of flavonoids from Sesamum indicum, Emblica officinalis and *Momordica charantia*.**

54-20 20001113993
NDN- 236-1243-4411-0
MED
Nat Lib of Medicine
AUTHORS: Anila, L; Vijayalakshmi, N R
JOURNAL NAME: Phytother Res
VOLUME: 14
NUMBER: 8
PUBLICATION DATE: 2000 Dec
PP: 592-5
DOCUMENT TYPE: Journal Article
JOURNAL CODE: 8904486
JOURNAL SUBSET: MEDJSIM
ISSN: 0951-418X
CORPORATE AUTHOR: Department of Biochemistry, University of Kerala, Kariavattom, Thiruvananthapuram - 695 581, India.
PUBLICATION COUNTRY: ENGLAND
LANGUAGE: English

Flavonoids from Sesamum indicum (gingili), Emblica officinalis (gooseberry) and Momordica charantia (bittergourd) were analysed for their biological activities. Of the three sources, flavonoids isolated from Emblica officinalis exerted the maximum beneficial action by eliciting highly potent hypolipidaemic and hypoglycaemic activities. Moreover these flavonoids were effective in raising the haemoglobin levels in rats.

11. **Bitter melon therapy: an experimental treatment of HIV infection.**

63-41 199512346831
NDN- 237-0980-0743-6
MED
Nat Lib of Medicine
AUTHORS: Rebultan, S P
JOURNAL NAME: AIDS Asia
VOLUME: 2
NUMBER: 4
PUBLICATION DATE: 1995 Jul-Aug
PP: 6-7
DOCUMENT TYPE: Journal Article
JOURNAL CODE: 9891126
JOURNAL SUBSET: MEDJSJ
PUBLICATION COUNTRY: INDIA
LANGUAGE: English

People in Asia often use a medicinal plant, bitter melon (Momordica charantia), to treat various diseases (e.g., malaria). It has anti-viral, anti-tumor, and immune system boosting properties. Some Asians, especially Filipinos, eat bitter melon. They believe that bitter melon cleanses the blood and boosts the immune system. Rural Filipino midwives place a strong bitter melon extract in a newborn's mouth to activate the immune system. An HIV-infected man in California uses bitter melon therapy. Bitter melon therapy can be prepared by extracting juices from fresh leaves and fruits and adding purified
water to the extract to control the potency. Another preparation involves bringing two pounds of leaves and fruits in a gallon of purified water to a boil, allowing it to simmer for five minutes, filtering the decoction in a sterile strainer, and storing it in the refrigerator. The therapy can be administered either orally or via the rectum. The HIV-infected California man drank 10 ounces of the juices or a combination of juices and decoction each day for five days a week during the first year. He then switched to rectal retention enema due to the bad taste. He increased the dosage to 16 ounces/day and the duration to seven days a week. He held an inserted enema bag or rectal syringe until the juices/decoction had been absorbed. Sometimes he would infuse most of the therapy two times a day. Within seven days of rectal retention enema delivery of the bitter melon therapy, his energy level increased rapidly and his physical stamina and appetite improved. One year after therapy began, his CD4 count increased greatly. Later, his CD4/CD8 ratios had returned to normal. He no longer experiences acute sinusitis or recurrent respiratory infections. He has had no serious side effects.

12.

**Bitter melon: for a healthy sugar metabolism**

05-05 1304991
NDN- 118-0139-9310-0
IPA
Thomson Scientific
AUTHORS: Sellerberg, U
JOURNAL NAME: PZ Pharmazeutische Zeitung
JOURNAL TITLE ABBREVIATION: Pharm. Ztg.
VOLUME: 149
NUMBER: 38
PUBLICATION DATE: 2004
PP: 10,CP3
ISSN: 0031-7136
PUBLICATION DATE: 2004
CODE: PHZIAP
PUBLICATION COUNTRY: Germany
TRADE NAME: Bitter melon
LANGUAGE: German

Botanical characteristics and constituents of Momordica charantia (bitter melon), its use as a dietary supplement, pharmacological effects, and effectiveness for the treatment of diabetes mellitus are discussed.

13.

**Strawberry, loquat, mulberry, and bitter melon juices exhibit prophylactic effects on LPS-induced inflammation using murine peritoneal macrophages.**

12-17-07 2008-Hq0807-FSTA
NDN- 178-0141-7369-8
FST
IFIS
AUTHORS: Jin-Yuarn Lin; Ching-Yin Tang
JOURNAL NAME: Food Chemistry
VOLUME: 107
NUMBER: 4
PUBLICATION DATE: 2008
1587-1596 PAGES
We hypothesized the juices from strawberry, loquat, mulberry and bitter melon exhibit anti-inflammatory activities using lipopolysaccharide (LPS)-stimulated murine peritoneal macrophage cultures. Selected juices were administered as a prophylactic, postmortem or concurrent event relative to LPS stimulation to clarify the effective mechanisms. Selected fruits and vegetable juices were administered to macrophage cultures for 24h prior to LPS stimulation (model A). Selected samples were administered to cell cultures at 24h following LPS treatment (model B). Selected fruits and vegetable juices and LPS were simultaneously co-cultured with macrophages for 24h (model C). The LPS-induced secretions of pro-inflammatory cytokines interleukin (IL)-1Nb, IL-6, and tumor necrosis factor (TNF)-Na and anti-inflammatory cytokine IL-10 were determined. The results showed that strawberry, loquat, mulberry and bitter melon administration increased IL-10 production by LPS-stimulated peritoneal macrophages in dose-dependent manners in experimental model A. Simultaneously, loquat, mulberry, and bitter melon administrations significantly (P < 0.05) decreased the levels of IL-1Nb, IL-6 and/or TNF-Na. Administration with loquat and bitter melon to experimental model C significantly increased IL-10 production. This study suggests that strawberry, loquat, mulberry, and bitter melon juices exhibit a prophylactic effect on LPS-induced inflammation of peritoneal macrophages via increasing anti-inflammatory cytokine and/or decreasing pro-inflammatory cytokines secretions. All rights reserved, Elsevier.

14.

An experimental evaluation of the antidiabetic and antilipidemic properties of a standardized Momordica charantia fruit extract.

11-05-07 2008-Jq0286-FSTA
NDN-178-0141-2799-1
FST
IFIS
AUTHORS: Fernandes, N. P. C.; Lagishetty, C. V.; Panda, V. S.; Naik, S. R.
JOURNAL NAME: BMC Complementary and Alternative Medicine
VOLUME: 7
NUMBER: Sept.
PUBLICATION DATE: 2007
18 REFERENCES
DOCUMENT TYPE: Journal Article
PUBLISHER: Correspondence address, S. R. Naik, Prin. K. M. Kundnani Coll. of Pharm, Dep. of Pharmacology & Toxicol., Jote Joy Building, Rambhau Salgaonkar Marg, Cuffe Parade, Mumbai 400 005, India.
LANGUAGE: English

Extracts of Momordica charantia fruit (MCE bitter gourd) have been documented to elicit hypoglycaemic activity on various occasions. However, due to lack of standardization of these extracts, their efficacy remains questionable. The present study was undertaken with a well standardized MCE to investigate hypoglycaemic and hypolipidaemic activities in animal models and using in vitro methods. Subchronic study of MCE in alloxan-induced diabetic rats showed significant antihyperglycaemic activity, lowering blood glucose and percent glycosylated haemoglobin. The pattern of the glucose tolerance curve was also altered significantly. MCE treatment enhanced uptake of glucose by hemidiaphragm and inhibited glycogenolysis in liver slices in vitro. A significant reduction in the serum cholesterol and glyceride levels of obese rats following MCE treatment was also observed. Results suggest that the effects of MCE in alloxan-induced diabetic rats are due to enhanced insulin secretion by the islets of Langerhans, reduced glycogenesis in liver tissue, enhanced peripheral glucose utilization and increased serum protein levels. Furthermore, MCE treatment restored the
altered histological architecture of the islets of Langerhans. Hence, the biochemical, pharmacological and histopathological profiles of MCE indicate its potential antidiabetic activity and other beneficial effects in amelioration of complications associated with diabetes.

15.

**OD-chiro-inositol found in *Momordica charantia* fruit extract plays a role in reducing blood glucose in streptozotocin-diabetic rats.**

10-22-07  2008-Jq0140-FSTA  
NDN- 178-0141-1431-2  
FST  
IFIS  
AUTHORS: Tio Xia; Qin Wang  
JOURNAL NAME: Journal of Food Biochemistry  
VOLUME: 31  
NUMBER: 4  
PUBLICATION DATE: 2007  
551-562 PAGES  
DOCUMENT TYPE: Journal Article  
ISS: 0145-8884  
PUBLISHER: Coll. of Life Sci., East China Normal Univ., Shanghai 200062, China. Tel./fax +86-21-62235711.  
LANGUAGE: English  

*Momordica charantia*, commonly known as bitter gourd, has been shown to possess hypoglycaemic activity. However, the mechanism of its action is not known. Chemically synthesized OD-chiro-inositol (OD-CI), the component of insulin mediators, has previously been demonstrated to have antihyperglycaemic effects in rats. In this study, it was found that *M. charantia* fruits contain relatively high levels of OD-CI thus, it may be a source of OD-CI for reducing blood glucose concn. in diabetics. In fed streptozotocin (STZ) rats, a dose of *M. charantia* fruit extract containing 20 mg OD-CI/kg body wt. markedly reduced blood glucose and plasma insulin after oral administration. A significant effect on oral glucose tolerance was also noted in fasted STZ rats. Findings from this study demonstrate that *M. charantia* fruit extract is an effective source of OD-CI for lowering blood glucose concn. in rats, and therefore may be useful in the treatment of diabetes.

16.

**Inhibition of increases in blood glucose and serum neutral fat by *Momordica charantia* saponin fraction.**

04-16-07  2007-Jq2550-FSTA  
NDN- 178-0139-0564-5  
FST  
IFIS  
JOURNAL NAME: Bioscience, Biotechnology, and Biochemistry  
VOLUME: 71  
NUMBER: 3  
PUBLICATION DATE: 2007  
735-740 PAGES  
24 REFERENCES  
DOCUMENT TYPE: Journal Article  
ISSN: 0916-8451
Effects of an extract from a butanol-soluble fraction of hot air dried bitter gourd powder on blood glucose and neutral fat levels were determined in 6-wk-old male Wistar rats. Disaccharidase-inhibitory activity and pancreatic lipase-inhibitory activity of the fraction were measured, and in vivo sugar- and lipid-loading tests were performed. The fraction inhibited disaccharidase activity and elevation of blood glucose level after sucrose loading. The fraction also markedly inhibited pancreatic lipase activity and elevation of the blood neutral fat level after corn oil loading. Based on these findings, the main active component related to the anti-diabetic effect of bitter gourd present in the butanol fraction may be saponin. Blood glucose and blood neutral fat-lowering effects of bitter gourd were closely associated with its inhibitory activity against disaccharidase and pancreatic lipase.

17.

**Bitter melon: an exotic vegetable with medicinal values.**

08-08-05 2005-Jq2567-FSTA
NDN- 178-0132-9847-0
FST
IFIS
AUTHORS: Subratty, A. H.; Gurib-Fakim, A.; Mahomoodally, F.
JOURNAL NAME: Nutrition and Food Science
VOLUME: 35
NUMBER: 3, Issues 3 and 4 combined in print
PUBLICATION DATE: 2005
143-147 PAGES
21 REFERENCES
DOCUMENT TYPE: Journal Article
ISSN: 0034-6659
PUBLISHER: Dep. of Health & Med. Sci., Univ. of Mauritius, Reduit, Mauritius
LANGUAGE: English

This article focuses on some of the reported medicinal values of bitter melon (bitter gourd), an exotic vegetable, with particular reference to: properties of the vegetable; medicinal values; and local traditional uses.

18.

**Reduced adiposity in bitter melon (Momordica charantia) fed rats is associated with lower tissue triglyceride and higher plasma catecholamines.**

08-15-05 2005-Jq2643-FSTA
NDN- 178-0133-0364-3
FST
IFIS
AUTHORS: Qixuan Chen; Li, E. T. S.
JOURNAL NAME: British Journal of Nutrition
VOLUME: 93
NUMBER: 5
PUBLICATION DATE: 2005
747-754 PAGES
It has been shown that supplementation with freeze-dried bitter melon (BM; bitter gourd) juice slows wt. gain and reduces visceral fat in rats fed a high-fat diet. This study explored the metabolic consequences and possible mechanism(s) of these findings. In a 4-wk experiment, rats were fed a low-fat (70 g/kg) or a high-fat (300 g/kg) diet with or without BM (7.5 g/kg or 0.75%). BM-supplemented rats had lower energy efficiency, visceral fat mass, plasma glucose concn. and hepatic triacylglycerol concn., but higher levels of serum free fatty acids and plasma catecholamines. In the 2nd experiment, 7-wk BM supplementation in high-fat diet rats led to a lowering of hepatic triacylglycerol concn. (P < 0.05) and steatosis score (P < 0.05) similar to those in rats fed a low-fat diet. BM supplementation did not affect serum and hepatic cholesterol concn. However, plasma epinephrine and serum free fatty acid concn. were increased (P < 0.05). In the 3rd experiment, BM (7.5 and 15 g/kg) and 1.5% BM lowered triacylglycerol concn. in red gastrocnemius and tibialis anterior (P < 0.05) muscle, but a dose-response effect was not observed. These data suggest that chronic BM feeding leads to a general decrease in tissue fat accumulation and that such an effect is mediated in part by enhanced sympathetic activity and lipolysis. Thus, BM or its bioactive ingredient(s) could be used as a dietary adjunct in the control of body wt. and blood glucose.

19.

Microsomal triglyceride transfer protein gene expression and apoB secretion are inhibited by bitter melon in HepG2 cells.

04-25-05 2005-Jq1522-FSTA
NDN-178-0132-1837-9
FST
IFIS
AUTHORS: Nerurkar, P. V.; Pearson, L.; Efird, J. T.; Adeli, K.; Theriault, A. G.; Nerurkar, V. R.
JOURNAL NAME: Journal of Nutrition
VOLUME: 135
NUMBER: 4
PUBLICATION DATE: 2005
702-706 PAGES
30 REFERENCES
DOCUMENT TYPE: Journal Article
ISSN: 0022-3166
PUBLISHER: Lab. of Metabolic Disorders & Alternative Med., Dep. of Molecular Biosc. & Bioeng., Coll. of Tropical Agric. & Human Resources, Univ. of Hawaii, Honolulu, HI, USA.
LANGUAGE: English

Momordica charantia or bitter melon (bitter gourd) is traditionally used as an antidiabetic agent in Asia, Africa, and South America. Recent studies indicate that bitter melon can also lower plasma lipids and very low density lipoprotein (VLDL) in diabetic animal models as well as animals fed a high-fat diet, suggesting an effect on lipoprotein metabolism. This study examined the cellular and molecular mechanisms involved in the hypolipaemic activity of bitter melon and the impact of this product on regulation of apolipoprotein B (apoB). Human hepatoma cells, HepG2, treated with bitter melon juice (BMJ) for 24 h showed lower apoB secretion with and without the addition of lipids (P < 0.05). However, BMJ did not increase apoB secretion in cells treated with N-acetyl-leucyl-leucyl-norleucinal, indicating a lack of effect on the proteasomal degradation pathway. BMJ reduced the secretion of new triglycerides (P < 0.05) and decreased microsomal.
triglyceride transfer protein (MTP) mRNA expression, suggesting that lipid bioavailability and lipidation of lipoprotein assembly are likely involved in decreased apoB secretion. Interestingly, BMJ increased the nuclear translocation of the mature form of sterol regulatory element-binding protein-1c (SREBP-1c, P < 0.05), involved in MTP secretion. It is suggested that BMJ is a potent inhibitor of apoB secretion and triglyceride synthesis and secretion that may be involved in the plasma lipid- and VLDL-lowering effects observed in animal studies.

20.

The effects of bitter melon (Momordica charantia) extracts on serum and liver lipid parameters in hamsters fed cholesterol-free and cholesterol-enriched diets.
04-04-05  2005-Aj0969-FSTA
NDN- 178-0132-0328-0
FST
IFIS
AUTHORS: Senanayake, G. V. K.; Maruyama, M.; Sakono, M.; Fukuda, N.; Morishita, T.; Yukizaki, C.; Kawano, M.; Ohta, H.
JOURNAL NAME: Journal of Nutritional Science and Vitaminology
VOLUME: 50
NUMBER: 4
PUBLICATION DATE: 2004
253-257 PAGES
23 REFERENCES
DOCUMENT TYPE: Journal Article
ISSN: 0301-4800
PUBLISHER: Correspondence (Reprint) address, N. Fukuda, Dep. of Biochem. & Applied Biosci., Fac. of Agric., Univ. of Miyazaki, Miyazaki 889-2192, Japan.
LANGUAGE: English

The hypolipidaemic effect of dietary methanol fraction (BMMF) extracted from bitter melon (Koimidori variety) at 0.5 and 1.0% levels was examined in male golden Syrian hamsters fed diets supplemented with and without cholesterol. Results showed that inclusion of BMMF in the diet for 4 wk tended to reduce food intake and growth, although there was no difference in food efficiency (wt. gain/food intake). Dietary BMMF did not have an effect on serum triglyceride in hamsters fed diets free of cholesterol, while hypertriglyceridaemia induced by dietary cholesterol was significantly lowered in a dose-dependent manner in hamsters fed diets containing the BMMF. Serum total cholesterol concn. also tended to decrease in a dose-dependent manner following intake of increasing amounts of BMMF in the presence and absence of cholesterol in the diet. Effects of dietary BMMF on liver triglyceride and total cholesterol levels were marginal, although dietary cholesterol caused a marked accumulation of these lipid molecules in the liver. Results suggest that the BMMF contains some components that could ameliorate lipid disorders such as hyperlipidemia.

21.

Bitter melon (Momordica charantia) reduces adiposity, lowers serum insulin and normalizes glucose tolerance in rats fed a high fat diet.
08-04-03  2003-Jg2339-FSTA
NDN- 178-0127-8241-7
FST
IFIS
AUTHORS: Qixuan Chen; Chan, L. L. Y.; Li, E. T. S.
JOURNAL NAME: Journal of Nutrition
Bitter melon (BM; bitter gourd) is known for its hypoglycaemic activity but its effect on rats fed a hyperinsulinaemic high fat diet has not been examined. In a dose-response (0.375, 0.75 and 1.5%) study, oral glucose tolerance was improved in rats fed a high fat (HF; 30%) diet supplemented with freeze-dried BM juice at a dose of 0.75% or higher (P < 0.05). At the highest dose, BM-supplemented rats had lower energy efficiency (P < 0.05) and tended (P = 0.10) to have less visceral fat mass. In a subsequent experiment, rats habitually fed a HF diet either continued to consume the diet or were switched to a HF + BM, low fat (LF; 7%) or LF + BM diet for 7 wk; BM was added at 0.75%. Final body wt. and visceral fat mass of the latter 2 groups were similar to those of rats fed a LF diet for the entire duration. Rats switched to the HF + BM diet gained less wt. and had less visceral fat than those fed the HF diet (P < 0.05). The addition of BM did not change apparent fat absorption. BM supplementation to the HF diet improved insulin resistance, lowered serum insulin and leptin but raised serum free fatty acid concn. (P < 0.05). Results reveal that BM reduces adiposity in rats fed a HF diet and appears to have multiple influences on glucose and lipid metabolism that strongly counteract the untoward effects of a high fat diet.

22.

**Bitter melon malt vinegar increases daily energy turnover in rats.**

03-08-04 2004-Jq1241-FSTA
NDN-178-0129-3551-0
FST
IFIS
JOURNAL NAME: Journal of Nutritional Science and Vitaminology
VOLUME: 49
NUMBER: 6
PUBLICATION DATE: 2003
428-433 PAGES
24 REFERENCES
DOCUMENT TYPE: Journal Article
ISSN: 0301-4800
PUBLISHER: Correspondence (Reprint) address, K. Miyasaka, Dep. of Clinical Physiology, Tokyo Metropolitan Inst. of Gerontology, Tokyo 173-0015, Japan.
LANGUAGE: English

Male 12-wk-old rats (LETO and OLETF strains) were fed an experimental diet for 12 wk based on bitter melon malt vinegar-water and compared to rats fed on commerical rat chow (CRF-1; control diet) with respect to respiratory quotient (RQ) and blood or plasma parameters associated with diabetes mellitus (DM). To prepare the experimental diet, a mash consisting of a 35% ethanolic extract from bitter melon malt vinegar-water (8 (extract):50 (malt):42 (water)) was subjected to further acetate fermentation. The resulting vinegar was converted to dried vinegar powder by spray drying.
after adsorption on dextrin, which was mixed with CRF-1 at the ratio of 1:19. Results showed that administration of the experimental diet increased daily food intake as well as daily energy expenditure in both rat strains. RQ decreased markedly in the experimental group (LETO strain), which was reflected by increased energy consumption from fat as well as decreased energy consumption from carbohydrate, while no marked difference in RQ was observed between both dietary groups of the OLETF strain. The profiles of diurnal energy expenditure in both dietary groups of the LETO strain exerted 2 peaks before lights-on and lights-off. A clear difference was observed between both dietary groups of the OLETF strain. Reproduction of the 2 peaks was conspicuous in the vinegar diet-fed group, but there was a lack of such peaks in the control group. No change was observed in blood HbA1c levels but a marked increase occurred in plasma cholesterol in the vinegar diet-fed OLETF rats. It is concluded that long-term administration of bitter melon malt vinegar would suppress the lowering of energy turnover that is inherent with ageing and improve anorexia rather than exert a preventive effect against non-insulin-dependent DM.

23.

**Momordica charantia** (bitter gourd) peel, pulp, seed and whole fruit extract inhibits mouse skin papillomagenesis.

98-07 1998-07-j1547-FSTA
NDN-178-0115-9994-5
FST
IFIS
AUTHORS: Anjali Singh; Satya Prakash Singh; Ramesh Bamezai
JOURNAL NAME: Toxicology Letters 94 (1) 37-46
PUBLICATION DATE: 1998
29 REFERENCES
DOCUMENT TYPE: Article
ISSN: 0378-4274
PUBLISHER: Jefferson Alumni Hall, Room 461, Thomas Jefferson Univ., Philadelphia, PA 19107, USA. Fax +1 215 9237145
LANGUAGE: English

The in vivo chemopreventive efficacy of Momordica charantia (bitter gourd) peel, pulp, seed and whole fruit extract was assessed during the pre-initiation and/or during the tumour promotion stage together with the mechanistic role that biotransformation system enzymes may have in modulation of murine skin papillomagenesis pattern. Results suggest that the max. chemopreventive potential is in the Momordica peel. Equivocal efficacy is in Momordica seed and whole fruit extract. Biotransformation system enzymes may be the cause of reduced papillomagenesis.

24.

**Bitter gourd (Momordica charantia): A potential mechanism in anti-carcinogenesis of colon**

07-23 2007226976
NDN-012-2699-2326-9
EMB
Elsevier
AUTHORS: Khan, S. A.
JOURNAL NAME: World Journal of Gastroenterology
ABBREVIATED JOURNAL TITLE: WORLD J. GASTROENTEROL.
VOLUME: 13
NUMBER: 11
PUBLICATION DATE: 21 MAR 2007
PP: 1761-1762
Antioxidant and chemoprotective properties of *Momordica charantia* L. (bitter melon) fruit extract

07-11 2007088954
NDN- 012-2684-3231-2
EMB
Elsevier
AUTHORS: Semiz, A.; Sen, A.
JOURNAL NAME: African Journal of Biotechnology
ABBREVIATED JOURNAL TITLE: AFR. J. BIOTECHNOL.
VOLUME: 6
NUMBER: 3
PUBLICATION DATE: 05 FEB 2007
PP: 273-277
DOCUMENT TYPE: Journal
COPYRIGHT: Copyright 2007 Elsevier B.V., All rights reserved.
ISSN: 1684-5315
PUBLICATION DATE: 2007
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AUTHOR ADDRESS: A. Semiz, Department of Biology, Pamukkale University, 20070 Kinikli-Denizli
COUNTRY OF AUTHOR: Turkey
LITERARY INDICATOR: Article
ASSIGNEE COUNTRY: 030; 037; 048
PUBLICATION COUNTRY: Kenya
LANGUAGE: ENGLISH

Momordica charantia, commonly known as bitter melon, is used as a vegetable in number of countries. Extracts of *M. charantia* plant, fruit pulp, and seed have been reported to have a wide medicinal use in the traditional medical systems, most often as hypoglycemic and anti-diabetic agents. We have studied the effect of *M. charantia*, collected from Kazdaglari (Mount Ida) in Balikesir, fruit extract on glutathione S-transferases (GSTs), cytochrome P450s (CYPs), and antioxidant enzymes in rats. Male Wistar rats, aged 12 weeks and weighing 200-250 g, were given 200 mg *M. charantia* fruit extract per kg body weight, i.e., for four consecutive days. At the end of the experimental period, the animals were sacrificed, and liver, kidney, and lung were isolated. Our results have indicated significant increase in especially hepatic antioxidant enzymes such as superoxide dismutase (SOD), catalase (CAT) and glutathione peroxidase (GPx) activities. The strongest increase (about 9-fold) was observed in GPx activities while about 2 to 5-fold increases were observed in...
SOD and CAT. M. charantia fruit extract also exhibited hepatoprotective effects in CCl4-intoxicated rats. In addition, about 50% increase was also noted with hepatic cytosolic GSTs. On the other hand, treatments of rats with M. charantia significantly reduced both ethoxyresorufin O-deethylase (EROD) and methoxyresorufin O-deethylase (MROD) activities in rat liver microsomes, which are known to be catalyzed by CYP1A isoforms. These results suggest that the M. charantia fruit extract possesses the anti-oxidant effects besides having protective activities in rats. ©copy; 2007 Academic Journals.

26.

Hypoglycemic effect of the seeds of *Momordica charantia*

07-03 2006610958
NDN- 012-2674-4855-8
EMB
Elsevier
AUTHORS: Omar, S. H.; Ansari, Z.; Nehal, M.
JOURNAL NAME: Fitoterapia
ABBREVIATED JOURNAL TITLE: FITOTERAPIA
VOLUME: 78
NUMBER: 1
PP: 46-47
DOCUMENT TYPE: Journal
COPYRIGHT: Copyright 2007 Elsevier B.V., All rights reserved.
ISSN: 0367-326X
PUBLICATION DATE: 2007
CODEN: FTRPA
EMAIL: syedharrisomar@rediffmail.com
AUTHOR ADDRESS: S.H. Omar, Department of Pharmacology, Jamia Hamdard, New Delhi
COUNTRY OF AUTHOR: India
LITERARY INDICATOR: Article
ASSIGNEE COUNTRY: 003; 030; 037; 006
PUBLICATION COUNTRY: Netherlands
LANGUAGE: ENGLISH

A hypoglycemic active principle (MCK\(\text{tn}\)3\(\text{tn}\)P\(\text{tn}\)8\(\text{tn}\)) obtained from a fraction of the ethanolic extract of Momordica charantia seeds, given by intraperitoneal injection to alloxan-diabetic rats at a dose of 15\(\text{mg/kg}\) showed a significant effect. ©copy; 2006 Elsevier B.V. All rights reserved.

27.

Effect of methanolic extract of *Momordica charantia* L leaves on alloxan treated wistar rats

07-01 2006593728
NDN- 012-2672-7649-6
EMB
Elsevier
JOURNAL NAME: Journal of Medical Sciences
ABBREVIATED JOURNAL TITLE: J. MED. SCI. (PAKISTAN)
VOLUME: 6
NUMBER: 5
Phytochemistry of Momordica charantia L. leaves revealed the presence of flavonoids and tannins. The hypoglycaemic effect of M. charantia leaves as well as the plant's effect on rats' weight under different treatment patterns was assessed. Forty wistar rats weighing between 140-250g were categorized into eight experimental groups of five wistar rats per group. The efficacy of 250 mg kg<sup>-1</sup> methanolic extract of the leaves on alloxan-induced diabetic rats showed mild hypoglycaemic effect within 24 h. There was no evidence to establish that parenteral route is more efficacious than the oral route of administration of the treatment plant. The experimental rats that were alloxan-treated to induce hyperglycaemia and treated with 500 mg kg<sup>-1</sup> of methanolic extract of the treatment plant as well as those induced with alloxan without treatment with methanolic extract of M. charantia showed significant loss in weight (p < 0.05) after twelve weeks. The controls as well as those treated exclusively with methanolic extract of treatment plant without alloxan treatment had significant weight gain (p < 0.05). The results generally indicate that methanolic extract of the leaves of M charantia has hypoglycaemic potential especially on long-term use.

28.

Anti-diabetic potentials of *Momordica charantia* and Andrographis paniculata and their effects on estrous cyclicity of alloxan-induced diabetic rats

06-15  2006151676
NDN- 012-2628-5377-8
EMB
Elsevier
JOURNAL NAME: Journal of Ethnopharmacology
ABBREVIATED JOURNAL TITLE: J. ETHNOPHARMACOL.
VOLUME: 105
PUBLICATION DATE: 21 APR 2006
PP: 196-200
DOCUMENT TYPE: Journal
COPYRIGHT: Copyright 2006 Elsevier B.V., All rights reserved.
ISSN: 0378-8741
PUBLICATION DATE: 2006
CODEN: JOETD
EMAIL: bsr103@jefferson.edu
AUTHOR ADDRESS: B.A.S. Reyes, Thomas Jefferson University, Department of Neurosurgery, Farber Institute for Neurosciences, Philadelphia, PA 19107
COUNTRY OF AUTHOR: United States
LITERARY INDICATOR: Article
ASSIGNEE COUNTRY: 003; 037
Momordica charantia and Andrographis paniculata are the commonly used herbs by the diabetic patients in Pampanga, Philippines. While the anti-diabetic potential of Momordica charantia is well established in streptozocin- or alloxan-induced diabetic animals, the anti-diabetic potential of Andrographis paniculata in alloxan-induced diabetic rat is not known. Neither the effects of these herbs on estrous cyclicity of alloxan-induced diabetic rats are elucidated. Thus, in these experiments, Momordica charantia fruit juice or Andrographis paniculata decoction was orally administered to alloxan-induced diabetic rats. Rats that were treated with Momordica charantia and Andrographis paniculata had higher body weight (BW) compared with diabetic positive control (P < 0.01) from day 22 to day 27 (D27) but exhibited lower BW than the non-diabetic control (P < 0.05). These rats had lower feed (P < 0.05) and liquid intakes (P < 0.01) compared with diabetic positive control from day 17 to D27, but similar with the non-diabetic control. The blood glucose levels in these groups were significantly reduced from day 12 to D27 compared with diabetic positive control (P < 0.01), however, comparable with non-diabetic control. The diabetic positive control had extended mean estrous cycles (8 days) compared to Momordica charantia and Andrographis paniculata-treated diabetic rats (5 days; P < 0.05). Our results suggest that the anti-diabetic potentials of Momordica charantia and Andrographis paniculata could restore impaired estrous cycle in alloxan-induced diabetic rats.

29.

Slow acting protein extract from fruit pulp of Momordica charantia with insulin secretagogue and insulinomimetic activities

06-30 2006270524
NDN- 012-2643-9543-0
EMB
Elsevier
JOURNAL NAME: Biological and Pharmaceutical Bulletin
ABBREVIATED JOURNAL TITLE: BIOL. PHARM. BULL.
VOLUME: 29
NUMBER: 6
PP: 1126-1131
DOCUMENT TYPE: Journal
COPYRIGHT: Copyright 2006 Elsevier B.V., All rights reserved.
ISSN: 0918-6158; 1347-5215
PUBLICATION DATE: 2006
CODEN: BPBLE
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AUTHOR ADDRESS: S. Yibchok-Anun, Department of Pharmacology, Faculty of Veterinary Science, Chulalongkorn University, Bangkok 10330
COUNTRY OF AUTHOR: Thailand
LITERARY INDICATOR: Article
ASSIGNEE COUNTRY: 003; 030; 037; 039
PUBLICATION COUNTRY: Japan
LANGUAGE: ENGLISH

The protein from Thai bitter gourd (Momordica charantia) fruit pulp was extracted and studied for its hypoglycemic effect. Subcutaneous administration of the protein extract (5, 10 mg/kg) significantly and markedly decreased plasma glucose concentrations in both normal and streptozotocin-induced diabetic rats in a dose-dependent manner. The onset of the protein extract-induced antihyperglycemia/hypoglycemia was observed at 4 and 6 h in diabetic and normal rats,
respectively. This protein extract also raised plasma insulin concentrations by 2 fold 4 h following subcutaneous administration. In perfused rat pancreas, the protein extract (10 &mu;g/ml) increased insulin secretion, but not glucagon secretion. The increase in insulin secretion was apparent within 5 min of administration and was persistent during 30 min of administration. Furthermore, the protein extract enhanced glucose uptake into C &superscript;2</superscript>C<i>&inf;</i>&superscript;12</superscript>&inf; myocytes and 3T3-L1 adipocytes. Time course experiments performed in rat adipocytes revealed that M. charantia protein extract significantly increased glucose uptake after 4 and 6 h of incubation. Thus, the M. charantia protein extract, a slow acting chemical, exerted both insulin secretagogue and insulinomimetic activities to lower blood glucose concentrations in vivo. &copy; 2006 Pharmaceutical Society of Japan.

30.

Lipid lowering effects of <i>Momordica charantia</i> (Bitter Melon) in HIV-1-protease inhibitor-treated human hepatoma cells, HepG2

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EMB
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JOURNAL NAME: British Journal of Pharmacology
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EMAIL: pratibha@hawaii.edu
AUTHOR ADDRESS: P.V. Nerurkar, Laboratory of Metabolic Disorders and Alternative Medicine, Department of Molecular Biosciences and Bioengineering, College of Tropical Agriculture and Human Resources, East-West Road, Honolulu, HI 96822
COUNTRY OF AUTHOR: United States
LITERARY INDICATOR: Article
ASSIGNEE COUNTRY: 030; 037
PUBLICATION COUNTRY: United Kingdom
TRADE NAMES: kaletra
LANGUAGE: ENGLISH

1 Hyperlipidemic effects of HIV-1-protease inhibitors (PI) are associated with increased hepatic production of triglyceride (TG)-rich lipoproteins, rather than lipoprotein clearance. PI are known to increase apolipoprotein B (apoB) secretion, apoC-III mRNA expression and decrease apoA-1 secretion. Nutritional therapy remains an important strategy to manage PI-associated hyperlipidemia. 2 This study investigated the in vitro efficacy of Asian vegetable, Momordica charantia or bitter melon (BM) to ameliorate PI-associated apoB and lipid abnormalities in HepG2 cells. 3 Our study demonstrates that bitter melon juice (BMJ) significantly reduced apoB secretion and apoC-III mRNA expression and normalized apoA-I expression in PI-treated HepG2 cells. BMJ also significantly reduced cellular TG and microsomal TG transfer protein, suggesting that lipid bioavailability and lipiddation of apoB assembly may play a role in decreased apoB secretion. 4 Identifying molecular targets of BM may offer alternative dietary strategies to decrease PI-associated hyperlipidemia and improve quality of life among HIV-1-infected patients. &copy; 2006 Nature Publishing Group All rights reserved.
31.

Potential applications of immobilized bitter gourd (Momordica charantia) peroxidase in the removal of phenols from polluted water
06-41 2006445254
NDN- 012-2659-0390-1
EMB
Elsevier
AUTHORS: Akhtar, S.; Husain, Q.
JOURNAL NAME: Chemosphere
ABBREVIATED JOURNAL TITLE: CHEMOSPHERE
VOLUME: 65
NUMBER: 7
PP: 1228-1235
DOCUMENT TYPE: Journal
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ISSN: 0045-6535
PUBLICATION DATE: 2006
CODEN: CMSHA
EMAIL: qayyumhusain@rediffmail.com
AUTHOR ADDRESS: Q. Husain, Department of Biochemistry, Faculty of Life Sciences, Aligarh Muslim University, Aligarh, 202002 UP
COUNTRY OF AUTHOR: India
LITERARY INDICATOR: Article
ASSIGNEE COUNTRY: 046
PUBLICATION COUNTRY: United Kingdom
LANGUAGE: ENGLISH

The potential applications of immobilized bitter gourd peroxidase in the treatment of model wastewater contaminated with phenols have been investigated. The synthetic water was treated with soluble and immobilized enzyme preparations under various experimental conditions. Maximum removal of phenols was found in the buffers of pH values 5.0-6.0 and at 40 &deg;C in the presence of 0.75 mM H2O2. Fourteen different phenols were independently treated with soluble and immobilized bitter gourd peroxidase in the buffer of pH 5.6 at 37 &deg;C. Chlorinated phenols and native phenol were significantly removed while other substituted phenols were marginally removed by the treatment. Chlorophenol and pyrogallol were recalcitrant to the action of bitter gourd peroxidase. Immobilized bitter gourd peroxidase preparation was capable of removing remarkably high percentage of phenols from the phenolic mixtures. Significantly higher level of total organic carbon was removed from the model wastewater containing individual phenol or complex mixture of phenols by immobilized bitter gourd peroxidase as compared to the soluble enzyme. 2,4-dichlorophenol and a phenolic mixture were also treated in a stirred batch reactor with fixed quantity of enzyme for longer duration. The soluble bitter gourd peroxidase ceased to function after 3 h while the immobilized enzyme was active even after 6 h of incubation with phenolic solutions. © 2006 Elsevier Ltd. All rights reserved.

32.

Using bitter melon to treat diabetes
06-08 2006050640
NDN- 012-2619-2175-8
EMB
Elsevier
Bitter melon (Momordica charantia) has a long history of use as a food and as a hypoglycemic agent. This article reviews scientific evidence of its efficacy for treating diabetes mellitus and reviews studies on this plant's effects on pregnancy and fertility, and use as an abortifacient, an understanding of which is important to bitter melon's safe use.

### Role of Momordica charantia in maintaining the normal levels of lipids and glucose in diabetic rats fed a high-fat and low-carbohydrate diet

05-50 2005510207
NDN- 012-2606-0006-4
EMB
Elsevier
AUTHORS: Chaturvedi, P.
JOURNAL NAME: British Journal of Biomedical Science
JOURNAL TITLE ABBREVIATION: BR. J. BIOMED. SCI.
VOLUME: 62
NUMBER: 3
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ISSN: 0967-4845
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CODEN: BJMSE
EMAIL: chaturve@mopipi.ub.bw
AUTHOR ADDRESS: Dr. P. Chaturvedi, Department of Biological Sciences, University of Botswana, PBag 0074, Gaborone
COUNTRY OF AUTHOR: Botswana
PUBLICATION COUNTRY: United Kingdom
LANGUAGE: ENGLISH

This study aims to assess whether or not a methanol extract of Momordica charantia is able to normalise lipid and glucose levels in diabetic rats fed a high-fat and a low-carbohydrate diet. Different doses of the extract are administered orally for
45 days. The rats are bled at the beginning of the experiment and at 15-day intervals. Blood glucose, triglyceride, low-density lipoprotein (LDL), high-density lipoprotein (HDL) and cholesterol are estimated. Results showed that M. charantia extract normalised blood glucose level, reduced triglyceride and LDL levels and increased HDL level. The animals reverted to a diabetic state once the M. charantia extract was discontinued.

34.

**Bitter melon - Reduction of blood sugar levels by supplementary balanced diet with** [Momordica charantia](#)

04-01 2004117728
NDN- 012-2484-0895-2
EMB
Elsevier
AUTHORS: Bielenberg, J.
JOURNAL NAME: Arztezeitschrift fur Naturheilverfahren
JOURNAL TITLE ABBREVIATION: ARZTEZ. NATURHEILVERFAHREN
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COPYRIGHT: Copyright 2004 Elsevier B.V., All rights reserved.
ISSN: 0720-6003
PUBLICATION DATE: 2004
CODEN: AENAD
PUBLICATION COUNTRY: Germany
LANGUAGE: GERMAN

Bitter melon (Momordica charantia, bittergourd) is a very common vegetable that is used in experience-based medicine to lower blood sugar levels. In a recent field study on 41 diabetic subjects involving a treatment phase of 6 months, the blood glucose level was reduced by up to 25% from the baseline value of 200 mg/dl and the HbA1c value was lowered by an average of 0.5 percent by Momordica charantia. Bitter melon can be applied as a supplementary balanced diet under the direction of a physician.

35.

**Pharmacological actions and potential uses of** [Momordica charantia]: A review

04-35 2004248413
NDN- 012-2531-0328-2
EMB
Elsevier
AUTHORS: Grover, J. K.; Yadav, S. P.
JOURNAL NAME: Journal of Ethnopharmacology
JOURNAL TITLE ABBREVIATION: J. ETHNOPHARMACOL.
VOLUME: 93
NUMBER: 1
PP: 123-132
DOCUMENT TYPE: Journal
COPYRIGHT: Copyright 2005 Elsevier B.V., All rights reserved.
ISSN: 0378-8741
PUBLICATION DATE: 2004
Since ancient times, plants and herbal preparations have been used as medicine. Research carried out in last few decades has certified several such claims of use of several plants of traditional medicine. Popularity of Momordica charantia (MC) in various systems of traditional medicine for several ailments (antidiabetic, abortifacient, anthelmintic, contraceptive, dysmenorrhea, eczema, emmenagogue, antimalarial, galactagogue, gout, jaundice, abdominal pain, kidney (stone), laxative, leprosy, leucorrhea, piles, pneumonia, psoriasis, purgative, rheumatism, fever and scabies) focused the investigator's attention on this plant. Over 100 studies using modern techniques have authenticated its use in diabetes and its complications (nephropathy, cataract, insulin resistance), as antibacterial as well as antiviral agent (including HIV infection), as anthelmintic and abortifacient. Traditionally it has also been used in treating peptic ulcers, interestingly in a recent experimental studies have exhibited its potential against Helicobacter pylori. Most importantly, the studies have shown its efficacy in various cancers (lymphoid leu30431kemia, lymphoma, choriocarcinoma, melanoma, breast cancer, skin tumor, prostatic cancer, squamous carcinoma of tongue and larynx, human bladder carcinomas and Hodgkin's disease). There are few reports available on clinical use of MC in diabetes and cancer patients that have shown promising results. (copyright) 2004 Elsevier Ireland Ltd. All rights reserved.

36.

Suppressive activity of the fruit of Momordica charantia with exercise on blood glucose in type 2 diabetic mice

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Elsevier
JOURNAL NAME: Biological and Pharmaceutical Bulletin
JOURNAL TITLE ABBREVIATION: BIOL. PHARM. BULL.
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DOCUMENT TYPE: Journal
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ISSN: 0918-6158; 1347-5215
PUBLICATION DATE: 2004
CODEN: BPBLE
EMAIL: miura@suzuka-u.ac.jp
AUTHOR ADDRESS: T. Miura, Department of Clinical Nutrition, Suzuka University of Medical Science, 1001-1 Kishioka, Suzuka, Mie 510-0293
COUNTRY OF AUTHOR: Japan
PUBLICATION COUNTRY: Japan
LANGUAGE: ENGLISH

The antidiabetic activity of Momordica charantia L. (Cucurbitaceae) with exercise was investigated in KK-Ay mice, an animal model with type 2 diabetes with hyperinsulinemia. The water extract of the fruit of Momordica charantia L. (MC) with exercise reduced the blood glucose of KK-Ay mice 5 weeks after oral administration (p<0.001), and also
significantly lowered the plasma insulin of KK-Ay mice under similar conditions (p<0.01). The blood glucose of MC with exercise is lower than that of MC only or exercise only 5 weeks after the administration. MC with exercise decreased blood glucose in a glucose tolerance test. These results suggest that MC with exercise is useful for type 2 diabetic cure. (copyright) 2004 Pharmaceutical Society of Japan.

37.

Phytochemical determination and extraction of *mohdorica charantia* fruit and its hypoglycemic potentiation of oral hypoglycemic drugs in diabetes mellitus (NIDDM)

04-35  2004151866  
NDN- 012-2521-4246-3  
EMB  
Elsevier  
AUTHORS: Tongia, A.; Tongia, S. K.; Dave, M.  
JOURNAL NAME: Indian Journal of Physiology and Pharmacology  
JOURNAL TITLE ABBREVIATION: INDIAN J. PHYSIOL. PHARMACOL.  
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NUMBER: 2  
PP: 241-244  
DOCUMENT TYPE: Journal  
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ISSN: 0019-5499  
PUBLICATION DATE: 2004  
CODEN: IJPPA  
AUTHOR ADDRESS: S.K. Tongia, Abhishek Tongia 36 Manishpurri, Saket End, Indore - 452 018 (M.P.)  
COUNTRY OF AUTHOR: India  
PUBLICATION COUNTRY: India  
TRADE NAMES: glyciaphage; daonil  
LANGUAGE: ENGLISH

Momordica charantia (MC) fruit was subjected to phytochemical and pharmacological interaction studies with oral hypoglycemics in NIDDM patients. Phytochemical, chromatraphical analysis and extraction of methanolic MC fruit soft (semi-solid form) in CCl<inf>4</inf> + C<inf>n</inf> + H<inf>n</inf> solvent system yielded 15 diverse chemical constituents - alkaloids, glycosides, aglycone, tannin, sterol, phenol and protein. The CCl<inf>4</inf> + C<inf>n</inf> solvent system was used orally in a dose of 200 mg twice daily (BD) for pharmacological interactions with two diversely acting oral hypoglycemic agents- 1) metformin BD and 2) glibenclamide BD in 15 patients of either sex (52-65 years of age) of NIDDM. It was observed that with CCl<inf>4</inf> + C<inf>n</inf> - MC soft extract plus half doses of metformin or glibenclamide or both in combination caused hypoglycemia greater than that caused by full doses used in the study with 7 days treatment. Conclusively the extract acts in synergism with oral hypoglycemics and potentiates their hypoglycemia in NIDDM.

38.

Does *bitter melon* contain an activator of AMP-activated kinase?

04-01  2004317784  
NDN- 012-2504-0438-6  
EMB  
Elsevier  
AUTHORS: McCarty, M. F.
Extracts of the unripe fruit of Momordica charantia - bitter melon, which flourishes throughout the tropics - appear to have utility in the management of type 2 diabetes. Rodent studies suggest that the thus-far-uncharacterized active components of such extracts enhance the efficiency of postprandial glucose storage in muscle and liver, and likely diminish excessive hepatic glucose output, while often down-regulating serum insulin - effects comparable to those reported for metformin. Other parallels between the actions of metformin and bitter melon in rodents appear to include: analogous effects on the hepatic activity of certain enzymes of glucose metabolism; increased expression of GLUT4 in the plasma membrane of skeletal muscle; a tendency to prevent weight gain; favorable effects on serum lipids; and an anti-promotional impact on cancer induction. Inasmuch as the clinical efficacy of metformin has recently been traced to its ability to activate AMP-activated kinase, it would be of interest to determine whether bitter melon extracts contain activators of this enzyme. The fact that bitter melon has the potential to down-regulate insulin suggests that, beyond its likely utility in the management of diabetes, it may have preventive value with respect to a wide range of disorders in which hyperinsulinemia plays a pathogenic role - and possibly could even favorably impact the aging process. (copyright) 2004 Elsevier Ltd. All rights reserved.

39.

Effect of Momordica charantia on lipid profile and oral glucose tolerance in diabetic rats
05-04 2005015850
NDN- 012-2560-2467-5
EMB
Elsevier
AUTHORS: Chaturvedi, P.; George, S.; Milinganyo, M.; Tripathi, Y. B.
JOURNAL NAME: Phytotherapy Research
JOURNAL TITLE ABBREVIATION: PHYTOTHER. RES.
VOLUME: 18
NUMBER: 11
PP: 954-956
DOCUMENT TYPE: Journal
COPYRIGHT: Copyright 2005 Elsevier B.V., All rights reserved.
ISSN: 0951-418X
PUBLICATION DATE: 2004
CODEN: PHYRE
EMAIL: Chaturve@mopipi.ub.bw
In this study, the methanol extract of Momordica charantia fruit extract was administered to diabetic rats to assess the long term effect of the extract on the lipid profile and the oral glucose tolerance test. Treatment for 30 days showed a significant decrease in triglyceride, low density lipoprotein and a significant increase in high density lipoprotein level. A significant effect on oral glucose tolerance was also noted. Chronic administration showed an improvement in the oral glucose tolerance curve. The effect was more pronounced when the test was done in rats fed the extract on the day of the test compared with tests done in rats which were not fed the extract on the same day. Copyright (copyright) 2004 John Wiley & Sons, Ltd.

40.

Safety and efficacy study of Momordica charantia extract in patients with type two diabetes

03-01 2003376111
NDN- 012-2464-0964-8
EMB
Elsevier
AUTHORS: Za(dieresis)nker, K. S.; Gottschalk, G.; Hans, S.
JOURNAL NAME: Zeitschrift fur Phytotherapie
JOURNAL TITLE ABBREVIATION: Z. PHYTOTHER.
VOLUME: 24
NUMBER: 4
PP: 163-169
DOCUMENT TYPE: Journal
COPYRIGHT: Copyright 2004 Elsevier B.V., All rights reserved.
ISSN: 0722-348X
PUBLICATION DATE: 2003
CODEN: ZPHYD
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AUTHOR ADDRESS: Dr. K.S. Zanker, Universitat Witten/Herdecke, Institut fur Immunologie, Stockumerstrasse 10, 58448 Witten
COUNTRY OF AUTHOR: Germany
PUBLICATION COUNTRY: Germany
LANGUAGE: GERMAN

In an effort to establish and to document the hypoglycaemic activity of Momordica charantia L. (bitter melon; Curcurbitaceae) in diabetes, 47 non-insulin-dependent patients took a capsule filled with 500 mg M. charantia fruit extract respectively, before two daily meals in addition to pharmacological and/or counselling therapies. Within a subgroup of moderate diabetes patients (fasting glucose (less than)200 mg/dl and HbA1c (less than) 8.0%), the plasma glucose level could be depressed within 24 weeks of observation by 25% followed by a drop in HbA<sub>c</sub> by 0.5 percent. In accordance with the UK Prospective Diabetes Study, this means an additional 10% of risk decrement for late diabetes associated diseases reaching - all in all - risk assessment of (less than) 42% (oral diabetic therapy/counselling plus bitter melon extract nutrition). Those patients belonging to the defined subgroup (moderate diabetes patients) could be brought, by taking Bitter Melon extract (500 mg) daily, into the group of glucose intolerant subjects who are less prone to late and severe diabetes associated diseases. Bitter Melon extract at the concentration used turned out to be a safe nutraceutical without any toxic side effects.
41.

**Bitter melon (Momordica Charantia): A review of efficacy and safety**

03-01 2003250125
NDN- 012-2451-8424-2
EMB
Elsevier
AUTHORS: Basch, E.; Gabardi, S.; Ulbricht, C.
JOURNAL NAME: American Journal of Health-System Pharmacy
JOURNAL TITLE ABBREVIATION: AM. J. HEALTH-SYST. PHARM.
VOLUME: 60
NUMBER: 4
PUBLICATION DATE: 15 FEB 2003
PP: 356-359
DOCUMENT TYPE: Journal
COPYRIGHT: Copyright 2004 Elsevier B.V., All rights reserved.
ISS: 1079-2082
PUBLICATION DATE: 2003
CODEN: AHSPE
EMAIL: kate@naturalstandard.com
AUTHOR ADDRESS: Dr. C. Ulbricht, Natural Standard, 1130 Massachusetts Avenue, Cambridge, MA 02138-5204
COUNTRY OF AUTHOR: United States
PUBLICATION COUNTRY: United States
LANGUAGE: ENGLISH

The pharmacology, clinical efficacy, adverse effects, drug interactions, and place in therapy of bitter melon are described. Bitter melon (Momordica charantia) is an alternative therapy that has primarily been used for lowering blood glucose levels in patients with diabetes mellitus. Components of bitter melon extract appear to have structural similarities to animal insulin. Antiviral and antineoplastic activities have also been reported in vitro. Four clinical trials found bitter melon juice, fruit, and dried powder to have a moderate hypoglycemic effect. These studies were small and were not randomized or double-blind, however. Reported adverse effects of bitter melon include hypoglycemic coma and convulsions in children, reduced fertility in mice, a favism-like syndrome, increases in (gamma)-glutamyltransferase and alkaline phosphatase levels in animals, and headaches. Bitter melon may have additive effects when taken with other glucose-lowering agents. Adequately powered, randomized, placebo-controlled trials are needed to properly assess safety and efficacy before bitter melon can be routinely recommended. Bitter melon may have hypoglycemic effects, but data are not sufficient to recommend its use in the absence of careful supervision and monitoring.

42.

**Antihyperglycemic effects of three extracts from Momordica charantia**

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NDN- 012-2458-4782-2
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Elsevier
JOURNAL NAME: Journal of Ethnopharmacology
JOURNAL TITLE ABBREVIATION: J. ETHNOPHARMACOL.
VOLUME: 88
NUMBER: 1
Momordica charantia (L.) (Cucurbitaceae) commonly known as bitter gourd or karela is a medicinal plant, used in Ayurveda for treating various diseases, one of which is diabetes mellitus. In this study, various extract powders of the fresh and dried whole fruits were prepared and their blood glucose lowering effect compared by administering them orally to diabetic rats. The aqueous extract powder of fresh unripe whole fruits at a dose of 20 mg/kg body weight was found to reduce fasting blood glucose by 48%, an effect comparable to that of glibenclamide, a known synthetic drug. This extract was tested for nephrotoxicity, hepatotoxicity and biochemical parameters such as SGOT, SGPT and lipid profile. The extract did not show any signs of nephrotoxicity and hepatotoxicity as judged by histological and biochemical parameters. Thus the aqueous extract powder of Momordica charantia, an edible vegetable, appears to be a safe alternative to reducing blood glucose. (copyright) 2003 Elsevier Ireland Ltd. All rights reserved.

43.

**Hypotriglyceridemic and hypocholesterolemic effects of anti-diabetic **Momordica charantia**(karela) fruit extract in streptozotocin-induced diabetic rats**

01-01 2001107194
NDN- 012-2347-9251-8
EMB
Elsevier
AUTHORS: Ahmed, I.; Lakhani, M. S.; Gillett, M.; John, A.; Raza, H.
JOURNAL NAME: Diabetes Research and Clinical Practice
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PP: 155-161
DOCUMENT TYPE: Journal
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ISSN: 0168-8227
PUBLICATION DATE: 2001
CODEN: DRCP
EMAIL: h.raza@uaeu.ac.ae
AUTHOR ADDRESS: H. Raza, Department Anatomy, Faculty of Medicine/Health Sciences, UAE University, P.O. Box 17666, Al Ain
COUNTRY OF AUTHOR: United Arab Emirates
PUBLICATION COUNTRY: Ireland
LANGUAGE: ENGLISH
Momordica charantia (karela) is commonly used as an antidiabetic and antihyperglycemic agent in Asian, Oriental and Latin American countries. This study was undertaken to investigate the effects of long term feeding (10 weeks) of M. charantia fruit extract on blood plasma and tissue lipid profiles in normal and streptozotocin (STZ) -induced Type 1 diabetic rats. The results show that there was a significant (P<0.05) increase in plasma non-esterified cholesterol, triglycerides and phospholipids in STZ-induced diabetic rats, accompanied by a decrease in high density lipoprotein (HDL) -cholesterol. A moderate increase in plasma (LPO) product, malondialdehyde (MDA), and about two-fold increase in kidney LPO was also observed in STZ-induced diabetic rats. The treatment of diabetic rats with M. charantia fruit extract over a 10-week period returned these levels close to normal. In addition, karela juice also exhibited an inhibitory effect on membrane LPO under in vitro conditions. These results suggest that M. charantia fruit extract exhibits hypolipidemic as well as hypoglycemic effects in the STZ-induced diabetic rat. Copyright (copyright) 2001 Elsevier Science Ireland Ltd.

44.

Hypoglycemic activity of the fruit of the **Momordica charantia** in type 2 diabetic mice

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JOURNAL NAME: Journal of Nutritional Science and Vitaminology
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NUMBER: 5
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DOCUMENT TYPE: Journal
COPYRIGHT: Copyright 2004 Elsevier B.V., Amsterdam. All rights reserved.
ISS: 0301-4800
PUBLICATION DATE: 2001
CODEN: JNSVA
AUTHOR ADDRESS: T. Miura, Department of Clinical Nutrition, Suzuki University of Medical Science, 1001-1 Kishioka, Suzuki, Mie 510-0293
COUNTRY OF AUTHOR: Japan
PUBLICATION COUNTRY: Japan
LANGUAGE: ENGLISH

The antidiabetic activity of Momordica charantia L. (Cucurbitaceae) was investigated in KK-Ay mice, an animal model with type 2 diabetes with hyperinsulinemia. The water extract of the fruit of Momordica charantia L. (MC) reduced the blood glucose of KK-Ay mice 3 weeks after oral administration (p<0.01) and also significantly lowered the serum insulin of KK-Ay mice under similar conditions (p<0.01). However, MC did not affect the blood glucose in normal mice. MC-treated KK-Ay mice blood glucose significantly decreased in an insulin tolerance test. Moreover, the muscle content of facilitative glucose transporter isoform 4 (GLUT4) protein content in the plasma membrane fraction from muscle significantly increased in the orally MC-treated mice when compared with that of the controls (p<0.01). These results suggest that the antidiabetic effect of MC is derived, at least in part, from a decrease in insulin resistance because of the increase of GLUT4 protein content in the plasma membrane of the muscle.
45. Prevention of carcinogen-induced mouse skin papilloma by whole fruit aqueous extract of *Momordica charantia*

00-01  2000290518
NDN- 012-2321-9972-4
EMB
Elsevier
AUTHORS: Ganguly, C.; De, S.; Das, S.
JOURNAL NAME: European Journal of Cancer Prevention
JOURNAL TITLE ABBREVIATION: EUR. J. CANCER PREV.
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NUMBER: 4
PP: 283-288
DOCUMENT TYPE: Journal
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CODEN: EJUPE
AUTHOR ADDRESS: S. Das, Chittaranjan Natl. Cancer Institute, Department of Cancer Chemoprevention, Calcutta 700 026
COUNTRY OF AUTHOR: India
PUBLICATION COUNTRY: United Kingdom
LANGUAGE: ENGLISH

The anticarcinogenic effect of aqueous extract of fruit of *Momordica charantia* (bitter gourd), which is widely used as a vegetable in India, was studied in a two-step skin carcinogenesis model in mice. The possible mode of action was also investigated. Oral administration of the fruit extract was found to have an adverse effect on the general health and lifespan of the animals when used at a high concentration. But when this dose was reduced by half, the test extract afforded protection from the development of skin tumour and increased life expectancy. Carcinogen-induced lipid peroxidation in liver and DNA damage in lymphocytes were found to be reduced following treatment with *Momordica*. The fruit extract was found to significantly activate the liver enzymes glutathione-S-transferase, glutathione peroxidase and catalase (*P < 0.001*), which showed a depression following exposure to the carcinogen. The results suggest a preventive role of water-soluble constituents of *M. charantia* fruit during carcinogenesis, which is mediated possibly by their modulatory effect on enzymes of the biotransformation and detoxification system of the host. (C) 2000 Lippincott Williams and Wilkins.

46. Demonstration of the hypoglycemic action of *Momordica charantia* in a validated animal model of diabetes

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NDN- 012-2151-9550-9
EMB
Elsevier
AUTHORS: Sarkar, S.; Pranava, M.; Marita, A. R.
JOURNAL NAME: Pharmacological Research
JOURNAL TITLE ABBREVIATION: PHARMACOL. RES.
VOLUME: 33
NUMBER: 1
PP: 1-4
DOCUMENT TYPE: Journal
In an effort to establish and document the hypoglycaemic activity of Momordica charantia in validated models of diabetes, the alcoholic extract of the pulp was studied. In the normal glucose primed rat model, M. charantia fruit extract, 500 mg kg\textsuperscript{-1}</sup>, depressed the plasma glucose levels by 10-15% at 1 h. Under similar conditions, tolbutamide (100 mg kg\textsuperscript{-1}</sup>) caused approximately 40% reductions in plasma glucose both at 1 and 2 h. At 500 mg kg\textsuperscript{-1}</sup>, the efficacy of M. charantia was 25-30% of tolbutamide. The reduction in plasma glucose in normal glucose primed rat was not accompanied by increased insulin secretion. There was no evidence of tachyphylaxis to the effect of M. charantia extract on repeated dosing. In streptozotocin diabetes rats, it improved the oral glucose tolerance causing significant (P < 0.002) reduction in plasma glucose of 26% at 3.5 h while metformin caused 40-50% reduction at 1, 2 and 3.5 h. M. charantia extract (500 mg kg\textsuperscript{-1}</sup>) caused a 4-5-fold increase in the rate of glycogen synthesis from U-\textsuperscript{14}</sup>C-glucose in the liver of normally fed rats. These data suggest that the mechanism of action of M. charantia could be partly attributed to increased glucose utilization in the liver rather than an insulin secretion effect. This is the first report on the effect of M. charantia in characterized and validated animal model systems known to respond to oral hypoglycaemic drugs.

47.

Antidiabetic and adaptogenic properties of \textit{Momordica charantia} extract: An experimental and clinical evaluation

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Elsevier
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JOURNAL TITLE ABBREVIATION: PHYTOTHER. RES.
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AUTHOR ADDRESS: B.J. Medical College,Ahmedabad 380016
COUNTRY OF AUTHOR: India
PUBLICATION COUNTRY: United Kingdom
LANGUAGE: ENGLISH

The hypoglycaemic properties of Mormordica charantia (bitter gourd) water extract was tested on alloxan diabetic rats experimentally. A fall of blood sugar after 3 week's treatment with aqueous extract of fruits of the herb was found to be
significant (p < 0.01). The aqueous extract of fruit was more effective in diabetes (fall of blood sugar 54% after 3 week's therapy) than the powder of the dried fruit (fall 25% nonsignificant). Hypoglycaemic effects in diabetic patients were found to be highly significant (p < 0.01) at the end of the trial but were cumulative and gradual, unlike that produced by insulin. Adaptogenic properties are indicated by the delay in the appearance of cataracts, the secondary complications of diabetes and relief in neurological and other common symptoms even before the hypoglycaemia occurred.

48.

**Studies on hypoglycemic effects of fruit pulp, seed, and whole plant of *Momordica charantia* on normal and diabetic model rats**

93-01 1993319556
NDN- 012-2052-5764-0
EMB
Elsevier
JOURNAL TITLE: Plant Medica
VOLUME: 59
NUMBER: 5
PP: 408-412
DOCUMENT TYPE: Journal
COPYRIGHT: Copyright 2004 Elsevier B.V., Amsterdam. All rights reserved.
ISSN: 0032-0943
PUBLICATION DATE: 1993
CODEN: PLMEA
AUTHOR ADDRESS: Research Division, BIRDEM, 122, Kazi Nazrul Islam Avenue,Dhaka-1000
COUNTRY OF AUTHOR: Bangladesh
PUBLICATION COUNTRY: Germany
LANGUAGE: ENGLISH

Extracts of *Momordica charantia* fruit pulp, seed, and whole plant were tested for their hypoglycemic effects on normal and diabetic rat models. The results show that during the oral glucose tolerance test the peak blood glucose values in rats are obtained much earlier (15 - 45 min) than in human subjects (around 60 min). Pulp juice of *M. charantia* lowered fasting blood glucose levels in normal rats (p < 0.05 at 120 min); the effect was more pronounced with the saponin-free methanol extract of the pulp juice (p < 0.05 at 60 min and p < 0.01 at 120 min). The pulp juice also had a significant hypoglycemic effect in the glucose-fed normal rats when the extract was fed 45 minutes before the oral glucose load percentage increments over basal value (M (plus or minus) SE): 85 (plus or minus) 10 in the control group vs. 54 (plus or minus) 7 in the pulp juice group, p < 0.01. In the IDDM model rats the pulp juice had no significant effect on blood glucose levels either in fasting or postprandial states. In the NIDDM model rats the saponin-free methanol extract of juice produced a significant hypoglycemic effect both in fasting (p < 0.05 at 120 min) and in postprandial states (sum of percentage increments over basal value: 140 (plus or minus) 26 in the control vs. 71 (plus or minus) 7 in the pulp juice group, p < 0.05). Methanol extracts of seed and of whole plant, and saponin-free methanol extract of whole plant produced no hypoglycemic effects in normal or IDDM model rats either in fasting or in postprandial states. Seed and whole plant extracts showed a small but consistent tendency to increase blood glucose levels in the normal rats. The results indicate the presence of non-sapogenin hypoglycemic compound(s) in *M. charantia* fruit pulp and the activity is probably mediated either by improving the insulin secretory capacity of the B cells or by improving the action of insulin.
49.

Characterization of anti-lymphoma factor from the bitter melon (Momordica charantia)

84-01  1984218549
NDN- 012-1758-0750-7
EMB
Elsevier
AUTHORS: Takemoto, D. J.; Jilka, C.; Jilka, F.; et, al.
JOURNAL NAME: Federation Proceedings
JOURNAL TITLE ABBREVIATION: FED. PROC.
VOLUME: 43
NUMBER: 4
DOCUMENT TYPE: Journal
COPYRIGHT: Copyright 2004 Elsevier B.V., Amsterdam. All rights reserved.
PUBLICATION DATE: 1984
CODEN: FEPRA
AUTHOR ADDRESS: Kansas State University, Manhattan, KS 66506
COUNTRY OF AUTHOR: United States
PUBLICATION COUNTRY: United States
LANGUAGE: ENGLISH

50.

In vivo antitumor activity of the bitter melon (Momordica charantia)

84-01  1984002440
NDN- 012-1776-4205-0
EMB
Elsevier
AUTHORS: Jilka, C.; Strifler, B.; Fortner, G. W.; et, al.
JOURNAL NAME: Cancer Research
JOURNAL TITLE ABBREVIATION: CANCER RES.
VOLUME: 43
NUMBER: 11
PP: 5151-5155
DOCUMENT TYPE: Journal
COPYRIGHT: Copyright 2004 Elsevier B.V., Amsterdam. All rights reserved.
PUBLICATION DATE: 1983
CODEN: CNREA
AUTHOR ADDRESS: Department of Biochemistry, Kansas State University, Manhattan, KS 66506
COUNTRY OF AUTHOR: United States
PUBLICATION COUNTRY: United States
LANGUAGE: ENGLISH

The in vivo antitumor activity of a crude extract from the bitter melon (Momordica charantia) was determined. The extract inhibited tumor formation in CBA/H mice which had been given i.p. injections of 1.0 x 10<sup>5</sup> CBA/DI tumor cells (77% of the untreated mice with tumors versus 33% of the treated mice with tumors after 6 weeks). The extract also inhibited tumor formation in DBA/2 mice which had been given i.p. injections of either 1 x 10<sup>5</sup> P388 tumor cells (0% of untreated mice survived after 30 days versus 40% survival of the treated mice) or 1 x 10<sup>5</sup> L1210 tumor cells (0% survival of untreated mice versus 100% of treated mice after 30 days). The in vivo antitumor effect required both the prior exposure of tumor cells to the extract (2 hr) in vitro and i.p., biweekly
injections of the extract into the mice. The optimum dose for tumor inhibition (8 (mu)g protein, biweekly, i.p.) was not
toxic to mice for at least 45 days of treatment. This same treatment caused a marked enhancement of C3H mouse thymic
cell response to concanavalin A in vitro. When compared to the untreated control mice, the bitter melon-injected animals
exhibited a 4-fold-higher incorporation of tritiated thymidine into trichloroacetic acid-precipitable material after 48 hr of
exposure to 50 (mu)g of concanavalin A. Nylon wool-purified spleen cells from these same bitter melon-treated mice
exhibited an enhanced mixed lymphocyte reaction when exposed to irradiated P388 stimulator cells (186% of the
untreated control mice). These data indicate that in vivo enhancement of immune functions may contribute to the
antitumor effects of the bitter melon extract.

51.

Wound-healing property of **Momordica charantia** L. fruit powder
07-15 2007132262
NDN- 012-2689-0540-8
EMB
Elsevier
AUTHORS: Prasad, V.; Jain, V.; Girish, D.; Dorle, A. K.
JOURNAL NAME: Journal of Herbal Pharmacotherapy
ABBREVIATED JOURNAL TITLE: J. HERBAL PHARMACOTHER.
VOLUME: 6
NUMBER: 3-4
PP: 105-115
DOCUMENT TYPE: Journal
COPYRIGHT: Copyright 2007 Elsevier B.V., All rights reserved.
ISSN: 1522-8940; 1522-9106
PUBLICATION DATE: 2006
CODEN: JHPOB
EMAIL: vureprasad@yahoo.com
AUTHOR ADDRESS: V. Prasad, Department of Pharmaceutics, Central Drug Research Institute, Chattar Manzil Palace,
Lucknow
COUNTRY OF AUTHOR: India
LITERARY INDICATOR: Article
ASSIGNEE COUNTRY: 013; 029; 030; 037
PUBLICATION COUNTRY: United States
LANGUAGE: ENGLISH

Momordica charantia Linn. fruit powder, in the form of an ointment (10% w/w dried powder in simple ointment base),
was evaluated for wound-healing potential in an excision, incision and dead space wound model in rats. The rats were
divided into three groups of control, treatment and reference in all three wound models, each group consisting of six rats.
Wound-contraction ability in excision wound mode was measured at different time intervals on days 4, 8, 10, 12 and 14,
and the study was continued until the wound had completely healed. Tensile strength was measured in 10-day-old incision
and granuloma wound. Histological studies were performed on 10-day-old sections of regenerated tissue. Powder
ointment showed a statistically significant response (P <0.01), in terms of wound-contracting ability, wound closure
time, period of epithelization, tensile strength of the wound and regeneration of tissues at wound site when compared with
the control group, and these results were comparable to those of a reference drug povidone iodine ointment. Copyright
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52.

Effects of *Momordica charantia* fruit juice on islet morphology in the pancreas of the streptozotocin-diabetic rat.

99-04 991405126
NDN- 191-0616-8858-3
CAB
CAB International
AUTHORS: Ahmed, I.; Adeghate, E.; Sharma, A. K.; Pallot, D. J.; Singh, J.
JOURNAL NAME: Diabetes Research and Clinical Practice
VOLUME: 40
NUMBER: 3
PUBLICATION DATE: 1998
PP: 145-151
18 REFERENCES
DOCUMENT TYPE: Journal article
ISSN: 0168-8227
AUTHOR AFFILIATION: Department of Human Anatomy, Faculty of Medicine and Health Sciences, United Arab Emirates University, P.O. Box 17666, Al Ain, United Arab Emirates.
ORGANISM DESCRIPTOR: Momordica charantia; rats
LANGUAGE: English

An investigation was made of the effect of M.charantia (bitter melon) fruit juice on the distribution and number of alpha, beta and delta cells in the pancreas of streptozotocin (STZ)-induced diabetic rats using immunohistochemical methods. The results indicated that there was a significant (Student's t-test) increase in the number of beta cells in M. charantia-treated animals when compared with untreated diabetics, however, their number was still significantly less than that obtained for normal rats. There was also an increase in the number of delta cells in STZ-diabetic rats compared to non-diabetic rats (P<0.006). This increase in the number of delta cells was not affected by M. charantia treatment. The number of alpha cells did not change significantly in M. charantia-treated rats when compared with untreated diabetic rats. The results suggest that oral feeding of M. charantia fruit juice may have a role in the renewal of beta cells in STZ-diabetic rats or alternately may permit the recovery of partially destroyed beta cells.

53.

Potential use of Kyethingha-thee (*Momordica charantia* L. fruit) in the treatment of maturity onset diabetes mellitus.

98-07 980308249
NDN- 191-0602-9823-6
CAB
CAB International
AUTHORS: May Aye Than; Ye Thwe; Thaw Zin; Mu Mu Sein Myint; Hla Pe; Aung Naing; Maung Maung Wint
JOURNAL NAME: Myanmar Health Sciences Research Journal
VOLUME: 8
NUMBER: 3
PUBLICATION DATE: 1996
PP: 148-154
15 REFERENCES
DOCUMENT TYPE: Journal article
The hypoglycaemic efficacy of Kyethingha-thee dried powdered capsule (fruits of M. charantia) was investigated in 5 uncomplicated type II non insulin dependent diabetes mellitus patients. Preliminary studies revealed that it exhibited hypoglycaemic effects with a minimum effective dose of 3 g. The onset of hypoglycaemic action started 2 h after administration, and maximum effect was observed between 4 and 6 h. Kyethingha-thee was 79.94% as effective as tolbutamide and 154.53% as effective as TMF 32. So far no adverse side effects were observed in any of these patients.

54.

**Regeneration of beta cells in islets of Langerhans of pancreas of alloxan diabetic rats by acetone extract of *Momordica charantia* (Linn.) (bitter gourd) fruits**

AUTHORS: Singh, Neera; Gupta, Manushma
JOURNAL NAME: Indian Journal of Experimental Biology
VOLUME: 45
NUMBER: 12
PUBLICATION DATE: DEC 2007
PP: 1055-1062
RELEASE YEAR OR PUBLICATION YEAR: 2007
DOCUMENT TYPE: Article
ISSN: 0019-5189
ADDRESS: Meerut Univ, Dept Zool, Environm Endocrinol and Biomed Res Unit, Meerut 250003, Uttar Pradesh, India
EMAIL: n27singh@yahoo.com
LANGUAGE: English

Acetone extract of whole fruit powder of M. charantia (bitter gourd) in doses 25, 50 and 75 mg/100 g body weight lowered the blood glucose from 13.30 to 50% after 8 to 30 days treatment in alloxan diabetic albino rats, confirming antihyperglycemic effect of this plant in diabetic animals and humans. Histological observations with acetone extract showed different phases of recovery of beta cells of the islets of Langerhans of pancreas, which in the untreated diabetic rats were less in number and showed varied degree of atrophy. The most important finding of the present study was observation of the presence of small scattered islets among the acinar tissue in some experimental animals, which may reflect neoformation of islets from pre-existing islet cells. The liver of alloxan diabetic rats showed hydropic degeneration, fatty change and necrosis at some places but liver of extract treated animals was normal. Glycogen localization in liver of diabetic rats was faint but after 30 days treatment with different doses of extract, normal to heavy glycogen localization was observed.

55.

**Fractionation and identification of 9c, 11t, 13t-conjugated linolenic acid as an activator of PPAR alpha in bitter gourd** (*Momordica charantia* L.)

10-03 PREV20070028905
Bitter gourd (Momordica charantia L.) is a common vegetable in Asia that has been used in traditional medicine for the treatment of Diabetes. PPARs are ligand-dependent transcription factors that belong to the steroid hormone nuclear receptor family and control lipid and glucose homeostasis in the body. We previously reported that the ethyl acetate (EA) extract of bitter gourd activated peroxisome proliferator receptors (PPARs) alpha and gamma. To identify the active compound that activated PPAR alpha, wild bitter gourd EA extract was partitioned between n-hexane and 90% methanol/10% H2O, and the n-hexane soluble fraction was further separated by silica gel column chromatography and finally by preparative HPLC. A transactivation assay employing a clone of CHOK1 cells stably transfected with a (UAS)(4)-t-alkaline phosphatase reporter and a chimeric receptor of GAL4-rPPAR alpha LBD was used to track the active component. Based on Mass, NMR, and IR spectroscopy, 9cis, 11trans, 13trans-conjugated linolenic acid (9c, 11t, 13t-CLN) was identified as a PPAR alpha activator in wild bitter gourd. The isolated 9c, 11t, 13t-CLN rich fraction also significantly induced acyl CoA oxidase (ACO) activity in a peroxisome proliferator-responsive murine hepatoma cell line, H4IEC3, implying that 9c, 11t, 13t-CLN was able to act on a natural PPAR alpha signaling pathway as well. The content of 9c, 11t, 13t-CLN was estimated to be about 7.1 g/kg of our dried wild bitter gourd sample. The concentration of 9c, 11t, 13t-CLN and activation activity in the hydrolyzed EA extract of the seeds was higher than that of the flesh. The potential health benefits of 9c, 11t, 13t-CLN through the PPAR alpha regulated mechanism are worthy to be further characterized in in vivo studies.

56.

**Momordica charantia** constituents and antidiabetic screening of the isolated major compounds

09-44  PREV200600523526
NDN- 244-0419-6618-9
BIO
Thomson Scientific
AUTHORS: Harinantenaina, Liva; Tanaka, Michi; Takaoka, Shigeru; Oda, Munehiro; Mogami, Orie; Uchida, Masayuki; Asakawa, Yoshinori
JOURNAL NAME: Chemical & Pharmaceutical Bulletin (Tokyo)
VOLUME: 54
NUMBER: 7
PUBLICATION DATE: JUL 2006
PP: 1017-1021
RELEASE YEAR OR PUBLICATION YEAR: 2006
DOCUMENT TYPE: Article
Bioguided fractionation of the methanol extract of Momordica charantia dried gourds led to the isolation of three new cucurbitane triterpenoids (1-3), together with eight known compounds (4-11). The aglycone of momordicoside I was isolated from the ether soluble fraction in a high amount. The structures of the metabolites were established on the basis of one and two dimensional NMR spectroscopic evidence, X-ray analysis, and comparison with the reported data in the literature. A number of phytochemicals have been isolated from Momordica charantia but the constituents responsible for the hypoglycaemic/antihyperglycaemic activities have not been determined. Therefore, in order to evaluate the contribution of the cucurbitane triterpenoids of the ether fraction of M. charantia methanol extract to in vivo anti-diabetic effects, the major compounds, 5 beta,19-epoxy-3 beta,25-dihydroxy cucurbita-6,23(E)-diene (4), and 3 beta,7 beta,25-trihydroxy cucurbita-5,23(E)-dien-19-ol (5) have been tested and have shown blood hypoglycaemic effects in the diabetes-induced male MY mice strain at 400 mg/kg. The two aglycones of charantin did not show any hypoglycaemic effects. Our finding is the first demonstration that major pure cucurbutanoid compounds of M. charantia have in vivo hypoglycaemic effects.

57.

Effect of bitter gourd (Momordica charantia) on glycaemic status in streptozotocin induced diabetic rats

08-52 PREV200510346800
NDN- 244-0367-0787-9
BIO
Thomson Scientific
AUTHORS: Shetty, A. K.; Kumar, G. Suresh; Sambaiah, K.; Salimath, P. V.
JOURNAL NAME: Plant Foods for Human Nutrition (Dordrecht)
VOLUME: 60
NUMBER: 3
PUBLICATION DATE: SEP 2005
PP: 109-112
RELEASE YEAR OR PUBLICATION YEAR: 2005
DOCUMENT TYPE: Article
ISSN: 0921-9668
ADDRESS: Cent Food Technol Res Inst, Dept Biochem and Nutr, Mysore 570020, Karnataka, India
EMAIL: paramahans1954@yahoo.com
LANGUAGE: English

Bitter gourd (Momordica charantia), a commonly consumed vegetable is used as an adjunct in the management of diabetes mellitus. A study was carried out to examine the effect of edible portion of bitter gourd at 10% level in the diet in streptozotocin induced diabetic rats. To evaluate the glycaemic control of bitter gourd during diabetes, diet intake, gain in body weight, water intake, urine sugar, urine volume, glomerular filtration rate and fasting blood glucose profiles were monitored. Water consumption, urine volume and urine sugar were significantly higher in diabetic controls compared to normal rats and bitter gourd feeding alleviated this rise during diabetes by about 30%. Renal hypertrophy was higher in diabetic controls and bitter gourd supplementation, partially, but effectively prevented it (38%) during diabetes. Increased glomerular filtration rate in diabetes was significantly reduced (27%) by bitter gourd. An amelioration of about 30% in fasting blood glucose was observed with bitter gourd feeding in diabetic rats. These results clearly provided experimental evidence that dried bitter gourd powder in the diet at 10% level improved diabetic status signifying its beneficial effect during diabetes.
58.

Protein extract from fruit pulp of *Momordica Charantia* with insulin secretagogue and insulinomimetic activities

08-51   PREV200510322163
NDN-  244-0364-6150-1
BIO
Thomson Scientific
AUTHORS: Yibchok-anun, Sirintom; Adisakwattana, Sirichai; Sangvanich, Polkit; Hsu, Walter H.
JOURNAL NAME: FASEB Journal
VOLUME: 19
NUMBER: 4, Suppl. S, Part 1
PUBLICATION DATE: MAR 4 2005
PP: A96
RELEASE YEAR OR PUBLICATION YEAR: 2005
DOCUMENT TYPE: Meeting
ISSN: 0892-6638
ADDRESS: Chulalongkorn Univ., Bangkok 10330, Thailand
SPONSOR: Amer Assoc Anatonomists; Amer Assoc Immunologists; Amer Physiol Soc; Amer Soc Biochem & Mol Biol;
Amer Soc Investigat Pathol; Amer Soc Nutr Sci; Amer Soc Pharmacol & Expt Therapeut; Int Union Physiol Sci
CONFERENCE DATE: March 31 -April 06, 2005
CONFERENCE TITLE: Experimental Biology 2005 Meeting/35th International Congress of Physiological Sciences
LANGUAGE: English

The protein from Thai bitter gourd (*Momordica charantia*) fruit pulp was extracted and studied for its hypoglycemic
effect. The molecular weights of protein mixture were analyzed by using matrix-assisted laser desorption/ionization mass
spectrometry (MALDI/MS). The results showed strong signals at m/z of 9,049, 10,038, 15,277 and 17,188 Da.
Subcutaneous administration of the protein extract (5 and 10 mg/kg) significantly and markedly decreased plasma glucose
concentrations in both normal and streptozotocin-induced diabetic rats in a dose-dependent manner. The onset of the
protein extract-induced hypoglycemia was observed at 4 and 6 h in diabetic and normal rats, respectively. This protein
extract also raised plasma insulin concentrations by 2 fold 4 h following subcutaneous administration. In perfused rat
pancreas, the protein extract (10 mu g/ml) increased insulin secretion, but not glucagon secretion, which was apparent
within 5 min of administration and lasted for 30 min. Furthermore, the proteinextract enhanced glucose uptake into
C2C12 myocytes and 3T3-L1 adipocytes. Thus, the *M. charantia* protein has both insulin secretagogue and insulin-like
activities that could help explain its hypoglycemic effect in vivo.

59.

Cancer preventive potential of *Momordica charantia* L. against benzo(a)pyrene induced fore-stomach
tumourigenesis in murine model system.

07-17   PREV200400192546
NDN-  244-0282-9840-8
BIO
Thomson Scientific
AUTHORS: Deep, Gagan; Dasgupta, Trisha; Rao, A. R.; Kale, R. K.
JOURNAL NAME: Indian Journal of Experimental Biology
VOLUME: 42
NUMBER: 3
PUBLICATION DATE: March 2004
PP: 319-322
Bitter melon (Momordica charantia Linnaeus) fruit extract was tested against 3,4 benzo(a)pyrene (B(a)P) induced forestomach papillomagenesis in Swiss albino mice. Extract of M. charantia in two concentrations, 2.5 and 5% of standard mice feed was used for the short-term and long-term studies. A significant decrease in tumour burden was observed in short and long-term treatment. Also, total tumour incidence reduced to 83.33% with 2.5% dose and 90.90% with 5% dose in short term treatment, while in long term treatment tumor incidence decreased to 76.92% with 2.5% dose and 69.23% with 5% dose of M. charantia. The possible mechanism involved in the cancer chemoprevention has also been discussed.

### 60.

**A kinetic model for in-vitro intestinal uptake of L-tyrosine and D (+)-glucose across rat everted gut sacs in the presence of Momordica charantia, a medicinal plant used in traditional medicine against diabetes mellitus**

08-52 PREV200510340472  
NDN- 244-0366-4459-3  
BIO Thomson Scientific  
AUTHORS: Mahomoodally, Mohamad Fawzi; Fakim, Arneenah-Gurib; Subratty, Anwar Hussein  
JOURNAL NAME: Journal of Cell and Molecular Biology

**VOLUME: 3  
NUMBER: 1  
PUBLICATION DATE: 2004  
PP: 39-44  
RELEASE YEAR OR PUBLICATION YEAR: 2004  
DOCUMENT TYPE: Article  
ISSN: 1303-3646  
ADDRESS: Univ Mauritius, Dept Hlth and Med Sci, Fac Sci, Reduit, Mauritius  
LANGUAGE: English

Momordica charantia (MC) is a traditional antidiabetic medicinal plant used in many parts of the world, including Mauritius. An everted rat gut sac technique was used to investigate the effect of MC on kinetic parameters of D (+)-glucose and L-tyrosine. Everted guts were mounted in a gut sac bath and aqueous extract of MC fruit was added to the mucosal medium (3.62 mg/mL) at varying substrate concentrations. Michaelis-Menten constant (K-m) and maximal velocity (V-max) were calculated in the presence and absence of MC fruit extract. It was observed that MC significantly reduced V-max of D- (+)-glucose uptake by 0.09 mM hr(-1), whereas K-m, remained unaltered suggested a non-competitive type of inhibition was present. L-Tyrosine uptake in the presence of MC fruit extract did not fit to a relatively simple kinetic model.

### 61.

**Effect of dietary intake of freeze dried bitter gourd (Momordica charantia) in streptozotocin induced diabetic rats.**

98-44 98-503382  
NDN- 007-0521-3463-7
Consumption of bitter gourd (Momordica charantia) by diabetic patients is a common practice in India, with the belief that it has an useful hypoglycemic potential. In the absence of conclusive information on the hypoglycemic influence of continuous intake of bitter gourd, in the present investigation, we have examined the hypoglycemic potency of dietary bitter gourd in experimentally induced diabetic rats. Wistar rats rendered hyperglycemic by streptozotocin (50 mg/kg b.w., i.p.) were maintained on a semi-synthetic diet containing freeze dried bitter gourd powder at 0.5% level for 6 weeks. The excretion of glucose, protein, urea and creatinine was monitored during the experimental period. Plasma glucose, albumin, urea and cholesterol were analysed at the end of the experimental regime. Dietary bitter gourd did not show any beneficial hypoglycemic influence as evidenced by the blood glucose levels as well as the excretion of diabetes related metabolites.

62.

ANALGESIC EFFECT OF **MOMORDICA-CHARANTIA** SEED EXTRACT IN MICE AND RATS
BR 40-00  BR 40-043602
NDN- 132-0271-5721-4
BIO
Thomson Scientific
AUTHORS: BISWAS, A. R.; RAMASWAMY, S.; BAPNA, J. S.
ABBREVIATED JOURNAL TITLE: J ETHNOPHARMACOL
VOLUME: 31
NUMBER: 1
PUBLICATION DATE: 1991
115-118 PAGES
CODEN: JOETD
AUTHOR AFFILIATION: DEP. PHARMACOLOGY, JAWAHARLAL INSTITUTE POSTGRADUATE MEDICAL
EDUCATION RESEARCH, PONDICHERRY 605-006, INDIA.
SUBFILE: BR (Biological Abstracts)
LANGUAGE: English

63.

Antidiabetic activity of **Momordica charantia** seeds on streptozotocin induced diabetic rats
08-32  PREV200510061495
NDN- 244-0338-5484-9
BIO
Thomson Scientific
The present study was aimed to evaluate the hypoglycemic efficacy in an aqueous extract of seeds of two varieties, namely a country and a hybrid variety of Momordica charantia (MCSEt1 and MCSEt2) respectively in streptozotocin (STZ) induced diabetic rats. STZ-induced diabetic rats were treated with aqueous extracts of MCSEt1 and t2 for a period of 30 days. MCSEt1 and t2 extract treatment to diabetic rats resulted in a significant reduction in blood glucose, glycosylated hemoglobin, lactate dehydrogenase, glucose-6-phosphatase, fructose-1,6-bisphosphatase and glycogen phosphorylase, and a concomitant increase in the levels of hemoglobin, glycogen and activities of hexokinase and glycogen synthase. These results clearly show the antidiabetic properties of Momordica charantia. Both the varieties showed safe and significant hypoglycemic effects which were more pronounced in MCSEt1 compared to MCSEt2 and glibenclamide.

64.

**Herbal nutraceutical formulation for diabetics and process for preparing the same**

2006-03-21 07014872
NDN- 269-3252-1699-3
USF
USPTO
INVENTOR: Pushpangadan, Palpu; Prakash, Dhan
PATENT NUMBER: 07014872
PATENT APPLICATION NUMBER: 108095
DATE FILED: 2002-03-26
PATENT DATE: 2006-03-21
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
PATENT CLASS: Invention (utility) patent
INVENTOR COUNTRY OR ZIPCODE: INX; INX
PATENT ASSIGNEE: Council of Scientific and Industrial Research
ASSIGNEE CITY: New Delhi
ASSIGNEE COUNTRY: INX
FIRM: RatnerPrestia
US PATENT CLASS: 424725000
US CLASSIFICATION REFERENCE: X424734000; X424757000; X424739000; X424756000
INTERNATIONAL PATENT CLASS: A61K03578
PATENT REFERENCE: 5866555; 5886029; 2002/0025349
NEW CLASSIFICATION: 424725000
CURRENT CLASSIFICATION REFERENCE: X424734000; X424757000; X424739000; X424756000
The present invention relates to a herbal health protective, promotive and disease preventive nutraceutical herbal formulation(s) for diabetics, and also relates to a process for the preparation of a herbal health protective, promotive and disease preventive nutraceutical herbal formulation as food supplement to ameliorate the general health of diabetics, said formulation comprises the base product of microwave roasted seed powders mixture from selected genera of Glycine, Cicer, Phaseolus, Cyamompsis, Mucuna, Hordeum, Amaranthus and Fagopyrum, fortified with herbs/medicinal plants used are selected from the genera of Gymnema, Momordica, Syzygium, Pterocarpus, Trigonella, Cinnamomum, Withania, Coccinia, Pueraria, Asparagus, Boerhaavia and Aegle and also some other ingredients like Piper longum, Chlorophytm tuberosum, Curcuma longa and Elettaria cardamomum were also added to get the final nutraceutical product(s); the nutraceuticals are with optimum nutrition, non toxic, natural herbal plant products, easy to digest, have health protective and promotive properties to ameliorate the general health and vigor of diabetics.

EXEMPLARY CLAIMS

1. A herbal nutraceutical formulation for diabetics, the formulation consisting essentially of: 50-90% by wt. of seed products selected from the group consisting of legumes, cereals, and pseudocereals; and 10-50% by wt of a plant product composition consisting of herbs and medicinal plants, wherein the plant product composition consists essentially of 2-40% by wt. Gymnema sylvestre, 2-40% by wt. Momordica charantia, 2-40% by wt. Syzygium cumini, 2-40% by wt. Pterocarpus marsupium, 2-40% by wt. Trigonella foenum - graecum, 2-40% by wt. Cinnamomum tamala, 0-20% by wt. Withania somnifera, 0-20% by wt. Coccinia indica, 0-20% by wt. Pueraria tuberosa, 0-20% by wt. Asparagus recemosus, 0-20% by wt. Boeraavia diffusa, 0-20% by wt. Aegle marmelos, and, optionally, acceptable amounts of additives selected from the group consisting of Piper longum, Chlorophytm tuberosum, Curcuma longa, and Elettaria cardamomum.

65.

Orally active fraction of Momordica charantia, active peptides thereof, and their use in the treatment of diabetes
NEW CLASSIFICATION: 5140130000
CURRENT CLASSIFICATION REFERENCE: X514015000; X514016000; X530326000; X530327000; X530329000; X424077000
RELATED PAPER: 09/628588; 09/053617; 08/850855; 08/831039

A water soluble extract of M. charantia named MC6, methods for its preparation and methods for its use in the treatment of hyperglycemic disorders are provided. The active MC6 is characterized by moving as a single band on SDS-PAGE having a molecular weight of less than 10 kDal, and by comprising three peptides. Also provided is a peptide component of MC6 named MC6.1, as well as analogues and mimetics thereof. The active MC6, MC6.1, MC6.2, and MC6.3 exhibit hypoglycemic activity, even following oral administration. Also provided are methods of using the active agents to treat hyperglycemic disorders, particularly diabetes, where the active agents are preferably orally administered.

EXEMPLARY CLAIMS

1. A method for reducing the blood glucose level of a host in need thereof, comprising: administering to said host a pharmaceutical composition comprising at least one peptide selected from those represented by SEQ ID NO1, SEQ ID NO2, or SEQ ID NO3, or mixtures thereof, in a physiologically acceptable vehicle.

66.

Protein/polypeptide-k obtained from Momordica charantia and a process for the extraction thereof

2004-12-14 06831162
NDN- 269-3174-4279-7
USF
USPTO
INVENTOR: Khanna, Pushpa
PATENT NUMBER: 06831162
PATENT APPLICATION NUMBER: 881569
DATE FILED: 2001-06-14
PATENT DATE: 2004-12-14; 2004-12-14
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
FIGURES: 18
PATENT CLASS: Invention (utility) patent; Invention (utility) patent
INVENTOR COUNTRY OR ZIPCODE: INX
FIRM: Ladas & Parry
US PATENT CLASS: 530530000
INTERNATIONAL PATENT CLASS: 7C07K00100
PATENT APPLICATION PRIORITY: 56099; 56199
PRIORITY COUNTRY CODE: INX; INX
PRIORITY DATE: 19990413; 19990413
NEW CLASSIFICATION: 530530000
RELATED PAPER: PCT/IN99/00052

The invention relates to a novel and highly effective hypoglycemic protein called polypeptide-k, extracted from Momordica charantia, provides a method for the extraction of said polypeptide-k from Momordica charantia and provides novel hypoglycemic compositions employing the said extract, and useful in the treatment of diabetes mellitus.

EXEMPLARY CLAIMS

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[Logo and contact information]

10005 Muirlands Blvd., Suite G – 1st Floor, Irvine, CA 92618
tel. 949.419.0288    fax. 949.419.0294
email: sales@chromadex.com
1. A protein comprising polypeptide-k extracted from **Momordica charantia**, the polypeptide-k comprising 160 amino acid residues, said amino acid residues consisting of aspartic acid, threonine, serine, glutamine, proline, cysteine, glycine, alanine, valine, methionine, isoleucine, leucine, tyrosine, phenylalanine, histidine, lysine, tryptophan and arginine, the following amino acids being present in the polypeptide-k in the following amounts by mole percent: aspartic acid 9.4% threonine 3.0% serine 5.3% glutamine 17.1% proline and cysteine 5.5% glycine 8.9% alanine 7.3% valine 6.8% methionine 1.5% isoleucine 4.8% leucine 8.2% tyrosine 2.7% phenylalanine 4.2% histidine 3.1% arginine 9.2% said polypeptide-k having the following properties: i. being water insoluble but soluble to some extent at pH 9.5 and completely soluble 10% formic acid, ii. having a free N-terminal, iii. being stable, iv. having a shelf-life of about 18 months, v. having a combustion point of 234 °C, and vi. not showing cross reaction when tested with bovine insulin.

**67.**

**Therapeutic treatment** for blood sugar regulation

2004-09-07 06787163
NDN- 269-3156-0192-3
USF
USPTO
INVENTOR: Harris, Dennis H.; Martin, Robert C.
PATENT NUMBER: 06787163
PATENT APPLICATION NUMBER: 349357
DATE FILED: 2003-01-21
PATENT DATE: 2004-09-07
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
FIGURES: 0
ART OR GROUP UNIT: 1654
PATENT CLASS: Invention (utility) patent
INVENTOR COUNTRY OR ZIPCODE: 85018; 85259
FIRM: Mott, Joseph W.
US PATENT CLASS: 4247250000
INTERNATIONAL PATENT CLASS: 7A61K03578
PATENT REFERENCE: 6271254; 6277842; 6448287; 2002/0143039
FOREIGN DOCUMENT REFERENCE: 34125; 40571; 43248; 02002145772
FOREIGN COUNTRY CODE: HUX; HUX; HUX; JPX
NEW CLASSIFICATION: 4247250000

A nutritional supplement formulation for the enhancement of blood sugar regulation, prevention and treatment of insulin resistance, prevention and treatment of dysinsulinemia, prevention and treatment of Syndrome X, and reduction of diabetic complications is disclosed. The formulation combines herbs, minerals and vitamins known to reduce insulin resistance with herbs, minerals and vitamins known to reduce blood sugar levels.

**EXEMPLARY CLAIMS**

1. A combination of natural components for use in the treatment of abnormal sugar metabolism comprising about 100 mg French Lilac/Goat's Rue, about 50 mg cinnamon, about 100 mg American ginseng, about 100 mg bitter melon, about 200 mg Gymnema Sylvestre, about 25 mg Garlic, about 15 mg Alpha Lipoic Acid, about 5 mg 5-Hydroxytryptophane, about 12.5 mg Diethylaminoethanol, about 40 mg Vitamin B Complex, about 200 mcg GTF Chromium, about 4 mg of 19%
Vanadyl Sulfate, about 100 mg of 56% magnesium oxide, about 99 mg of 20% potassium citrate, about 2.5 mg of 18% manganese ascorbate, about 12.5 mg of 80% zinc oxide, and about 0.5 mg of 10% copper chelate.

68.

Orally active fraction of *Momordica charantia*, active peptides thereof, and their use in the treatment of diabetes
2002-05-21 06391854
NDN- 269-2985-0935-8
USF
USPTO
INVENTOR: Nag, Bishwajit; Medicherla, Satyanarayana; Sharma, Somesh D.
PATENT NUMBER: 06391854
PATENT APPLICATION NUMBER: 628588
DATE FILED: 2000-07-31
PATENT DATE: 2002-05-21
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
FIGURES: 19
ART OR GROUP UNIT: 1651
PATENT CLASS: Invention (utility) patent
PATENT ASSIGNEE: Calyx Therapeutics, Inc.
ASSIGNEE CITY: Hayward
ASSIGNEE STATE: CA
FIRM: Pillsbury Winthrop LLP
US PATENT CLAS: 5140130000
US CLASSIFICATION REFERENCE: X514015000; X514016000; X530326000; X530327000; X530329000; X424777000
INTERNATIONAL PATENT CLASS: 7A61K03804; A61K03808; A61K03810; A61K03178; C07K00706; C07K00708
PATENT REFERENCE: 3817837; 3850752; 3853914; 3905654; 3945988; 4043989; 4069105; 4156081; 4368149; 4985248; 5086043; 5098710
NEW CLASSIFICATION: 5140130000
CURRENT CLASSIFICATION REFERENCE: X424777000; X514015000; X514016000; X530326000; X530327000; X530329000
RELATED PAPER: 0; 09/053617; 0; 08/50855; 0; 08/31039

A water-soluble extract of IL>M. charantia named MC6, methods for its preparation and methods for its use in the treatment of hyperglycemic disorders are provided. The active MC6 is characterized by moving as a single band on SDS-PAGE having a molecular weight of less than 10 kDal, and by comprising three peptides. Also provided is a peptide component of MC6 named MC6.1, as well as analogues and mimetics thereof. The active MC6, MC6.1, MC6.2, and MC6.3 exhibit hypoglycemic activity, even following oral administration. Also provided are methods of using the active agents to treat hyperglycemic disorders, particularly diabetes, where the active agents are preferably orally administered.

EXEMPLARY CLAIMS

1. The water-soluble composition obtained from IL>Momordica CharantiaMC6 characterized by migrating as a single band of less than 10 kDal on SDS-20 PAGE comprising three peptides, exhibiting hypoglycemic activity and being active by oral administration.
Use of plant extracts for treatment of acne and furuncle

2002-04-30 06379718
NDN- 269-2979-9085-6
USF
USPTO
INVENTOR: Ren, Kaijun
PATENT NUMBER: 06379718
PATENT APPLICATION NUMBER: 745455
DATE FILED: 2000-12-21
PATENT DATE: 2002-04-30
NUMBER OF CLAIMS: 12
EXEMPLARY CLAIM: 1
ART OR GROUP UNIT: 1651
PATENT CLASS: Invention (utility) patent
INVENTOR COUNTRY OR ZIPCODE: 77478
ASSIGNEE CITY: Sugar Land
ASSIGNEE STATE: TX
ASSIGNEE TEXT: Kaijun, Ren
FIRM: Moser, Patterson & Sheridan, LLP
US PATENT CLASS: 424758000O
US CLASSIFICATION REFERENCE: X424725000; X514859000
INTERNATIONAL PATENT CLASS: 7A01N06500; A61K03578
PATENT REFERENCE: 4795739; 4985248; 5484889; 5578307; 5929047
FOREIGN DOCUMENT REFERENCE: 1084714; 1205202; 54132227; 04299938; 06040882; 97/04791
FOREIGN COUNTRY CODE: CNX; CNX; JPX; JPX; JPX; WOX
NEW CLASSIFICATION: 424758000O
CURRENT CLASSIFICATION REFERENCE: X424725000; X514859000
RELATED PAPER: 0; 09/350342

Novel herbal extracts provide potent efficacy in the treatment of acne and furuncle. The formulated extracts of IL> Momordica charantia L. are from either the whole plant or parts of the plant. The extracts have been formulated into aqueous solution, pads, and/or lotion. These formulations have been provided to treat acne and furuncle 2 to 3 times a day. It has demonstrated the ability to manage various grades of acne, from mild, moderate to severe, which include comedos, papules, pustules and nodules. Significant improvement is visible within five days. There are no observed either long-term or short-term side reactions.

EXEMPLARY CLAIMS

1. A process for producing a skin treatment composition for treating acne and furuncle containing an extract of IL> Momordica charantia L., comprising: grinding one or more parts of IL> Momordica charantia L. plant to a pulp-like texture; pressing liquid from the ground plant; centrifuging the pressed liquid; collecting upper clean centrifuged liquid; and formulating a solution by adding an effective amount of an acid to the clean centrifuged liquid to produce a skin treatment composition.
70.

Use of plant Momordica charactia extracts for treatment of acne acid
2001-02-06 06183747
NDN- 269-2895-2865-6
USF
USPTO
INVENTOR: Ren, Kajun
PATENT NUMBER: 06183747
PATENT APPLICATION NUMBER: 350342
DATE FILED: 1999-07-14
PATENT DATE: 2001-02-06
NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
ART OR GROUP UNIT: 1651
PATENT CLASS: Invention (utility) patent
INVENTOR COUNTRY OR ZIPCODE: 77478
FIRM: Thomason, Moser & Patterson, L.L.P.
US PATENT CLASS: 4241951000
US CLASSIFICATION REFERENCE: X514859000
INTERNATIONAL PATENT CLASS: 7A61K03578
PATENT REFERENCE: 5578307; 5929047
FOREIGN DOCUMENT REFERENCE: 1205202; 06040882; 97/04791
FOREIGN COUNTRY CODE: CNX; JPX; WOX
NEW CLASSIFICATION: 4247580000
CURRENT CLASSIFICATION REFERENCE: X514859000

Novel herbal extracts provide potent efficacy in the treatment of acne and furuncle. The formulated extracts of IL>Momordica charantia L. are from either the whole plant or parts of the plant. The extracts have been formulated into aqueous solution, pads, and/or lotion. These formulations have been provided to treat acne and furuncle 2 to 3 times a day. It has demonstrated the ability to manage various grades of acne, from mild, moderate to severe, which include comedos, papules, pustules and nodules. Significant improvement is visible within five days. There are no observed either long-term or short-term side reactions.

EXEMPLARY CLAIMS

1. A process for treating skin having acne or furuncle comprising applying a composition containing an effective amount of an acidified pressed liquid or water extract of IL>Momordica charactia L. over an area of skin having acne or furuncle.

71.

Orally active fraction of momordica charantia, active peptides thereof, and their use in the treatment of diabetes
2000-10-03 06127338
NDN- 269-2870-5346-7
USF
USPTO
INVENTOR: Nag, Bishwajit; Medicherla, Satyanarayana; Sharma, Somesh D.
PATENT NUMBER: 06127338
PATENT APPLICATION NUMBER: 053617
A water soluble extract of M. charantia named MC6, methods for its preparation and methods for its use in the treatment of hyperglycemic disorders are provided. The active MC6 is characterized by moving as a single band on SDS-PAGE having a molecular weight of less than 10 kDa, and by comprising three peptides. Also provided is a peptide component of MC6 named MC6.1, as well as analogues and mimetics thereof. The active MC6, MC6.1, MC6.2, and MC6.3 exhibit hypoglycemic activity, even following oral administration. Also provided are methods of using the active agents to treat hyperglycemic disorders, particularly diabetes, where the active agents are preferably orally administered.

**EXEMPLARY CLAIMS**

Claim- 1. A peptide having anti-hyperglycemic activity selected from the group consisting of peptides respectively consisting of SEQ ID No. 1, SEQ ID No. 2, SEQ ID No. 3.

72.

**Plant protein useful for treating tumors and HIV infection**

1996-01-16 05484889

NDN- 269-2599-9589-3

USF

USPTO

INVENTOR: Lee-Huang, Sylvia; Huang, Philip L.; Nara, Peter L.; Chen, Hao-Chia; Kung, Hsiang-fu; Huang, Peter; Huang, Henry I.; Huang, Paul L.

PATENT NUMBER: 05484889

PATENT APPLICATION NUMBER: 277283

DATE FILED: 1994-07-21

PATENT DATE: 1996-01-16
A protein, in particular MAP 30, obtainable from both the fruit and seeds of *Momordica charantia* or produced by recombinant means useful for treating tumors and HIV infections is disclosed. In treating HIV infections, the protein is administered alone or in conjunction with conventional AIDS therapies. Also provided are processes for purifying the protein, DNA sequences encoding the protein, and recombinant DNA methods for expressing the protein.

EXEMPLARY CLAIMS

Claim 1. A purified protein comprising a MAP 30 protein obtainable from the fruit or the seed of the plant *Momordica charantia*, said MAP 30 protein having a molecular weight of about 30 kD on sodium dodecyl sulfate polyacrylamide gel electrophoresis and including the amino acia sequence: Asp-Val-Asn-Phe-Asp-Leu-Ser-Thr-Ala-Thr-Ala-Lys-Thr-Tyr-Thr-Lys -Phe-Ile-Glu-Asp-Phe-Arg-Ala-Thr-Leu-Pro-Phe-Ser-His-Lys-Val -Tyr-Asp-Ile-Pro-Leu-Leu-Tyr-Ser-Thr-IleSer-Asp-Pro, SEQ ID NO:1, said protein having anti-HIV activity in vitro in p24 expression or reverse transcriptase assays.

73.

**HERBAL PRODUCT COMPRISING CINNAMON AND BITTER MELON FOR TREATING DIABETES**

08-01 2008000063/WO-A1
NDN-177-2460-8688-4
PCN
Univentio
INVENTOR: SOLOMON, David; LAPOINTE, Philip Maurice
DATE FILED: 2007-06-15
PUBLICATION NUMBER: 2008000063/WO-A1
DOCUMENT TYPE: A1
PUBLICATION DATE: 2008-01-03
79 Old Forest Hill Road Toronto, Ontario M5P 2R6; 336 East 26th Street North Vancouver, British Columbia V7N 1B1
FIRM: RICHES, McKENZIE & HERBERT LLP; 2 Bloor Street East Suite 1800 Toronto, Ontario M4W 3J5; CA
INTERNATIONAL PATENT CLASS: A61K03654; A61K03642; A61K00920; A61K00922; A61K00948
PCT APPLICATION NUMBER: 07001066/CA
PATENT APPLICATION PRIORITY: 2551706
PRIORITY COUNTRY CODE: CA
PRIORITY DATE: 2006-06-27
APPLICANT: INNOVATIVE LIFE SCIENCES CORPORATION
A herbal product comprising cinnamon (Cinnamomi cassiae: Cinnamomum verum) and **bitter melon** (Momordica charantia) is disclosed. Each of cinnamon and **bitter melon** is known to be useful in the **treatment** of type 2 diabetes mellitus. The combination of cinnamon and **bitter melon** demonstrates significant synergism and improved **therapeutic benefit** to diabetic patients.

74.

**HISTAMINE RELEASE INHIBITOR**

07-40 2007111294/WO-A1
NDN-177-2447-4504-4
PCN

Univentio

INVENTOR: FUJIMURA, Yuki; OKUBO, Hiroshi; OZAKI, Yukio; TACHIBANA, Hirofumi

DATE FILED: 2007-03-26

PUBLICATION NUMBER: 2007111294/WO-A1

DOCUMENT TYPE: A1

PUBLICATION DATE: 2007-10-04
c/o Kyushu University, National University Corporation, 10-1, Hakozaki 6-chome, Higashi-ku, Fukuoka-; 8128581; c/o Kyushu University, National University Corporation, 10-1, Hakozaki 6-chome, Higashi-ku, Fukuoka-; 8128581; c/o Kyushu University, National University Corporation, 10-1, Hakozaki 6-chome, Higashi-ku, Fukuoka-; 8128581; c/o Kyushu University, National University Corporation, 10-1, Hakozaki 6-chome, Higashi-ku, Fukuoka-; 8128581

FIRM: SHAMOTO, Ichio et al.; YUASA AND HARA, Section 206, New Ohtemachi Bldg., 2-1, Ohtemachi 2-chome, Chiyoda-ku, Tokyo 1000004; JP

INTERNATIONAL PATENT CLASS: A61K03642; A23L00130; A61P01102; A61P01106; A61P01700; A61P01704; A61P02714; A61P03708; A61P04300

PCT APPLICATION NUMBER: 07056187/JP

PATENT APPLICATION PRIORITY: 20060083592

PRIORITY COUNTRY CODE: JP

PRIORITY DATE: 2006-03-24

APPLICANT: KYUSHU UNIVERSITY, NATIONAL UNIVERSITY CORPORATION

PUBLICATION COUNTRY: WO
10-1, Hakozaki 6-chome, Higashi-ku, Fukuoka-shi, Fukuoka 8128581

JP

JP; JP; JP; JP

FILING LANGUAGE: JAP
Disclosed is a food or pharmaceutical composition for the treatment of a disease or condition associated with the release of histamine, which comprises a plant belonging to the genus Momordica. Preferred examples of the plant include balsam pear (Momordica charantia L.) and kakrol (Momordica dioica Roxb.) which grows in an area around Bangladesh. It is particularly preferable to use an aqueous extract of a pulp of the plant. The food or pharmaceutical composition is useful for a disease or condition associated with the release of histamine, such as atopic dermatitis, pollinosis, allergic rhinitis, allergic conjunctivitis, bronchial asthma, urticaria, collagen disease, hypersensitivity pneumonitis, anaphylaxis, food allergy, drug allergy, mite allergy, metal allergy and animal allergy.

75.

SIMAROUBA AMARA AND/OR MOMORDICA CHARANTIA EXTRACTS FOR THE TREATMENT OF COCCIDIOSIS IN POULTRY

2005-08-18 2005074954/WO-A1
NDN- 177-2340-0625-8
PCN
Univentio
INVENTOR: KETZIS, Jennifer
DATE FILED: 2005-02-02
PUBLICATION NUMBER: 2005074954/WO-A1
DOCUMENT TYPE: A1
PUBLICATION DATE: 2005-08-18
Bollwerkstrasse 46, CH-4102 Binningen
FIRM: ROTH, Peter; Novartis AG, Corporate Intellectual Property, CH-4002 Basel; CH
INTERNATIONAL PATENT CLASS: A61K03578; A61P00100
PCT APPLICATION NUMBER: 05"/A/001041/EP
PRIORITY COUNTRY CODE: EP
PRIORITY DATE: 2004-02-03
APPLICANT: NOVARTIS AG; NOVARTIS PHARMA GMBH
PUBLICATION COUNTRY: WO
Lichtstrasse 35, CH-4056 Basel; Brunner Strasse 59, A-1230 Vienna
CH; AT
CH
FILING LANGUAGE: ENG
DESIGNATED COUNTRY: AE; AE; AG; AL; AL; AM; AM; AM; AT; AT; AU; AZ; AZ; BA; BB; BG; BH; BR; BW; BY; BY; BZ; CA; CH; CN; CN; CO; CO; CR; CR; CU; CU; CZ; CZ; DE; DE; DK; DK; DM; DZ; EC; EC; EE; EE; EG; EG; ES; ES; FI; FI; GB; GD; GE; GE; GH; GM; HR; HR; HU; HU; ID; IL; IN; IS; JP; JP; KE; KE; KG; KG; KP; KP; KP; KR; KR; KZ; KZ; KZ; LC; LC; LR; LS; LS; LT; LU; LV; MA; MD; MD; MG; MK; MN; MW; MX; MZ; MZ; NA; NI; NI; NO; NZ; OM; PG; PH; PH; PL; PL; PT; PT; RO; RU; RU; SC; SD; SE; SG; SK; SK; SL; SL; SY; TJ; TJ; TM; TM; TN; TR; TR; TT; TT; TZ; UA; UA; UG; UG; US; US; UZ; UZ; VC; VN; YU; YU; YA; ZA; ZM; ZW; BW; GH;
Described is the use of a coccidiostatically effective amount of Simarouba amara either alone or in combination with *Momordica charantia* for the manufacture of a medicament for the therapy of coccidiosis in poultry. Further described is a method for controlling coccidiosis in poultry based on the administering of said medicament. Described is also a poultry feed supplement or medicated poultry feed for the control of coccidiosis in poultry that comprises besides ground dry vegetable- and/or animal-based poultry feed, with or without additives such as proteins, vitamins and minerals, and a coccidiostatically effective amount of Simarouba amara dried bark or an extract thereof either alone or in combination with *Momordica charantia* fruit extract. Also described is the production of said medicament and to the use of said active ingredients as an additive to dry or wet poultry food or drinking water for the prophylactic or curative treatment of coccidial infections in poultry. Another described embodiment relates to the management for preventing the development of resistant *Eimeria* strains that cause coccidiosis in poultry comprising rotation of the administration of a coccidiostatically effective amount of Simarouba amara dried bark or an extract thereof and of a coccidiostatically effective amount of *Momordica charantia* fruit extract together with one or more with one or more physiologically acceptable carriers.

**76.**

**DIETARY SUPPLEMENT FOR PROMOTING CONTROL OF BLOOD-SUGAR LEVELS AND ASSOCIATED PATHOLOGY IN TYPE 2 DIABETICS**

2005-02-03  2005009351/WO-A2  
NDN- 177-2315-9812-5  
PCN  
Univention  
INVENTOR: DJANG, Arthur  
DATE FILED: 2004-07-13  
PUBLICATION NUMBER: 2005009351/WO-A2  
DOCUMENT TYPE: A2  
PUBLICATION DATE: 2005-02-03  
Sante International, Inc., 111 West Second Street, Suite 400, Jamestown, NY 14701  
FIRM: NELSON, Bud, M.; 8112 Greywinds Drive, Raleigh, NC 27615; US  
INTERNATIONAL PATENT CLASS: A61K  
PCT APPLICATION NUMBER: 04022330/US  
PATENT APPLICATION PRIORITY: 60/488492  
PRIORITY COUNTRY CODE: US  
PRIORITY DATE: 2003-07-17  
APPLICANT: SANTE INTERNATIONAL, INC.  
PUBLICATION COUNTRY: WO  
111 West Second Street, Suite 4000, Jamestown, NY 14701  
US  
US  
FILING LANGUAGE: ENG  
DEVELOPING COUNTRY: AE; AE; AG; AL; AL; AM; AM; AM; AT; AT; AU; AZ; AZ; BA; BB; BG; BG; BR; BR; BW; BY; BY; BY; BZ; BZ; CA; CH; CN; CN; CO; CO; CR; CR; CU; CU; CZ; CZ; DE; DE; DK; DK; DM; DZ; EC; EC; EE; EE; EG; EG; ES; ES; FI; FI; GB; GD; GE; GE; GH; GM; HR; HR; HU; HU; ID; IL; IN; IS; JP; JP; KE; KE; KG; KG; KP; KP; KP; KR; KR; KR; KR; KZ; KZ; KZ; KZ; KZ; LC; LC; LR; LS; LS; LT; LU; LV; MA; MD; MD; MG; MK; MN; MW; MX; MX;
Provided is an herbal extract-based composition comprising an extract of Gynostemma pentaphyllum, an extract of Crataegus pinnatifida (hawthorn), an extract of Camellia sinensis (green tea), and an extract of Momordica charantia (bitter melon). The composition may further comprise an extract of mulberry (Morus species). Also provided is a process for preparing a herbal extract-based composition which comprises separately extracting each of hawthorn, green tea, Gynostemma pentaphyllum, mulberry, and bitter melon; drying extraction eluates obtained from the extracting of each of the herbal components to obtain organic residues in forming a hawthorn extract powder, green tea extract powder, a Gynostemma pentaphyllum extract powder, a mulberry extract powder, and a bitter melon powder; and combining the green tea extract powder, the Gynostemma Pentaphyllum extract powder, the hawthorn extract powder, the mulberry extract powder, and the bitter melon powder in desired proportions to form the herbal extract-based composition which, when taken orally, has health-promoting effects including anti-diabetic effects that include, but are not limited to, decreasing visceral fat, reducing hyperglycemia, and reducing the occurrence and severity of diabetic complications, associated with type 2 diabetes.

77.

**HEALTH-CARE PRODUCT FOR REGULATING BLOOD GLUCOSE AND ITS PREPARATION METHOD**

2003-03-13 2003020293/WO-A1
NDN- 177-2238-3500-6
PCN
Univention
INVENTOR: ZHU, Xiaoping; ZENG, Yaohui; ZHU, Zhongmei
DATE FILED: 2002-09-04
PUBLICATION NUMBER: 2003020293/WO-A1
DOCUMENT TYPE: A1
PUBLICATION DATE: 2003-03-13
Kang Bo Tong Biological Technology Co. Ltd, Shilongchang, Guangdong Province, Heyuan 517000, CN; Kang Bo Tong Biological Technology Co. Ltd, Shilongchang, Guangdong Province, Heyuan 517000, CN
INTERNATIONAL PATENT CLASS: A61K03578; *A61P00310
PCT APPLICATION NUMBER: 00200617/CN
PATENT APPLICATION PRIORITY: 01131280.7
PRIORITY COUNTRY CODE: CN
PRIORITY DATE: 2001-09-05
APPLICANT: ZHU, Xiaoping
PUBLICATION COUNTRY: WO
Kang Bo Tong Biological Technology Co. Ltd, Shilongchang, Guangdong Province, Heyuan 517000 CN
CN
FILING LANGUAGE: CHI
DESIGNATED COUNTRY: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NO; NZ; OM; PH; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VN; YU; ZA; ZM; ZW; GH; GM; KE; LS; MW; MZ; SD; SL;
The invention relates a health-care product for regulating blood glucose and its preparation method. The health-care product is prepared by using green tea 3-30 portions, fresh *Momordica charantia* L. 5-60 portions, Folium Mori 5-15 portions, Radix Astragali, Rhizoma Dioscoreae, Fructus Lycii and Radix Rehmaniae 1-10 portions each as raw material and low-temperature extracting. It has the functions of regulating blood glucose, lowering blood glucose in the population of diabetic, and improving clinical symptom. For human who has the tendency to hyperglycemia, it may prevent diabetes effectively. It also has excellent improving effect on the main symptoms of type II diabetes, such as the symptoms of large food intake, large drinking and polyuria. L'invention concerne un produit medical servant a reguler le taux de glucose sanguin ainsi qu'un procede de preparation dudit produit, ledit procede consistant a utiliser comme matieres premiéres : 3 a 30 parties de the vert, 5 a 60 parties de *Momordica Charantia* fraiche, 5 a 15 parties de Folium Mori, 1 a 10 parties de Radix Astragali, 1 a 10 parties de Rhizoma Dioscoreae, 1 a 10 parties de Fructus Lycii et 1 a 10 parties de Radix Rehmanniae ; et a realiser une extraction a basse temperature. Ce produit medical regule le taux de glucose sanguin, abaisse le taux de glucose sanguin chez les diabetiques et reduit les symptomes cliniques. Chez les sujets humains presentant une tendance a l'hyperglycémie, il peut éviter efficacement l'apparition du diabète. Il réduit de manière tres efficace les symptomes principaux du diabete de type II, tels que la prise alimentaire importante et l'ingestion importante de boissons, ainsi que la polyurie.

78.

USE OF PLANT EXTRACTS FOR TREATMENT OF ACNE AND FURUNCLE

2001-01-25 2001005417/WO-A1
NDN- 177-2158-5530-1
PCN
Univentio
INVENTOR: REN, Kaijun
DATE FILED: 2000-07-05
PUBLICATION NUMBER: 2001005417/WO-A1
DOCUMENT TYPE: A1
PUBLICATION DATE: 2001-01-25
DOCUMENT VOLUME REFERENCE: DATABASE DERWENT OnlineU GYANGXI INST. MEDICINE NAT. MINORITIES, XP002935732 Retrieved from WEST Database accession no. 1997-320410 & CN 1 105 522 A (LU ET AL.) 26 July 1995
1211 Spinnaker Way, Sugar Land, TX 77478
INTERNATIONAL PATENT CLASS: A61K03578
PCT APPLICATION NUMBER: 00018406/US
PATENT APPLICATION PRIORITY: 09/350342
PRIORITY COUNTRY CODE: US
PRIORITY DATE: 1999-07-14
APPLICANT: REN, Kaijun
PUBLICATION COUNTRY: WO
1211 Spinnaker Way, Sugar Land, TX 77478
US
US
FILING LANGUAGE: ENG
DESIGNATED COUNTRY: AE; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN; CR; CU; CZ; DE; DK; DM; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU;
A process for treating skin having acne or furuncle which comprises applying a composition containing an extract of *Momordica charantia* L. over an area of skin having acne or furuncle is disclosed. Preferably the extract is an acidified pressed liquid extract or an acidified water extract. La présente invention concerne une méthode de traitement d'une peau présentant de l'acné ou des furoncles, consistant à appliquer une composition à base d'extrait de *Momordica charantia* L. sur la surface de la peau en question. De preference, cet extrait est un extrait liquide pressé acidifié ou un extrait d'eau acidifié.

79.

**PROTEIN/POLYPEPTIDE-K OBTAINED FROM**

2000-10-19  2000061619/WO-A1
NDN- 177-2150-9322-6
PCN
Univentio
INVENTOR: KHANNA, Pushpa
DATE FILED: 1999-09-28
PUBLICATION NUMBER: 2000061619/WO-A1
DOCUMENT TYPE: A1
PUBLICATION DATE: 2000-10-19
DOCUMENT VOLUME REFERENCE: EL-GENGAIHI S ET AL: "CHEMICAL AND BIOLOGICAL INVESTIGATION OF POLYPEPTIDES OF MOMORDICA AND LUFFA SPP. FAM. CUCURBITACEAE"
E 14/7, 1st floor, Vasant Vihar, New Delhi 110 057
FIRM: GABRIEL, Devadoss, Caleb; Kumaran & Sagar, 16 Aradhana, R.K. Puram, Sector XIII, New Delhi 110 066; IN INTERNATIONAL PATENT CLASS: *7; C07K014415; *A61P00310
PATENT REFERENCE: 9843484/WO-A
PCT APPLICATION NUMBER: 09900052/IN
PATENT APPLICATION PRIORITY: 560/DEL/99; 561/DEL/99
PRIORITY COUNTRY CODE: IN; IN
APPLICANT: KHANNA, Pushpa
PUBLICATION COUNTRY: WO
E 14/7, 1st floor, Vasant Vihar, New Delhi 110 057
IN

FILING LANGUAGE: ENG
DESIGNATED COUNTRY: AE; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN; CU; CZ; DE; DK; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MD; MG; MK; MN; MW; MX; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; SZ; TZ; UG; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; TR; TT; UA; US; UZ; VN; YU; ZA; ZW; GH; GM; KE; LS; MW; SD; SL; SZ; TZ; UG; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT; BE;
The invention relates to a highly effective hypoglycaemic polypeptide-k, extracted from *Momordica charantia*. This invention also provides a method for the extraction of said polypeptide-k from. Further, the invention provides novel hypoglycaemic compositions employing the said extract, and useful in the treatment of diabetes mellitus. L'invention concerne un polypeptide-k hypoglycémique tres efficace, extrait de *Momordica charantia*. L'invention concerne en outre un procédé relatif a l'extraction de ce polypeptide a partir de. L'invention concerne également de nouvelles compositions hypoglycémiques faisant appel a ce type d'extrait, qui sont utiles pour le traitement du diabète sucre.

80.

**ORALLY ACTIVE FRACTION OF *MOMORDICA CHARANTIA*, ACTIVE PEPTIDES THEREOF, AND THEIR USE IN THE TREATMENT OF DIABETES, -1998043484/WO-A1/**

1998-10-08 1998043484/WO-A1
NDN- 177-2105-1925-8
PCN
Univentio
INVENTOR: NAG, Bishwajit; MEDICHERLA, Satyanarayana; SHARMA, Somesh, D.
DATE FILED: 1998-04-01
PUBLICATION NUMBER: 1998043484/WO-A1
DOCUMENT TYPE: A1
PUBLICATION DATE: 1998-10-08
34353 Eucalyptus Terrace, Fremont, CA 94555; Apartment 61, 1674 Hollenbeck Avenue, Sunnyvale, CA 94087; 44 Stuart Court, Los Altos, CA 94022
FIRM: SUYAT, Reginald, J.; Fish & Richardson P.C., Suite 100, 2200 Sand Hill Road, Menlo Park, CA 94025; US INTERNATIONAL PATENT CLASS: *6; A01N06500; *A01N03718
PCT APPLICATION NUMBER: 09806450/US
PRIORITY COUNTRY CODE: US; US
PRIORITY DATE: 1997-04-01; 1997-05-02
APPLICANT: NATPRO, INC.
PUBLICATION COUNTRY: WO
29552 Union City Boulevard, Union City, CA 94587
US
US; US; US
FILING LANGUAGE: ENG
DESIGNATED COUNTRY: AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN; CU; CZ; DE; DK; EE; ES; FI; GB; GE; GH; GM; GW; HU; ID; IL; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LS; LT; LU; LV; MD; MG; MK; MN; MW; MX; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; UA; UG; UZ; VN; YU; ZW; GH; GM;
A water soluble extract of M. charantia named MC6, methods for its preparation and methods for its use in the treatment of hyperglycemic disorders are provided. The active MC6 is characterized by moving as a single band on SDS-PAGE having a molecular weight of less than 10 kDa, and by comprising three peptides. Also provided is a peptide component of MC6 named MC6.1, as well as analogues and mimetics thereof. The active MC6, MC6.1, MC6.2, and MC6.3 exhibit hypoglycemic activity, even following oral administration, also provided are methods of using the active agents to treat hyperglycemic disorders, particularly diabetes, where the active agents are preferably orally administered.

81.

ORALLY ACTIVE FRACTION OF MOMORDICA CHARANTIA, ACTIVE PEPTIDES THEREOF, AND THEIR USE IN THE TREATMENT OF DIABETES, -1998043484/WO-A1/

1998-10-08 1998043484/WO-A1
NDN- 052-0226-1052-2
PCN
Univentio
INVENTOR: NAG, Bishwajit; MEDICHERLA, Satyanarayana; SHARMA, Somesh, D.
DATE FILED: 1998-04-01
PUBLICATION NUMBER: 1998043484/WO-A1
DOCUMENT TYPE: A1
PUBLICATION DATE: 1998-10-08
34353 Eucalyptus Terrace, Fremont, CA 94555; Apartment 61, 1674 Hollenbeck Avenue, Sunnyvale, CA 94087; 44 Stuart Court, Los Altos, CA 94022
FIRM: SUYAT, Reginald, J.; Fish & Richardson P.C., Suite 100, 2200 Sand Hill Road, Menlo Park, CA 94025; US
INTERNATIONAL PATENT CLASS: *6; A01N06500; *A01N03718
PCT APPLICATION NUMBER: 09806450/US
PATENT APPLICATION PRIORITY: 08/831,039; 08/850,855
PRIORITY COUNTRY CODE: US; US
PRIORITY DATE: 1997-04-01; 1997-05-02
APPLICANT: NAFPRO, INC.
PUBLIC COUNTRY: WO
29552 Union City Boulevard, Union City, CA 94587
US
US; US; US
FILING LANGUAGE: ENG
DESIGNATED COUNTRY: AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN; CU; CZ; DE; DK; EE; ES; FI; GB; GE; GH; GM; GW; HU; ID; IL; IS; JP; KE; KG; KP; KR; KZ; LC; DK; LS; LT; LU; LV; MD; MG; MK; MN; MW; MX; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; UA; UG; UZ; VN; YU; ZW; GH; GM;
A water soluble extract of M. charantia named MC6, methods for its preparation and methods for its use in the treatment of hyperglycemic disorders are provided. The active MC6 is characterized by moving as a single band on SDS-PAGE having a molecular weight of less than 10 kDa, and by comprising three peptides. Also provided is a peptide component of MC6 named MC6.1, as well as analogues and mimetics thereof. The active MC6, MC6.1, MC6.2, and MC6.3 exhibit hypoglycemic activity, even following oral administration, also provided are methods of using the active agents to treat hyperglycemic disorders, particularly diabetes, where the active agents are preferably orally administered.

82.

A PLANT PROTEIN USEFUL FOR TREATING TUMORS AND HIV INFECTION, -1992006106/WO-A1/
1992-04-16 1992006106/WO-A1
NDN- 177-2029-5092-5
PCN
Univentio
INVENTOR: LEE-HUANG, Sylvia; HUANG, Philip, L.; NARA, Peter, L.; CHEN, Hao-Chia; KUNG, Hsiang-fu; HUANG, Peter; HUANG, Henry, I.; HUANG, Paul, L.
DATE FILED: 1991-10-09
PUBLICATION NUMBER: 1992006106/WO-A1
DOCUMENT TYPE: A1
PUBLICATION DATE: 1992-04-16
INTERNATIONAL PATENT CLASS: C07K00302; *C07K00328; *C07K01510; *C12N01503; *C12N01506; *C12N01511; *C12N01529
PATENT REFERENCE: 4795739/WO-A
PCT APPLICATION NUMBER: 09107439/US
PATENT APPLICATION PRIORITY: 594,156
PRIORITY COUNTRY CODE: US
PRIORITY DATE: 1990-10-09
APPLICANT: NEW YORK UNIVERSITY; AMERICAN BIOSCIENCES, INC; THE UNITED STATES GOVERNMENT, as represented by THE SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLICATION COUNTRY: WO
DESIGNATED COUNTRY: AT; AU; BE; CA; CH; DE; DK; ES; FR; GB; GR; IT; JP; LU; NL; SE

A protein, in particular MAP 30, obtainable from both the fruit and seeds of Momordica charantia or produced by recombinant means useful for treating tumors and HIV infections is disclosed. In treating HIV infections, the protein is
administered alone or in conjunction with conventional AIDS therapies. Also provided are processes for purifying the protein, DNA sequences encoding the protein, and recombinant DNA methods for expressing the protein.

83.

A PLANT PROTEIN USEFUL FOR TREATING TUMORS AND HIV INFECTION, -1992006106/WO-A1/
1992-04-16 1992006106/WO-A1
NDN- 052-0135-9127-7
PCN
Univentio
INVENTOR: LEE-HUANG, Sylvia; HUANG, Philip, L.; NARA, Peter, L.; CHEN, Hao-Chia; KUNG, Hsiang-fu;
HUANG, Peter; HUANG, Henry, I.; HUANG, Paul, L.
DATE FILED: 1991-10-09
PUBLICATION NUMBER: 1992006106/WO-A1
DOCUMENT TYPE: A1
PUBLICATION DATE: 1992-04-16
INTERNATIONAL PATENT CLASS: C07K00302; *C07K00328; *C07K01510; *C12N01503; *C12N01506;
*C12N01511; *C12N01529
PATENT REFERENCE: 4795739/WO-A
PCT APPLICATION NUMBER: 09107439/US
PATENT APPLICATION PRIORITY: 594,156
PRIORITY COUNTRY CODE: US
PRIORITY DATE: 1990-10-09
APPLICANT: NEW YORK UNIVERSITY; AMERICAN BIOSCIENCES, INC; THE UNITED STATES GOVERNMENT, as represented by THE SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLICATION COUNTRY: WO
DESIGNATED COUNTRY: AT; AU; BE; CA; CH; DE; DK; ES; FR; GB; GR; IT; JP; LU; NL; SE

A protein, in particular MAP 30, obtainable from both the fruit and seeds of Momordica charantia or produced by recombinant means useful for treating tumors and HIV infections is disclosed. In treating HIV infections, the protein is administered alone or in conjunction with conventional AIDS therapies. Also provided are processes for purifying the protein, DNA sequences encoding the protein, and recombinant DNA methods for expressing the protein.

84.

FUCOIDAN-CONTAINING HEALTH SUPPLEMENTARY FOOD
08-01-07 07190004 JP
NDN- 043-0435-6328-7
PAJ
Micropatent
INVENTOR: SHIODA, SHINICHI
PATENT APPLICATION NUMBER: 2006034419
DATE FILED: 2006-01-16
PUBLICATION NUMBER: 07190004 JP
DOCUMENT TYPE: A
PUBLICATION DATE: 2007-08-02
INTERNATIONAL PATENT CLASS: A23L00129; A23L00130; A61K03600; A61K03554; A61K031737; A61K03605; A61K0317008; A61P03500
APPLICANT: SHIODA SHINICHI
PUBLICATION COUNTRY: Japan
PROBLEM TO BE SOLVED: To obtain a health supplementary food improved in quality effect and further effective to health through retrieving a habitually drinking method of a powder or aqueous solution product of conventional health supplementary food such as garlic yolk, barley young leaf, chlorella, Momordica Charantia, black vinegar, gluconsamine, kale, and rasuma tea.
SOLUTION: The health supplementary food is obtained by subjecting a powder or aqueous solution product of fucoidan extract having special effect of anticancer prevention and extracted from seaweed to mixing treatment with a product of health supplementary food of garlic yolk, barley young leaf or the like.
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85.

BITTER MELON SEED PROCESSED FOOD, OR FOOD OR DRUG FOR IMPROVING OR TREATING INFERTILITY AND PROCESS FOR PRODUCING THE SAME
08-01-07 07191478 JP
NDN- 043-0435-7802-0
PAJ
Micropatent
INVENTOR: MAEDA, HIROMI
PATENT APPLICATION NUMBER: 2006346842
DATE FILED: 2006-12-23
PUBLICATION NUMBER: 07191478 JP
DOCUMENT TYPE: A
PUBLICATION DATE: 2007-08-02
PATENT PRIORITY INFORMATION: 2005371201, 2005-12-23, Japan
INTERNATIONAL PATENT CLASS: A61K03642; A23L00130; A23L001212; A23L00136; A61P00116; A61P00306; A61P01500; A61P03708
APPLICANT: MAEDA SHIYOGOU
PUBLICATION COUNTRY: Japan
PROBLEM TO BE SOLVED: To collect effectively only seeds in a pod of a bitter melon from which only the seeds inside the pod are difficult to be collected, to attain high quality powder hygienically thereby enabling mass production of products including processed foods or various kinds of treating foods, drugs for improving various kinds of symptoms and the like, as well as attaining foods or drugs having effects on treatments of infertility, or improvement of neutral fat, liver function and atopic dermatitis or the like.
SOLUTION: The invention provides bitter melon seed processed foods or infertility treatment foods, neutral fat improving foods, liver function improving foods or atopy improving foods prepared by taking out and powderizing seeds from a dried bitter melon. Intake of the powder obtained by taking out seeds inside a dried bitter melon can provide effects on alleviation of body temperature elevation and malaise owing to fat burning or improvement in metabolism and
in addition, an effect on treatments of infertility can also be achieved. Moreover, the powder is also promising as foods or drugs for improving neutral fat, liver function, atopic dermatitis and the like.

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86.

HEALTH FOOD AND METHOD FOR PRODUCING THE SAME

06-01-07 07151431 JP
NDN- 043-0431-7756-7
PAJ
Micropatent
INVENTOR: KINO, MATSUO
PATENT APPLICATION NUMBER: 2005348903
DATE FILED: 2005-12-02
PUBLICATION NUMBER: 07151431 JP
DOCUMENT TYPE: A
PUBLICATION DATE: 2007-06-21
INTERNATIONAL PATENT CLASS: A23L00130
APPLICANT: KINO MATSUO
PUBLICATION COUNTRY: Japan
PROBLEM TO BE SOLVED: To provide health food comprising food material such as fish and shellfish, seaweed, herbs, cereal grains and spices, and enabling improvement of physical condition of an eater: and to provide a method for producing the health food.
SOLUTION: The health food comprises fish and shellfish comprising sea cucumber and Onchidium, seaweed comprising brown algae and Nemacystus decipiens, herbs comprising whole plant (including roots, leaves and seeds) of Plantago asiatica, roots, stalks and seeds of Momordica Charantia, roots of turmeric, roots of Crepitidastrum platyphyllum (Franch. et Savat.) Kitam., and parsley, cereal grains comprising rice bran and soybeans, and seasoning comprising Japanese pepper, as raw material, wherein medicinal material regarded as folk medicine transmitted in Okinawa is mainly combined so as to be rich in efficacy or enable internal reform. Further, the health food is formed into granulated or encapsulated one comprising fine powder and spices so as to be easy to drink.
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87.

MOMORDICA CHARANTIA PRESERVED IN SOYBEAN PASTE

11-01-06 06304767 JP
NDN- 043-0411-7985-4
PAJ
Micropatent
INVENTOR: NISHIKAWA, KAZUKO
PATENT APPLICATION NUMBER: 2005225472
DATE FILED: 2005-08-03
PUBLICATION NUMBER: 06304767 JP
DOCUMENT TYPE: A
PUBLICATION DATE: 2006-11-09
INTERNATIONAL PATENT CLASS: A23B00710
APPLICANT: NISHIKAWA KAZUKO
PUBLICATION COUNTRY: Japan
PROBLEM TO BE SOLVED: To provide Momordica charantia preserved in a soybean paste intended for solving such problems that it is convenient to bring Momordica charantia known as one of health food into preserved pickles and daily...
supply to use for food, but there are no pickles with suppressed strong bitter taste of *Momordica charantia* and made easy to eat.

SOLUTION: The *Momordica charantia* preserved in a soybean paste has a suppressed bitter taste and made easy to eat by pickling *Momordica charantia* in salt followed by thoroughly pickling in sweet soybean paste.

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88.

**HEALTHY TEA OF POWDER OF ERYTHRINA VARIEGATA L. VAR. ORIENTALIS FOR DIET**

10-01-05  05295972 JP
NDN- 043-0375-4277-6
PAJ

Micropatent
INVENTOR: KAKAZU, TAKANOBU
PATENT APPLICATION NUMBER: 2004139220
DATE FILED: 2004-04-06
PUBLICATION NUMBER: 05295972 JP
DOCUMENT TYPE: A
PUBLICATION DATE: 2005-10-27
INTERNATIONAL PATENT CLASS: A23L00130
APPLICANT: KAKAZU TAKANOBU
PUBLICATION COUNTRY: Japan

PROBLEM TO BE SOLVED: To provide a product not only ameliorating sleeplessness as a modern disease but also ameliorating overweight and diabetic, heightening immune strength by supplying various kinds of nutrients, and assisting improvement of beauty and health.

SOLUTION: The healthy tea is obtained by formulating a formulation of a powder of dried bark of Erythrina variegata L. var. orientalis with a powder of a dried root or stem of Salacia which is said to be effective for amelioration of the overweight and the diabetic, further with at least one kind of powder of a dried leaf or a leaf roasted after drying of Morinda citrifolia, *Momordica charantia*, Artemisia indica Willd., papaya, guava, Citrus depressa Hayata, Murraya paniculata, Alpinia zerumbet, and the like.

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89.

**HEALTH FOOD HAVING LOOFA OR MOMORDICA CHARANTIA AS MAIN INGREDIENT AND METHOD FOR PRODUCING THE FOOD**

09-01-05  05229930 JP
NDN- 043-0368-8234-8
PAJ

Micropatent
INVENTOR: MURAKAMI, MEGUMI; SADOYAMA, KEIICHI; MIYAGI, TAKESHI
PATENT APPLICATION NUMBER: 2004044638
DATE FILED: 2004-02-20
PUBLICATION NUMBER: 05229930 JP
DOCUMENT TYPE: A
PUBLICATION DATE: 2005-09-02
INTERNATIONAL PATENT CLASS: A23L00130
APPLICANT: OKINAWA HAKKO KAGAKU:KK
PUBLICATION COUNTRY: Japan
PROBLEM TO BE SOLVED: To obtain health food having high alcohol dehydrogenase activity and aldehyde dehydrogenase activity without mixing a substance having possibility of affecting the human body in a production process.

SOLUTION: The health food having loofa or Momordica charantia as main ingredients is obtained by freezing and drying filtrate obtained by crushing a product obtained by adding cold water to cooled loofa or Momordica charantia, decomposing the product into solid and liquid, and filtering supernatant liquid.

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90.

VEGETABLE JAM AND METHOD FOR PRODUCING THE SAME

05-01-05 05130843 JP
NDN- 043-0358-9143-1
PAJ

INVENTOR: KIDA, MEGUMI; TAKEDA, KAZUHIRO
PATENT APPLICATION NUMBER: 2003408169
DATE FILED: 2003-10-31
PUBLICATION NUMBER: 05130843 JP
DOCUMENT TYPE: A
PUBLICATION DATE: 2005-05-26
INTERNATIONAL PATENT CLASS: A23L00106; A23L001307
APPLICANT: MOROKI ITSURO
PUBLICATION COUNTRY: Japan

PROBLEM TO BE SOLVED: To provide low-caloric vegetable jam by making use of natural material without adding almost no fruit or pectin which is a gellant, bringing the vegetable as main raw material to be jam requiring no addition of a synthetic additive.

SOLUTION: The vegetable jam as tasting healthy food is produced by using Capsicum annuum L.var. angulosum Mill and/or Momordica charantia L. as the main raw material and bringing the vegetable to be jam using a heating and concentrating cooker at (greater than)100(degree sign)C temperature, adding natural juice of citrus fruit, a mushroom extract and/or a tea leaf extract.

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91.

METHOD FOR PRODUCING SPARKLING WINE

05-01-05 05130769 JP
NDN- 043-0358-9069-8
PAJ

INVENTOR: MATSUDA, AKIRA
PATENT APPLICATION NUMBER: 2003370543
DATE FILED: 2003-10-30
PUBLICATION NUMBER: 05130769 JP
DOCUMENT TYPE: A
PUBLICATION DATE: 2005-05-26
INTERNATIONAL PATENT CLASS: C12C00502; C12G00302
APPLICANT: HEELIOS SHUZO KK
PUBLICATION COUNTRY: Japan
PROBLEM TO BE SOLVED: To provide a method for producing sparkling wine effectively utilizing properties such as the bitterness of *Momordica Charantia*.

SOLUTION: This method for producing the sparkling wine comprises adding a *Momordica Charantia* extract that is obtained by heat treatment of *Momordica Charantia* squeezed juice to beer or sparkling wine at unfinished stages.

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92.

**FOOD MIXED WITH MOMORDICA CHARANTIA**

04-01-04  04097180 JP
NDN- 043-0319-0968-2
PAJ

Micropatent
INVENTOR: IGARASHI, GORO
PATENT APPLICATION NUMBER: 2002299614
DATE FILED: 2002-09-04
PUBLICATION NUMBER: 04097180 JP
DOCUMENT TYPE: A
PUBLICATION DATE: 2004-04-02
INTERNATIONAL PATENT CLASS: A23L00110
APPLICANT: IGARASHI GORO
PUBLICATION COUNTRY: Japan

PROBLEM TO BE SOLVED: To provide a raw material food product, containing vitamins by mixing *Momordica charantia* or its powder as an agitated and treated vegetable in the powder of cereals.

SOLUTION: (A) The food product mixed with the *Momordica charantia* is obtained by mixing the *Momordica charantia* as the agitated and treated vegetable in the powder of the cereals. (B) The food product mixed with the *Momordica charantia* is obtained by mixing the powder of the *Momordica charantia* with the powder of the cereals. By adding the *Momordica charantia* as a vegetable, the powder of the cereals becomes a raw material of food products containing vitamin C and vitamin A (carotene and retinol equivalents) which are contained less in the cereal powder, and it becomes the raw material food product mixed with the *Momordica charantia* which is effective for health.

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93.

**DIABETIC MEDICINE AND HEALTH FOOD**

05-01-03  03128571 JP
NDN- 043-0284-1559-4
PAJ

Micropatent
INVENTOR: ONO, HIROTAKA; IMAI, SHOJI; IWASHIMA, KIYOSHI; MATSUURA, KEICHI
PATENT APPLICATION NUMBER: 2001323710
DATE FILED: 2001-10-22
PUBLICATION NUMBER: 03128571 JP
DOCUMENT TYPE: A
PUBLICATION DATE: 2003-05-08
INTERNATIONAL PATENT CLASS: A61K03578; A23L00130; A61K03564; A61P00310
APPLICANT: MATSUURA YAKUGYO KK
PUBLICATION COUNTRY: Japan

PROBLEM TO BE SOLVED: To provide a highly safe diabetic medicine, and to provide health food.
SOLUTION: The diabetic medicine and the health food each having a hypoglycemic action is characterized by comprising an extract extracted from loquat leaves and an extract extracted from at least one or more animals or plants selected from the group consisting of Momordica Charantia, olive leaves, Koechia scoparia leaves, ginseng, mate tea, molokheiya, Nelumbo nucifera leaves, caiapo, Radix Rhizoma Rhodoidea root and rhizom, focus, Hovenia dulcis seeds, carrot, Apocynum venetum, the fruit body of Ganoderma lucidum, propolis, Polygonatum falcatum roots, royal jelly, Gymnema sylvestre leaves, Momordica grosvenori fruits, san-chi ginseng, Smallanthus sonchifolia tea, Equisetum arvense, Euonymus tricocarpus leaves, Cornus officinalis, Salacia reticulata, mulberry leaves, guar leaves, stevia and green tea.

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94.

ANTITUMOR COMPOSITION

07-01-02 02205953 JP
NDN- 043-0254-4296-3
PAJ

Micropatent
INVENTOR: FUJIMOTO, KENSHIRO; TAKAMIYA, TAKEHITO; MATSUMOTO, WATARU
PATENT APPLICATION NUMBER: 2001002239
DATE FILED: 2001-01-10
PUBLICATION NUMBER: 02205953 JP
DOCUMENT TYPE: A
PUBLICATION DATE: 2002-07-23
INTERNATIONAL PATENT CLASS: A61K03578; A23L00130; A61K031232; A61P03500
APPLICANT: ASAHI DENKA KOGYO KK
PUBLICATION COUNTRY: Japan

PROBLEM TO BE SOLVED: To obtain a practically usable antitumor composition having high safety without adverse effects, and a medicine and a food comprising the antitumor composition.

SOLUTION: This antitumor composition is characterized as comprising a seed oil of Momordica Charantia L. or the seed oil of the Momordica Charantia L. obtained by carrying out a hydrolysis treatment with a lipase and concentrating the resultant (alpha)-eleostearic acid-containing glyceride. The medicine and food comprise the antitumor composition.

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95.

ANGIOTENSIN-CONVERTING ENZYME INHIBITOR

12-01-01 01335494 JP
NDN- 043-0231-4661-6
PAJ

Micropatent
INVENTOR: TOYA, RYOICHI; TOYOKAWA, TETSUYA; HIRASHIKI, KANEKIYO
PATENT APPLICATION NUMBER: 2000158651
DATE FILED: 2000-05-29
PUBLICATION NUMBER: 01335494 JP
DOCUMENT TYPE: A
PUBLICATION DATE: 2001-12-04
INTERNATIONAL PATENT CLASS: A61K03578; A23L00130; A23L00252; A23L00238; A61P00912; A61P04300
APPLICANT: OKINAWA SHOKURYO KK
PUBLICATION COUNTRY: Japan
PROBLEM TO BE SOLVED: To obtain an angiotensin-converting enzyme inhibitor having angiotensin-converting enzyme inhibitory actions and effective in treatment and prophylaxis of hypertension. 
SOLUTION: This substance for inhibiting an angiotensin-converting enzyme activity is characterized by including a dried powder or an extract of one or more species of plants selected from the group consisting of a mugwort, Foeniculum vulgare Mill., a papaya, Annona atemoya, Passiflora edulis Sims, Curcuma aromatica Salisbury, Strelitzia reginae, Brassica juncea Czern. et Coss., Luffa cylindrica M. Roemen, Lactuca lanceolata Makino and Momordica charantia L. as an active ingredient.
COPYRIGHT: (C)2001,JPO

96.

BITTERED CARBONATED BEVERAGE 
04-01-01 01095541 JP 
NDN- 043-0207-6468-4 
PAJ 
Micropatent 
INVENTOR: YOSHIMURA, KOICHI; KUDO, TATSUYUKI; UCHIDA, MITSURO; TODA, NAGISA 
PATENT APPLICATION NUMBER: 11281256 
DATE FILED: 1999-10-01 
PUBLICATION NUMBER: 01095541 JP 
DOCUMENT TYPE: A 
PUBLICATION DATE: 2001-04-10 
INTERNATIONAL PATENT CLASS: A23L00202; A23L00200 
APPLICANT: YAKULT HONSHA CO LTD; KUMAMOTOKEK KAJITSU NOGYO KYODO KUMIAI RENGOKAI 
PUBLICATION COUNTRY: Japan 
PROBLEM TO BE SOLVED: To provide a new bittered carbonated beverage hardly limiting a drinking place such as a beer, and having excellent palatability, refreshing feeling and thirst-preventing feeling. 
SOLUTION: A fruit of Momordica charantia is washed, blanched and immediately pulverized by a micro-grader, and the product is subjected to press- squeezing. The squeezed liquid is subjected to an enzyme treatment with a protease, and the treated product is sterilized. The sterilized product is further subjected to an enzyme treatment with a pectinase, and the resultant product is centrifugally separated. The separated material is heated to deactivate the enzyme, and thereafter cooled. The cooled product is subjected to a diatomaceous earth filtration, and the filtrate is sterilized and cooled to provide a transparent squeezed liquid (straight) of the Momordica charantia. A drink is prepared by the recipe of 20% transparent squeezed liquid, 0.5% malt extract, 4% maltose, 0.06% 50%-lactic acid, 0.1% beer flavor, and 2.5 Vol. gas volume, and charged in a can. The can charged with the drink is sterilized at 70(degree sign)C for 10 min to provide the objective (beer-like) carbonated beverage containing the Momordica charantia. 
COPYRIGHT: (C)2001,JPO

97.

SIMAROUBA AMARA AND/OR MOMORDICA CHARANTIA EXTRACTS FOR THE TREATMENT OF COCCIDIOSIS IN POULTRY 
06-43 01713491/EP-A1 
NDN- 113-0285-4502-9 
EFA 
Univentio 

INVENTOR: KETZIS, Jennifer 
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PATENT APPLICATION NUMBER: 05701316.1
DATE FILED: 2005-02-02
PUBLICATION NUMBER: 01713491/EP-A1
PUBLICATION DATE: 2006-10-25
PATENT PRIORITY INFORMATION: 04002296, 2004-02-03, EP
FIRM: Crawley, Patrick Edward et al, Novartis AG Corporate Intellectual Property; 4002 Basel, CH
INTERNATIONAL PATENT CLASS: A61K03618; A61P00100
PCT PUBLICATION NUMBER: WO2005074954
PUBLICATION: 2006-10-25, A1, Published application with search report
FILING LANGUAGE: ENG
DESIGNATED COUNTRY: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LI; LT; LU; MC; NL; PL; PT; RO; SE; SI; SK; TR
LANGUAGE: ENG

98.

CERAMIDASE INHIBITOR
06-40 01707211/EP-A1
NDN- 113-0283-8400-7
EFA
Univentio

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INVENTOR: OKAMOTO, Motoko
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INVENTOR: IZU, Hiroyuki
The present invention provides a ceramidase activity inhibitor which inhibits ceramidase activity, specifically neutral/alkaline ceramidase activity, characterized in that the inhibitor comprises, as an active ingredient, a processed product derived from at least one plant selected from the group consisting of plants belonging to Ginkgoaceae, plants belonging to Cucurbitaceae, plants belonging to Rutaceae, plants belonging to Laminariaeae, plants belonging to Myrtaceae and plants belonging to Compositae, and a medicament, a quasi-drug, cosmetics and a food, each comprising the inhibitor.

EXEMPLARY CLAIMS
1. A ceramidase activity inhibitor characterized in that the inhibitor comprises, as an active ingredient, a processed product derived from at least one plant selected from the group consisting of plants belonging to Ginkgoaceae, plants belonging to Cucurbitaceae, plants belonging to Rutaceae, plants belonging to Laminariaeae, plants belonging to Myrtaceae and plants belonging to Compositae. 2. The ceramidase activity inhibitor according to claim 1, wherein the plant belonging to Ginkgoaceae is ginkgo (Ginkgo biloba); the plant belonging to Cucurbitaceae is at least one member selected from the group consisting of Oriental pickling melon (Cucumis melo L. var. conomon Makino), cucumber (Cucumis sativus L.), wax gourd (Benincasa cerifera Savi) and bitter cucumber (Momordica charantia L.); the plant belonging to Rutaceae is at least one member selected from the group consisting of orange (Citrus sinensis, Citrus aurantium or Citrus reticulate), grapefruit (Citrus Paradisi) and lime (Citrus aurantifolia); the plant belonging to
Laminariaceae is at least one member selected from the group consisting of gagome (Kjellmaniella crassifolia Miyabe), kelp (Laminaria japonica Areschoug) and wakame seaweed (Undaria pinnatifida); the plant belonging to Myrtaceae is eucalyptus; and the plant belonging to Compositae is mugwort (Artemisia vulgaris L. var indica Maxim.). 3. A ceramide level regulator characterized in that the regulator comprises the ceramidase activity inhibitor as defined in claim 1 or 2. 4. A medicament characterized in that the medicament comprises the ceramidase activity inhibitor as defined in claim 1 or 2. 5. The medicament according to claim 4, wherein the medicament is a skin medicine for external application. 6. The medicament according to claim 4, wherein the medicament is a therapeutic agent or prophylactic agent for a disease requiring suppression of cellular growth. 7. The medicament according to claim 4, wherein the medicament is a therapeutic

99.

Simarouba amara and/or Momordica charantia extracts for the treatment of coccidiosis in poultry

2005-08-17 01563842/EP-A1
NDN- 113-0250-0924-3
EFA
Univentio

INVENTOR: The designation of the inventor has not yet been filed
Novartis AG, Corporate Intellectual Property
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PATENT ASSIGNEE: Novartis AG
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4056 Basel

CH
PATENT APPLICATION NUMBER: 04002296.4
DATE FILED: 2004-02-03
PUBLICATION DATE: 2005-08-17
FIRM: Gros, Florent et al, Novartis AG, Corporate Intellectual Property 4002 Basel, CH
INTERNATIONAL PATENT CLASS: A61K03578; A61P00100
PUBLICATION: 2005-08-17, A1, Published application with search report
FILING LANGUAGE: ENG
DESIGNATED COUNTRY: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR
LANGUAGE: ENG

Described is the use of natural ingredients Simarouba amara dried bark or an extract thereof and low concentrations of Momordica charantia fruit extract either alone or in combination with each other in the resistance management and control of coccidiosis in poultry. It further relates to veterinary compositions containing said natural ingredients, the preparation of these veterinary compositions, a method of controlling coccidiosis in poultry comprising the administration of said natural ingredients or said veterinary compositions to poultry, and the use of said natural ingredients for the preparation of these veterinary compositions or for treating coccidial infections in poultry. The invention also comprises the use of said natural ingredients as an additive to dry or wet poultry food or drinking water for the prophylactic or curative treatment of coccidial infections in poultry.

EXEMPLARY CLAIMS
1. A veterinary composition for the control of coccidiosis in poultry comprising a coccidiostatically effective amount of Simarouba amara dried bark or an extract thereof or of Momordica charantia fruit extract or of a coccidiostatically effective amount of a combination of Simarouba amara dried bark or an extract thereof and Momordica charantia fruit extract.
extract together with one or more carriers that are physiologically well-tolerated by birds. 2. The composition according to
claim 1 wherein the active ingredient is Simarouba amara dried bark or an extract thereof. 3. The composition according
to claim 1 wherein the active ingredient is *Momordica charantia* fruit extract. 4. The composition according to claim 1
wherein the active ingredient is a combination of Simarouba amara dried bark or an extract thereof and *Momordica
charantia* fruit extract. 5. Method for controlling coccidiosis in poultry comprising the administration of a veterinary
composition according to any of claims 1 to 4 or of a coccidiostatically effective amount of Simarouba amara dried bark or
an extract thereof of *Momordica charantia* fruit extract or of a coccidiostatically effective amount of a combination of
Simarouba amara dried bark or an extract thereof and *Momordica charantia* fruit extract together with one or more
physiologically acceptable carriers to birds suffering from coccidial infections. 6. The method according to claim 5
wherein the active ingredient is *Momordica charantia* fruit extract. 7. The method according to claim 5 wherein the active
ingredient is Simarouba amara dried bark or an extract thereof. 8. The method according to claim 5 wherein the active
ingredient is a combination of Simarouba amara dried bark or an extract thereof and *Momordica charantia* fruit extract. 9.
Use of Simarouba amara dried bark or an extract thereof or of *Momordica charantia* fruit extract or of a combination of
Simarouba amara dried bark or an extract thereof and *Momordica charantia* fruit extract for the

100.

ORALLY ACTIVE FRACTION OF *MOMORDICA CHARANTIA*, ACTIVE PEPTIDES THEREOF, AND
THEIR USE IN THE TREATMENT OF DIABETES

NDN- 113-0112-2538-1
EFA
Univentio

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INVENTOR: SHARMA, Somesh, D.
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PATENT ASSIGNEE: Calyx Therapeutics, Inc.
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DESIGNATED COUNTRIES: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
PATENT APPLICATION NUMBER: 98914405.0
DATE FILED: 1998-04-01
PUBLICACIÓN DATE: 2000-06-07
FIRM: Thomson, Paul Anthony, Potts, Kerr & Co., 15, Hamilton Square, Birkenhead, Merseyside CH41 6BR, GB
ORALLY ACTIVE FRACTION OF **MOMORDICA CHARANTIA**, ACTIVE PEPTIDES THEREOF, AND THEIR USE IN THE **TREATMENT** OF DIABETES

INTERNATIONAL PATENT CLASS: A01N06500; A01N03718
PCT PUBLICATION DATE: 1998-10-08
PUBLICATION: 2000-06-07, A1, Published application with search report
FILING LANGUAGE: ENG
PROCEDURE LANGUAGE: ENG
DESIGNATED COUNTRY: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
LANGUAGE: ENG

101.

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DESIGNATED COUNTRIES: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
PATENT APPLICATION NUMBER: 98914405.0
DATE FILED: 1998-04-01
PUBLICATION DATE: 2000-06-07
FIRM: Thomson, Paul Anthony, Potts, Kerr & Co., 15, Hamilton Square, Birkenhead, Merseyside CH41 6BR, GB
INTERNATIONAL PATENT CLASS: A01N06500; A01N03718
PCT PUBLICATION DATE: 1998-10-08
PUBLICATION: 2000-06-07, A1, Published application with search report
FILING LANGUAGE: ENG
PROCEDURE LANGUAGE: ENG
DESIGNATED COUNTRY: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
LANGUAGE: ENG
102.

**Simarouba amara and/or momordica charantia extracts for the treatment of coccidiosis in poultry**

06-28-07  20070148186/US-A1  
NDN- 041-0641-4764-2  
APN  
USPTO  

INVENTOR: Ketzis, Jennifer  
Ballina  

PATENT APPLICATION NUMBER: 586419/10  
DATE FILED: 2005-02-02  
PUBLICATION NUMBER: 20070148186/US-A1  
PUBLICATION DATE: 2007-06-28  
MAILING ADDRESS: NOVARTIS; CORPORATE INTELLECTUAL PROPERTY; ONE HEALTH PLAZA 104/3; EAST HANOVER; NJ; 07936-1080; US  
FIRM: NOVARTIS; CORPORATE INTELLECTUAL PROPERTY  
US PATENT CLASS: 4241951100  
INTERNATIONAL PATENT CLASS: A61K039385  
PATENT APPLICATION PRIORITY: 04002296.4  
PRIORITY COUNTRY CODE: EP  
PRIORITY DATE: 2004-02-03  

Described is the use of a coccidiostatically effective amount of Simarouba amara either alone or in combination with *Momordica charantia* for the manufacture of a medicament for the therapy of coccidiosis in poultry. Further described is a method for controlling coccidiosis in poultry based on the administering of said medicament. Described is also a poultry feed supplement or medicated poultry feed for the control of coccidiosis in poultry that comprises besides ground dry vegetable- and/or animal-based poultry feed, with or without additives such as proteins, vitamins and minerals, and a coccidiostatically effective amount of Simarouba amara dried bark or an extract thereof either alone or in combination with *Momordica charantia* fruit extract. Also described is the production of said medicament and to the use of said active ingredients as an additive to dry or wet poultry food or drinking water for the prophylactic or curative treatment of coccidial infections in poultry. Another described embodiment relates to the management for preventing the development of resistant *Eimeria* strains that cause coccidiosis in poultry comprising rotation of the administration of a coccidiostatically effective amount of Simarouba amara dried bark or an extract thereof and of a coccidiostatically effective amount of *Momordica charantia* fruit extract together with one or more with one or more physiologically acceptable carriers.

103.

**Herbal composition for treatment of immunocompromised conditions**

05-31-07  20070122496/US-A1  
NDN- 041-0630-8176-8  
APN  
USPTO  

INVENTOR: Managoli, Nandkishor Bapurao  
Surat  

APPLICANT: Sahajanand Biotech Pvt. Ltd.  
Surat  

IN
According to the present invention there is provided pharmaceutical or medicinal preparation comprising a combination of two herbal compositions to be administered together. The first herbal composition comprises a mixture of the following herbs: Asparagus racemosus, Curcuma longa, Glycyrrhiza glabra, *Momordica charantia*, Tinospora cordifolia, Withania somnifera, Spirulina, Allium sativum, Emblica officinalis, Terminalia bellerica, and Terminalia chebula, or a mixture of the active ingredients that have been extracted from those herbs or chemically synthesized. The second herbal composition comprises a mixture of the following herbs: Moringa oleifera, Boerhavia diffusa, Onosma bracteatum, Bauhinia variegata, Spharanthus indicus, Tecomella undulata, Chlorophyllum borivilianum, Ficus racemosa, and Cyperus rotundus, or a mixture of the active ingredients that have been extracted from those herbs or chemically synthesized. The herbal preparation is effective for the treatment a wide range of physiological and pathological conditions in the human body resulting from a weakened or deteriorating immune system.

104.

**Dietary supplement for promoting control of blood-sugar levels and associated pathology in type 2 diabetes**

08-03-06 20060172020/US-A1

NDN- 041-0528-2151-3

APN

USPTO

INVENTOR: Djang, Arthur H.K.
Jamestown, NY

PATENT APPLICATION NUMBER: 563713/10

DATE FILED: 2004-07-13

PUBLICATION NUMBER: 20060172020/US-A1

PUBLICATION DATE: 2006-08-03

MAILING ADDRESS: Arthur H .K. Djang; Sante International, Inc; 111 West Second Street; Suite 4000; Jamestown; NY; 14701; US

FIRM: Arthur H .K. Djang; Sante International, Inc

US PATENT CLASS: 424725000; X424729000; X424758000; X424777000

INTERNATIONAL PATENT CLASS: A61K03682; A61K03642; A61K036605

Provided is an herbal extract-based composition comprising an extract of Gynostemma pentaphyllum, an extract of Crataegus pinnatifida (hawthorn), an extract of Camellia sinensis (green tea), and an extract of *Momordica charantia* (bitter melon). The composition may further comprise an extract of mulberry (*Morus* species). Also provided is a process for preparing a herbal extract-based composition which comprises separately extracting each of hawthorn, green tea, Gynostemma pentaphyllum, and bitter melon drying extraction eluates obtained from the extracting of each of the herbal components to obtain organic residues in forming a hawthorn extract powder, green tea extract powder, a Gynostemma pentaphyllum extract powder, a mulberry extract powder, and a bitter melon powder and combining the green tea extract powder, the Gynostemma Pentaphyllum extract powder, the hawthorn extract powder, the mulberry extract powder, and the bitter melon powder in desired proportions to form the herbal extract-based composition which, when taken orally, has health-promoting effects including anti-diabetic effects that include, but are not limited to,
decreasing visceral fat, reducing hyperglycemia, and reducing the occurrence and severity of diabetic complications, associated with type 2 diabetes.

105.

Orally active fraction of momordica charantia, active peptides thereof, and their use in the treatment of diabetes
2002-12-19 20020193310/US-A1
NDN- 041-0108-8631-9
APN
USPTO

INVENTOR: Nag, Bishwajit
CA, US

INVENTOR: Medicherla, Satyanarayana
CA, US

INVENTOR: Sharma, Somesh, D.
CA, US
PATENT APPLICATION NUMBER: 101952/10
DATE FILED: 2002-03-21
PUBLICATON NUMBER: 20020193310/US-A1
PUBLICATION DATE: 2002-12-19
MAILING ADDRESS: Pillsbury Winthrop LLP; 1600 Tysons Boulevard; McLean, VA; 22102; US
FIRM: Pillsbury Winthrop LLP
US PATENT CLASS: 514013000; X530326000; X424758000
INTERNATIONAL PATENT CLASS: *07; A61K03817; *A61K03810; *A61K03578; *C07K014415
A water soluble extract of named MC6, methods for its preparation and methods for its use in the treatment of hyperglycemic disorders are provided. The active MC6 is characterized by moving as a single band on SDS-PAGE having a molecular weight of less than 10 kDal, and by comprising three peptides. Also provided is a peptide component of MC6 named MC6.1, as well as analogues and mimetics thereof. The active MC6, MC 6.1, MC6.2, and MC6.3 exhibit hypoglycemic activity, even following oral administration. Also provided are methods of using the active agents to treat hyperglycemic disorders, particularly diabetes, where the active agents are preferably orally administered.

106.

Protein/polypeptide-k obtained from momordica charantia and a process for the extraction thereof
2002-10-17 20020151687/US-A1
NDN- 041-0088-8262-7
APN
USPTO

INVENTOR: Khanna, Pushpa
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PATENT APPLICATION NUMBER: 881569/09
DATE FILED: 2001-06-14
PUBLICATION NUMBER: 20020151687/US-A1
PUBLICATION DATE: 2002-10-17
MAILING ADDRESS: 26 WEST 61ST STREET; NEW YORK, NY; 10023; US
FIRM: LADAS & PARRY
US PATENT CLASS: 530370000
INTERNATIONAL PATENT CLASS: *07; C07K014415
PATENT APPLICATION PRIORITY: 560/DEL/99; 561/DEL/99
PRIORITY COUNTRY CODE: IN; IN