

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Paul Edward Stamets Confirmation No.:
Serial No.: 17/669,845 Group No.:
Filing or 371(c) Date: February 11, 2022 Examiner:
Entitled: PSILOCYBIN COMPOSITIONS

THIRD-PARTY PRE-ISSUANCE SUBMISSION

Examiner:

The following documents, which are also identified in the Form PTO/SB/429 filed herewith, are submitted for your consideration as being of potential relevance to the examination of the present application

1. U.S. Pat. App. Pub. No. 2015/0335689 “Integrative Fungal Solutions For Protecting Bees” (Published November 26, 2015)
2. U.S. Pat. App. Pub. No. 2013/0156872 “Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject” (Published June 20, 2013)
3. U.S. Pat. App. Pub. No. 2011/0206721 “FERMENTED SOY NUTRITIONAL SUPPLEMENTS INCLUDING MUSHROOM COMPONENTS” (Published August 25, 2011)
4. U.S. Pat. App. Pub. No. 2016/0000754 “Antiviral Activity From Medicinal Mushrooms And Their Active Constituents” (Published January 7, 2016)
5. KHALIL (1975) “Dimethyltryptamine from the leaves of certain Acacia species of northern Sudan” *Lloydia*. 38(2): 176-177

U.S.S.N. 17/669,845 Pending Claims	References
<p>I. A composition comprising: psilocybin, psilocin, baeocystin, norbaeocystin, N,N-dimethyltryptamine (DMT), or a combination thereof; and an extract of <i>Hericium erinaceus</i>.</p>	<p>1. U.S. Pat. App. Pub. No. 2015/0335689 “Integrative Fungal Solutions For Protecting Bees” (Published November 26, 2015)</p> <p>From [0134] “Filamentous, basidiomycetous fungi are also sources of neuroregenerative compounds. Species of <i>Hericium</i> (including but not limited to Hericium erinaceus, <i>Hericium corralloides</i> and <i>Hericium abietis</i>) produce potent nerve growth factors causing regeneration of myelin on the axons of nerves and nerve regeneration. See Stamets, Lion's Mane: A Mushroom That Improves Your Memory and Mood?, The Blog, Huffington Post Healthy Living, Aug. 8, 2012. Psilocybin and psilocybin-producing fungi, including but not limited to species of <i>Psilocybe</i>, <i>Panaeolus</i>, <i>Gymnopilus</i>, <i>Pluteus</i> and <i>Conocybe</i> such as <i>Psilocybe azurescens</i>, <i>Psilocybe cyanescens</i>, <i>Psilocybe allenii</i>, <i>Psilocybe cyanofibrillosa</i>, <i>Psilocybe cubensis</i>, <i>Psilocybe ovoideocystidiata</i>, <i>Psilocybe subaeruginosa</i>, <i>Copelandia Panaeoli</i> (<i>Copelandia cyanescens</i>, <i>Copelandia tropicalis</i>, <i>Copelandia bispora</i>), <i>Pluteus salicinus</i>, <i>Gymnopilus luteofolius</i>, <i>Gymnopilus spectabilis</i>, <i>Conocybe cyanopus</i> and <i>Conocybe smithii</i> can trigger neurogenesis. (See Catlow et al., Effects of psilocybin on hippocampal neurogenesis and extinction of trace fear conditioning, <i>Exp Brain Res</i> (2013) 228:481-491 DOI 10.1007/s00221-013-3579-0). Individually or in combination, mixtures of extracts of psilocybin mushroom and Hericium mushroom fruitbodies, or more preferably their mycelial extracts, could help repair neurons damaged by toxins, cholinergic pesticides, oxidation, old age, or other sources of neurotoxins. The net effect of ingesting these mixtures of nerve regenerating <i>Hericium</i> and psilocybin species would improve the neurological health of bees through neurogenesis and re-myelination, and indeed of animals, including humans. Another, improved form of “mycological honey” might incorporate these elements for the benefits of bees and people, improving cognition, preventing or repairing neuropathies presenting themselves as diseases to humans within scope of the definitions for Alzheimer's, Parkinson's, Parkinsonisms, MS (multiple sclerosis), or as yet uncategorized forms of neurological impairment. Indeed such combinations could increase intelligence, sensory abilities, memory, reflexes, reaction times, and problem solving abilities. As such a ‘smart mycological honey’ is anticipated to be within the scope of this invention.”</p> <p>From [0207] “... ethyl 7-chloro-2-oxo-4-phenyl-2H-chromen-3-carboxylate, psilocybin, psilocin and their congeners, isomers, structural analogs and significantly similar compounds may prove useful in the practice of this invention. The compounds are also anticipated to be useful with other animals, including humans”</p>

4. U.S. Pat. App. Pub. No. 2016/0000754 “Antiviral Activity From Medicinal Mushrooms And Their Active Constituents” (Published January 7, 2016)

From [0137] “Light stimulation also triggers the production of **psilocybin and psilocin in the mycelium** of, for instance *Psilocybe cyanescens*, ***Psilocybe cubensis*** and *Psilocybe cyanescens*. The “off/on” production of **psilocybin, psilocin, baeocystin, nor-baeocystin** and other associated alkaloids from the mycelium caused by light exposure (particularly UV) are interrelated to the production of p-coumaric acid and the resultant metabolic expression of tyrosinase coding for melanin, especially prior to, during and after the time of primordia formation. Hence, this inventor suggests that **psilocybin, psilocin, baeocystin, nor-baeocystin and other associated alkaloids may have medicinal properties** key to the production of novel antivirals not yet discovered by science but predicted by this inventor. Animals such as humans and bees might benefit from using the mycelium of psilocybin producing mushrooms as a source for novel medicinal agents.”

From [0132] “Any of the active principal ingredients or compositions containing these aforementioned APIs that would be diminished through oxidization can be taken with monoamine oxidase (MAO) inhibitors to help maintain antiviral efficacy. Using oxidase inhibitors will allow better survival of the original APIs through the cytochrome P450 pathways especially via the liver. Numerous natural sources of MAO's can be utilized in combinations with the APIs, with the extracts of mycelium containing these APIs, or with other compositions containing these APIs to increase bioavailability, passage or potency. **Plants that can be utilized include** but are not limited to *Glycyrrhiza giabra* (licorice root), ***Acacia catechu* (catechu plant)**, *Ginkgo biloba* (ginkgo) Leaf, *Passiflora incarnata* (passionflower) Plant, *Peganum harmala* (Syrian rue) root and seed, *Curcuma longa* (turmeric) root, *Piper methysticum* (kava root), *Hypericum perforatum* (St. John's wort), and *Banisteriopsis caapi* (yage).”

5. KHALIL (1975) “Dimethyltryptamine from the leaves of certain *Acacia* species of northern Sudan” *Lloydia*. 38(2): 176-177

From **page 176** “Tetrahydroharman (4), its N-methyl derivative (5), N-methyl- and **N,N-dimethyltryptamine** (6-8), hordenine (9), phenylethylamine and its derivatives (10), N-cinnamoyl histamine (11), nicotine and trigonelline (12), **have also been reported to be present in several *Acacia* species** (13).”

<p>2. The composition of claim 1, further comprising niacin.</p>	<p>2. U.S. Pat. App. Pub. No. 2013/0156872 “Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject” (Published June 20, 2013)</p> <p>From [0136] “As exemplary of these highly diverse nootropic member substances, a representative and listing typically encompasses and includes all of the following: Ashwagandha (Withania somnifera), a root also known as Indian ginseng; Inositol, a sugar; Kava kava, a root; Lemon balm (Melissa officinalis), a herb; Passion Flower; Rhodiola Rosea, a herb; St John's Wort, a herb; Siberian Ginseng (Eleutherococcus senticosus), a root; Sutherlandia frutescens, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a vitamin; Picamilon (also known as nicotinoyl-GABAm, Pycamilon, or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (Vitis vinifera).”</p> <p>From [0083] “LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that may be due to ascending traffic in the reticular activation system, which can result in stimulus overload.”</p> <p>From [0084] “Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D.”</p> <p>From [0124] “(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom.”</p> <p>From [0176] “(8) The present invention notably relies upon the use of nootropic agents as the active ingredients for implementing "integrated neuromodulation" in-vivo. Nootropic agents can produce an immense range of effects on human mental functions, including but not limited to: cognition, memory, intelligence, motivation, attention, and concentration. These nootropic agents can work by a number of mechanisms including neurotransmitter replenishment, enzyme expression, and/or hormonal function, brain vascularity, and nerve growth. Moreover, many of these nootropic agents can cross the blood-brain barrier in order to produce psychoactive effects; and it is precisely for this reason that in the present invention, only naturally occurring nootropic agents are used to implement "integrated neuromodulation" for five discrete neurotransmitter systems.”</p>
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	<p>From claim 1 “A non-prescription blended formulation suitable for ingestion by a living human subject, and which after ingestion is able to induce a more positive mood for and to initiate an observable enhancement of cognitive functions in a living human subject, said blended formulation comprising: a controlled admixture of five essential active ingredients, each of which is able to pass the blood-brain barrier in-vivo, said controlled admixture being limited to (a) not less than two different naturally existing nootropic dopamine neurotransmitter agonist, (b) not less than one naturally existing nootropic acetylcholine neurotransmitter agonist, (c) not less than one naturally existing nootropic serotonin neurotransmitter agonist, (d) not less than one naturally existing nootropic gamma-aminobutyric acid (GABA) neurotransmitter agonist, and (e) at least one nootropic adenosine antagonists, wherein the ratio of all individual nootropic neurotransmitter agonists to all individual nootropic adenosine antagonists is proportionally not less than 5:1, and wherein the neurotransmitter replenishment balance for the admixture of essential active agents mathematically is zero ("0") in value.”</p>
<p>3. The composition of claim 1, further comprising neurotropic or nootropic fungal or plant extracts, or other natural products, or purified compounds thereof.</p>	<p>1. U.S. Pat. App. Pub. No. 2015/0335689 “Integrative Fungal Solutions For Protecting Bees” (Published November 26, 2015)</p> <p>From [0134] “Filamentous, basidiomycetous fungi are also sources of neuroregenerative compounds. Species of <i>Herichium</i> (including but not limited to Herichium erinaceus, <i>Herichium corralloides</i> and <i>Herichium abietis</i>) produce potent nerve growth factors causing regeneration of myelin on the axons of nerves and nerve regeneration. See Stamets, <i>Lion's Mane: A Mushroom That Improves Your Memory and Mood?</i>, The Blog, Huffington Post Healthy Living, Aug. 8, 2012. Psilocybin and psilocybin-producing fungi, including but not limited to species of <i>Psilocybe</i>, <i>Panaeolus</i>, <i>Gymnopilus</i>, <i>Pluteus</i> and <i>Conocybe</i> such as <i>Psilocybe azurescens</i>, <i>Psilocybe cyanescens</i>, <i>Psilocybe allenii</i>, <i>Psilocybe cyanofibrillosa</i>, <i>Psilocybe cubensis</i>, <i>Psilocybe ovoideocystidiata</i>, <i>Psilocybe subaeruginosa</i>, <i>Copelandia Panaeoli</i> (<i>Copelandia cyanescens</i>, <i>Copelandia tropicalis</i>, <i>Copelandia bisporea</i>), <i>Pluteus salicinus</i>, <i>Gymnopilus luteofolius</i>, <i>Gymnopilus spectabilis</i>, <i>Conocybe cyanopus</i> and <i>Conocybe smithii</i> can trigger neurogenesis. (See Catlow et al., <i>Effects of psilocybin on hippocampal neurogenesis and extinction of trace fear conditioning</i>, <i>Exp Brain Res</i> (2013) 228:481-491 DOI 10.1007/s00221-013-3579-0). Individually or in combination, mixtures of extracts of psilocybin mushroom and Herichium mushroom fruitbodies, or more preferably their mycelial extracts, could help repair neurons damaged by toxins, cholinergic pesticides, oxidation, old age, or other sources of neurotoxins. The net effect of ingesting these mixtures of nerve</p>

	<p>regenerating Hericium and psilocybin species would improve the neurological health of bees through neurogenesis and re-myelination, and indeed of animals, including humans. Another, improved form of “mycological honey” might incorporate these elements for the benefits of bees and people, improving cognition, preventing or repairing neuropathies presenting themselves as diseases to humans within scope of the definitions for Alzheimer's, Parkinson's, Parkinsonisms, MS (multiple sclerosis), or as yet uncategorized forms of neurological impairment. Indeed such combinations could increase intelligence, sensory abilities, memory, reflexes, reaction times, and problem solving abilities. As such a ‘smart mycological honey’ is anticipated to be within the scope of this invention.”</p>
<p>4. A composition comprising: an extract of <i>Hericium erinaceus</i>; and niacin.</p>	<p>3. U.S. Pat. App. Pub. No. 2011/0206721 “FERMENTED SOY NUTRITIONAL SUPPLEMENTS INCLUDING MUSHROOM COMPONENTS” (Published August 25, 2011)</p> <p>From claim 1 “A composition comprising: (a) a mushroom grown in a fermented soy growth medium; and (b) curcuminoids comprising one or more of curcumin, demethoxycurcumin, or bis-demethoxycurcumin.”</p> <p>From claim 9 “The composition of claim 5, wherein the mushroom species is one or more of: ... Schizophyllum commune, Hericium erinaceus, Poria cocos...”</p> <p>From claim 12 “The composition of claim 1 further comprising a member selected from the group consisting of: daidzein,... biotin, niacin, lactoserum, sacchorse, and combinations thereof.”</p>
<p>Claim 5 missing</p>	
<p>6. The composition of claim 4, further comprising psilocybin, psilocin, baeocystin, norbaeocystin, N,N-dimethyltryptamine (DMT), or a combination thereof.</p>	<p>2. U.S. Pat. App. Pub. No. 2013/0156872 “Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject” (Published June 20, 2013)</p> <p>From [0136] “As exemplary of these highly diverse nootropic member substances, a representative and listing typically encompasses and includes all of the following: Ashwagandha (<i>Withania somnifera</i>), a root also known as Indian ginseng; Inositol, a sugar; Kava kava, a root; Lemon balm (<i>Melissa officinalis</i>), a herb; Passion Flower; <i>Rhodiola Rosea</i>, a herb; St John's Wort, a herb; Siberian Ginseng (<i>Eleutherococcus senticosus</i>), a root; <i>Sutherlandia frutescens</i>, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a vitamin; Picamilon (also known as nicotinoyl-GABA_m, Pycamilon, or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (<i>Vitis vinifera</i>).”</p>

	<p>From [0083] “LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that may be due to ascending traffic in the reticular activation system, which can result in stimulus overload.”</p> <p>From [0084] “Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D.”</p> <p>From [0124] “(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom.”</p>
<p>7. The composition of claim 4, further comprising neurotropic or nootropic fungal or plant extracts, or other natural products, or purified compounds thereof.</p>	<p>1. U.S. Pat. App. Pub. No. 2015/0335689 “Integrative Fungal Solutions For Protecting Bees” (Published November 26, 2015)</p> <p>From [0134] “Filamentous, basidiomycetous fungi are also sources of neuroregenerative compounds. Species of Hericium (including but not limited to Hericium erinaceus, Hericium corralloides and Hericium abietis) produce potent nerve growth factors causing regeneration of myelin on the axons of nerves and nerve regeneration. See Stamets, <i>Lion's Mane: A Mushroom That Improves Your Memory and Mood?</i>, The Blog, Huffington Post Healthy Living, Aug. 8, 2012. Psilocybin and psilocybin-producing fungi, including but not limited to species of Psilocybe, Panaeolus, Gymnopilus, Pluteus and Conocybe such as Psilocybe azurescens, Psilocybe cyanescens, Psilocybe allenii, Psilocybe cyanofibrillosa, Psilocybe cubensis, Psilocybe ovoideocystidiata, Psilocybe subaeruginosa, Copelandian Panaeoli (Copelandia cyanescens, Copelandia tropicalis, Copelandia bispora), Pluteus salicinus, Gymnopilus luteofolius, Gymnopilus spectabilis, Conocybe cyanopus and Conocybe smithii can trigger neurogenesis. (See Catlow et al., <i>Effects of psilocybin on hippocampal neurogenesis and extinction of trace fear conditioning</i>, <i>Exp Brain Res</i> (2013) 228:481-491 DOI 10.1007/s00221-013-3579-0). Individually or in combination, mixtures of extracts of psilocybin mushroom and Hericium mushroom fruitbodies, or more preferably their mycelial extracts, could help repair neurons damaged by toxins, cholinergic pesticides, oxidation, old age, or other sources of neurotoxins. The net effect of ingesting these mixtures of nerve regenerating Hericium and psilocybin species would improve the neurological health of bees through neurogenesis and re-myelination, and indeed of animals, including humans. Another, improved form of “mycological honey” might incorporate these elements for the benefits of bees and people, improving cognition, preventing or repairing neuropathies presenting themselves as diseases to humans within scope of the definitions for Alzheimer's,</p>

	<p>Parkinson's, Parkinsonisms, MS (multiple sclerosis), or as yet uncategorized forms of neurological impairment. Indeed such combinations could increase intelligence, sensory abilities, memory, reflexes, reaction times, and problem solving abilities. As such a 'smart mycological honey' is anticipated to be within the scope of this invention."</p> <p>2. U.S. Pat. App. Pub. No. 2013/0156872 "Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject" (Published June 20, 2013)</p> <p>From [0136] "As exemplary of these highly diverse nootropic member substances, a representative and listing typically encompasses and includes all of the following: Ashwagandha (Withania somnifera), a root also known as Indian ginseng; Inositol, a sugar; Kava kava, a root; Lemon balm (Melissa officinalis), a herb; Passion Flower; Rhodiola Rosea, a herb; St John's Wort, a herb; Siberian Ginseng (Eleutherococcus senticosus), a root; Sutherlandia frutescens, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a vitamin; Picamilon (also known as nicotinoyl-GABA_m, Pycamilon, or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (Vitis vinifera)."</p> <p>From [0083] "LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that may be due to ascending traffic in the reticular activation system, which can result in stimulus overload."</p> <p>From [0084] "Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D."</p> <p>From [0124] "(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom."</p>
<p>8. A composition comprising: psilocybin, psilocin, baeocystin, norbaeocystin, N,N-dimethyltryptamine (DMT), or a combination thereof; and niacin.</p>	<p>2. U.S. Pat. App. Pub. No. 2013/0156872 "Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject" (Published June 20, 2013)</p> <p>From [0136] "As exemplary of these highly diverse nootropic member substances, a representative and listing typically encompasses and includes all of the following: Ashwagandha (Withania somnifera), a root also known as Indian ginseng; Inositol,</p>

	<p>a sugar; Kava kava, a root; Lemon balm (<i>Melissa officinalis</i>), a herb; Passion Flower; <i>Rhodiola Rosea</i>, a herb; St John's Wort, a herb; Siberian Ginseng (<i>Eleutherococcus senticosus</i>), a root; <i>Sutherlandia frutescens</i>, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a vitamin; Picamilon (also known as nicotinoyl-GABA_m, Pycamilon, or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (<i>Vitis vinifera</i>).”</p> <p>From [0083] “LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that may be due to ascending traffic in the reticular activation system, which can result in stimulus overload.”</p> <p>From [0084] “Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D.”</p> <p>From [0124] “(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom.”</p>
<p>9. The composition of claim 8, further comprising an extract of <i>Hericium erinaceus</i>.</p>	<p>1. U.S. Pat. App. Pub. No. 2015/0335689 “Integrative Fungal Solutions For Protecting Bees” (Published November 26, 2015)</p> <p>From [0134] “... Individually or in combination, mixtures of extracts of psilocybin mushroom and Hericium mushroom fruitbodies, or more preferably their mycelial extracts, could help repair neurons damaged by toxins, cholinergic pesticides, oxidation, old age, or other sources of neurotoxins. The net effect of ingesting these mixtures of nerve regenerating <i>Hericium</i> and psilocybin species would improve the neurological health of bees through neurogenesis and re-myelination, and indeed of animals, including humans...”</p> <p>2. U.S. Pat. App. Pub. No. 2013/0156872 “Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject” (Published June 20, 2013)</p> <p>From [0136] “As exemplary of these highly diverse nootropic member substances, a representative and listing typically encompasses and includes all of the following: Ashwagandha (<i>Withania somnifera</i>), a root also known as Indian ginseng; Inositol, a sugar; Kava kava, a root; Lemon balm (<i>Melissa officinalis</i>), a herb; Passion Flower; <i>Rhodiola Rosea</i>, a herb; St John's Wort, a herb; Siberian Ginseng (<i>Eleutherococcus senticosus</i>), a root; <i>Sutherlandia</i></p>

	<p>frutescens, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a vitamin; Picamilon (also known as nicotinoyl-GABA_m, Pycamilon, or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (<i>Vitis vinifera</i>).”</p> <p>From [0083] “LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that may be due to ascending traffic in the reticular activation system, which can result in stimulus overload.”</p> <p>From [0084] “Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D.”</p> <p>From [0124] “(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom.”</p>
<p>10. The composition of claim 8, further comprising neurotropic or nootropic fungal or plant extracts, or other natural products, or purified compounds thereof.</p>	<p>1. U.S. Pat. App. Pub. No. 2015/0335689 “Integrative Fungal Solutions For Protecting Bees” (Published November 26, 2015)</p> <p>From [0134] “... Individually or in combination, mixtures of extracts of psilocybin mushroom and Hericium mushroom fruitbodies, or more preferably their mycelial extracts, could help repair neurons damaged by toxins, cholinergic pesticides, oxidation, old age, or other sources of neurotoxins. The net effect of ingesting these mixtures of nerve regenerating <i>Hericium</i> and <i>psilocybin</i> species would improve the neurological health of bees through neurogenesis and re-myelination, and indeed of animals, including humans...”</p>
<p>11. A method for inducing one or more of neurogenesis, neuroregeneration, neurogeneration, and neuroplasticity in a subject in need thereof, the method comprising administering to the subject a therapeutically effective amount of a composition comprising: psilocybin, psilocin, baecocystin, norbaecocystin, N,N-dimethyltryptamine (DMT), or a combination thereof; and an extract of <i>Hericium erinaceus</i>.</p>	<p>1. U.S. Pat. App. Pub. No. 2015/0335689 “Integrative Fungal Solutions For Protecting Bees” (Published November 26, 2015)</p> <p>From [0134] “Filamentous, basidiomycetous fungi are also sources of neuroregenerative compounds. Species of <i>Hericium</i> (including but not limited to Hericium erinaceus, <i>Hericium corralloides</i> and <i>Hericium abietis</i>) produce potent nerve growth factors causing regeneration of myelin on the axons of nerves and nerve regeneration. See Stamets, <i>Lion's Mane: A Mushroom That Improves Your Memory and Mood?</i>, The Blog, Huffington Post Healthy Living, Aug. 8, 2012. Psilocybin and psilocybin-producing fungi, including but not limited to species of <i>Psilocybe</i>, <i>Panaeolus</i>, <i>Gymnopilus</i>, <i>Pluteus</i> and <i>Conocybe</i> such as <i>Psilocybe azurescens</i>, <i>Psilocybe cyanescens</i>, <i>Psilocybe allenii</i>, <i>Psilocybe cyanofibrillosa</i>, <i>Psilocybe cubensis</i>, <i>Psilocybe ovoideocystidiata</i>, <i>Psilocybe subaeruginosa</i>, <i>Copelandia Panaeoli</i> (<i>Copelandia cyanescens</i>,</p>

	<p>Copelandia tropicalis, Copelandia bispora), Pluteus salicinus, Gymnopilus luteofolius, Gymnopilus spectabilis, Conocybe cyanopus and Conocybe smithii can trigger neurogenesis. (See Catlow et al., Effects of psilocybin on hippocampal neurogenesis and extinction of trace fear conditioning, Exp Brain Res (2013) 228:481-491 DOI 10.1007/s00221-013-3579-0). Individually or in combination, mixtures of extracts of psilocybin mushroom and Hericium mushroom fruitbodies, or more preferably their mycelial extracts, could help repair neurons damaged by toxins, cholinergic pesticides, oxidation, old age, or other sources of neurotoxins. The net effect of ingesting these mixtures of nerve regenerating Hericium and psilocybin species would improve the neurological health of bees through neurogenesis and re-myelination, and indeed of animals, including humans. Another, improved form of “mycological honey” might incorporate these elements for the benefits of bees and people, improving cognition, preventing or repairing neuropathies presenting themselves as diseases to humans within scope of the definitions for Alzheimer's, Parkinson's, Parkinsonisms, MS (multiple sclerosis), or as yet uncategorized forms of neurological impairment. Indeed such combinations could increase intelligence, sensory abilities, memory, reflexes, reaction times, and problem solving abilities. As such a ‘smart mycological honey’ is anticipated to be within the scope of this invention.”</p> <p>4. U.S. Pat. App. Pub. No. 2016/0000754 “Antiviral Activity From Medicinal Mushrooms And Their Active Constituents” (Published January 7, 2016)</p> <p>From [0137] “Light stimulation also triggers the production of psilocybin and psilocin in the mycelium of, for instance Psilocybe cyanescens, Psilocybe cubensis and Psilocybe cyanescens. The “off/on” production of psilocybin, psilocin, baeocystin, nor-baeocystin and other associated alkaloids from the mycelium caused by light exposure (particularly UV) are interrelated to the production of p-coumaric acid and the resultant metabolic expression of tyrosinase coding for melanin, especially prior to, during and after the time of primordia formation. Hence, this inventor suggests that psilocybin, psilocin, baeocystin, nor-baeocystin and other associated alkaloids may have medicinal properties key to the production of novel antivirals not yet discovered by science but predicted by this inventor. Animals such as humans and bees might benefit from using the mycelium of psilocybin producing mushrooms as a source for novel medicinal agents.”</p>
<p>12. The composition of claim 11, further comprising niacin.</p>	<p>2. U.S. Pat. App. Pub. No. 2013/0156872 “Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject” (Published June 20, 2013)</p> <p>From [0136] “As exemplary of these highly diverse nootropic member substances, a representative and listing typically</p>

	<p>encompasses and includes all of the following: Ashwagandha (Withania somnifera), a root also known as Indian ginseng; Inositol, a sugar; Kava kava, a root; Lemon balm (Melissa officinalis), a herb; Passion Flower; Rhodiola Rosea, a herb; St John's Wort, a herb; Siberian Ginseng (Eleutherococcus senticosus), a root; Sutherlandia frutescens, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a vitamin; Picamilon (also known as nicotinoyl-GABA, Pycamilon, or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (Vitis vinifera).”</p> <p>From [0083] “LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that may be due to ascending traffic in the reticular activation system, which can result in stimulus overload.”</p> <p>From [0084] “Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D.”</p> <p>From [0124] “(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom.”</p> <p>From [0240] “Serotonin is a neurotransmitter which contributes to human feelings of well being and calmness, with possible effects on neurogenesis; therefore, increasing the availability of this neurotransmitter in the brain will marked improve human mood and observable human cognitive functions. Accordingly, each nootropic serotonin agonist will provide these well established serotonin functional attributes and capabilities.”</p> <p>From [0100] “Notably, some nootropic agents work by increasing the quantity of nerve growth factor and cause new nerve cell growth in the brain; other nootropic agents work by increasing the oxygen supply of the brain (i.e., they are brain specific vasodilators); still others function as short term stimulants which cause a cognitive enhancing effect when used sparingly, in very small quantities.”</p>
<p>13. A method for inducing one or more of neurogenesis, neuroregeneration, neurogeneration, and neuroplasticity in a subject in need thereof, the method</p>	<p>1. U.S. Pat. App. Pub. No. 2015/0335689 “Integrative Fungal Solutions For Protecting Bees” (Published November 26, 2015)</p> <p>From [0134] “Filamentous, basidiomycetous fungi are also sources of neuroregenerative compounds. Species of <i>Hericium</i> (including but not limited to Hericium erinaceus, <i>Hericium corralloides</i> and</p>

<p>comprising administering to the subject a therapeutically effective amount of a composition comprising: an extract of <i>Hericium erinaceus</i>; and niacin.</p>	<p><i>Hericium abietis</i>) produce potent nerve growth factors causing regeneration of myelin on the axons of nerves and nerve regeneration. See Stamets, Lion's Mane: A Mushroom That Improves Your Memory and Mood?, The Blog, Huffington Post Healthy Living, Aug. 8, 2012. Psilocybin and psilocybin-producing fungi, including but not limited to species of <i>Psilocybe</i>, <i>Panaeolus</i>, <i>Gymnopilus</i>, <i>Pluteus</i> and <i>Conocybe</i> such as <i>Psilocybe azurescens</i>, <i>Psilocybe cyanescens</i>, <i>Psilocybe allenii</i>, <i>Psilocybe cyanofibrillosa</i>, <i>Psilocybe cubensis</i>, <i>Psilocybe ovoideocystidiata</i>, <i>Psilocybe subaeruginosa</i>, <i>Copelandia Panaeoli</i> (<i>Copelandia cyanescens</i>, <i>Copelandia tropicalis</i>, <i>Copelandia bispora</i>), <i>Pluteus salicinus</i>, <i>Gymnopilus luteofolius</i>, <i>Gymnopilus spectabilis</i>, <i>Conocybe cyanopus</i> and <i>Conocybe smithii</i> can trigger neurogenesis. (See Catlow et al., Effects of psilocybin on hippocampal neurogenesis and extinction of trace fear conditioning, <i>Exp Brain Res</i> (2013) 228:481-491 DOI 10.1007/s00221-013-3579-0). Individually or in combination, mixtures of extracts of psilocybin mushroom and Hericium mushroom fruitbodies, or more preferably their mycelial extracts, could help repair neurons damaged by toxins, cholinergic pesticides, oxidation, old age, or other sources of neurotoxins. The net effect of ingesting these mixtures of nerve regenerating Hericium and psilocybin species would improve the neurological health of bees through neurogenesis and re-myelination, and indeed of animals, including humans. Another, improved form of “mycological honey” might incorporate these elements for the benefits of bees and people, improving cognition, preventing or repairing neuropathies presenting themselves as diseases to humans within scope of the definitions for Alzheimer's, Parkinson's, Parkinsonisms, MS (multiple sclerosis), or as yet uncategorized forms of neurological impairment. Indeed such combinations could increase intelligence, sensory abilities, memory, reflexes, reaction times, and problem solving abilities. As such a ‘smart mycological honey’ is anticipated to be within the scope of this invention.”</p> <p>2. U.S. Pat. App. Pub. No. 2013/0156872 “Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject” (Published June 20, 2013)</p> <p>From [0136] “As exemplary of these highly diverse nootropic member substances, a representative and listing typically encompasses and includes all of the following: Ashwagandha (<i>Withania somnifera</i>), a root also known as Indian ginseng; Inositol, a sugar; Kava kava, a root; Lemon balm (<i>Melissa officinalis</i>), a herb; Passion Flower; <i>Rhodiola Rosea</i>, a herb; St John's Wort, a herb; Siberian Ginseng (<i>Eleutherococcus senticosus</i>), a root; <i>Sutherlandia frutescens</i>, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a vitamin; Picamilon (also known as nicotinoyl-GABA_m, Pycamilon,</p>
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	<p>or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (<i>Vitis vinifera</i>).”</p> <p>From [0083] “LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that may be due to ascending traffic in the reticular activation system, which can result in stimulus overload.”</p> <p>From [0084] “Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D.”</p> <p>From [0124] “(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom.”</p> <p>From [0240] “Serotonin is a neurotransmitter which contributes to human feelings of well being and calmness, with possible effects on neurogenesis; therefore, increasing the availability of this neurotransmitter in the brain will marked improve human mood and observable human cognitive functions. Accordingly, each nootropic serotonin agonist will provide these well established serotonin functional attributes and capabilities.”</p> <p>From [0100] “Notably, some nootropic agents work by increasing the quantity of nerve growth factor and cause new nerve cell growth in the brain; other nootropic agents work by increasing the oxygen supply of the brain (i.e., they are brain specific vasodilators); still others function as short term stimulants which cause a cognitive enhancing effect when used sparingly, in very small quantities.”</p>
<p>14. The composition of claim 13, further comprising psilocybin, psilocin, baeocystin, norbaeocystin, N,N-dimethyltryptamine (DMT), or a combination thereof.</p>	<p>2. U.S. Pat. App. Pub. No. 2013/0156872 “Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject” (Published June 20, 2013)</p> <p>From [0136] “As exemplary of these highly diverse nootropic member substances, a representative and listing typically encompasses and includes all of the following: Ashwagandha (<i>Withania somnifera</i>), a root also known as Indian ginseng; Inositol, a sugar; Kava kava, a root; Lemon balm (<i>Melissa officinalis</i>), a herb; Passion Flower; <i>Rhodiola Rosea</i>, a herb; St John's Wort, a herb; Siberian Ginseng (<i>Eleutherococcus senticosus</i>), a root; <i>Sutherlandia frutescens</i>, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a</p>

	<p>vitamin; Picamilon (also known as nicotinoyl-GABA, Pycamilon, or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (<i>Vitis vinifera</i>).”</p> <p>From [0083] “LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that may be due to ascending traffic in the reticular activation system, which can result in stimulus overload.”</p> <p>From [0084] “Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D.”</p> <p>From [0124] “(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom.”</p> <p>From [0240] “Serotonin is a neurotransmitter which contributes to human feelings of well being and calmness, with possible effects on neurogenesis; therefore, increasing the availability of this neurotransmitter in the brain will marked improve human mood and observable human cognitive functions. Accordingly, each nootropic serotonin agonist will provide these well established serotonin functional attributes and capabilities.”</p> <p>From [0100] “Notably, some nootropic agents work by increasing the quantity of nerve growth factor and cause new nerve cell growth in the brain; other nootropic agents work by increasing the oxygen supply of the brain (i.e., they are brain specific vasodilators); still others function as short term stimulants which cause a cognitive enhancing effect when used sparingly, in very small quantities.”</p>
<p>15. A method for inducing one or more of neurogenesis, neuroregeneration, neurogeneration, and neuroplasticity in a subject in need thereof, the method comprising administering to the subject a therapeutically effective amount of a composition comprising: psilocybin, psilocin, baeocystin, norbaeocystin, N,N-dimethyltryptamine</p>	<p>1. U.S. Pat. App. Pub. No. 2015/0335689 “Integrative Fungal Solutions For Protecting Bees” (Published November 26, 2015)</p> <p>From [0134] “Filamentous, basidiomycetous fungi are also sources of neuroregenerative compounds. Species of <i>Herichium</i> (including but not limited to Herichium erinaceus, <i>Herichium corralloides</i> and <i>Herichium abietis</i>) produce potent nerve growth factors causing regeneration of myelin on the axons of nerves and nerve regeneration. See Stamets, <i>Lion's Mane: A Mushroom That Improves Your Memory and Mood?</i>, The Blog, Huffington Post Healthy Living, Aug. 8, 2012. Psilocybin and psilocybin-producing fungi, including but not limited to species of <i>Psilocybe</i>, <i>Panaeolus</i>, <i>Gymnopilus</i>, <i>Pluteus</i> and <i>Conocybe</i> such as <i>Psilocybe azurescens</i>, <i>Psilocybe cyanescens</i>, <i>Psilocybe allenii</i>, <i>Psilocybe cyanofibrillosa</i>,</p>

<p>(DMT), or a combination thereof; and niacin.</p>	<p>Psilocybe cubensis, Psilocybe ovoideocystidiata, Psilocybe subaeruginosa, Copelandia Panaeoli (Copelandia cyanescens, Copelandia tropicalis, Copelandia bispora), Pluteus salicinus, Gymnopilus luteofolius, Gymnopilus spectabilis, Conocybe cyanopus and Conocybe smithii can trigger neurogenesis. (See Catlow et al., Effects of psilocybin on hippocampal neurogenesis and extinction of trace fear conditioning, Exp Brain Res (2013) 228:481-491 DOI 10.1007/s00221-013-3579-0). Individually or in combination, mixtures of extracts of psilocybin mushroom and Hericium mushroom fruitbodies, or more preferably their mycelial extracts, could help repair neurons damaged by toxins, cholinergic pesticides, oxidation, old age, or other sources of neurotoxins. The net effect of ingesting these mixtures of nerve regenerating Hericium and psilocybin species would improve the neurological health of bees through neurogenesis and re-myelination, and indeed of animals, including humans. Another, improved form of “mycological honey” might incorporate these elements for the benefits of bees and people, improving cognition, preventing or repairing neuropathies presenting themselves as diseases to humans within scope of the definitions for Alzheimer's, Parkinson's, Parkinsonisms, MS (multiple sclerosis), or as yet uncategorized forms of neurological impairment. Indeed such combinations could increase intelligence, sensory abilities, memory, reflexes, reaction times, and problem solving abilities. As such a ‘smart mycological honey’ is anticipated to be within the scope of this invention.”</p> <p>2. U.S. Pat. App. Pub. No. 2013/0156872 “Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject” (Published June 20, 2013)</p> <p>From [0136] “As exemplary of these highly diverse nootropic member substances, a representative and listing typically encompasses and includes all of the following: Ashwagandha (Withania somnifera), a root also known as Indian ginseng; Inositol, a sugar; Kava kava, a root; Lemon balm (Melissa officinalis), a herb; Passion Flower; Rhodiola Rosea, a herb; St John's Wort, a herb; Siberian Ginseng (Eleutherococcus senticosus), a root; Sutherlandia frutescens, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a vitamin; Picamilon (also known as nicotinoyl-GABA_m, Pycamilon, or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (Vitis vinifera).”</p> <p>From [0083] “LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that</p>
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	<p>may be due to ascending traffic in the reticular activation system, which can result in stimulus overload.”</p> <p>From [0084] “Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D.”</p> <p>From [0124] “(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom.”</p> <p>From [0240] “Serotonin is a neurotransmitter which contributes to human feelings of well being and calmness, with possible effects on neurogenesis; therefore, increasing the availability of this neurotransmitter in the brain will marked improve human mood and observable human cognitive functions. Accordingly, each nootropic serotonin agonist will provide these well established serotonin functional attributes and capabilities.”</p> <p>From [0100] “Notably, some nootropic agents work by increasing the quantity of nerve growth factor and cause new nerve cell growth in the brain; other nootropic agents work by increasing the oxygen supply of the brain (i.e., they are brain specific vasodilators); still others function as short term stimulants which cause a cognitive enhancing effect when used sparingly, in very small quantities.”</p>
<p>16. The composition of claim 15, further comprising an extract of <i>Hericum erinaceus</i>.</p>	<p>1. U.S. Pat. App. Pub. No. 2015/0335689 “Integrative Fungal Solutions For Protecting Bees” (Published November 26, 2015)</p> <p>From [0134] “... Individually or in combination, mixtures of extracts of psilocybin mushroom and Hericum mushroom fruitbodies, or more preferably their mycelial extracts, could help repair neurons damaged by toxins, cholinergic pesticides, oxidation, old age, or other sources of neurotoxins. The net effect of ingesting these mixtures of nerve regenerating Hericum and psilocybin species would improve the neurological health of bees through neurogenesis and re-myelination, and indeed of animals, including humans...”</p> <p>2. U.S. Pat. App. Pub. No. 2013/0156872 “Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject” (Published June 20, 2013)</p> <p>From [0136] “As exemplary of these highly diverse nootropic member substances, a representative and listing typically encompasses and includes all of the following: Ashwagandha (<i>Withania somnifera</i>), a root also known as Indian ginseng; Inositol, a sugar; Kava kava, a root; Lemon balm (<i>Melissa officinalis</i>), a herb;</p>

	<p>Passion Flower; Rhodiola Rosea, a herb; St John's Wort, a herb; Siberian Ginseng (Eleutherococcus senticosus), a root; Sutherlandia frutescens, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a vitamin; Picamilon (also known as nicotinoyl-GABA, Pycamilon, or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (Vitis vinifera).”</p> <p>From [0083] “LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that may be due to ascending traffic in the reticular activation system, which can result in stimulus overload.”</p> <p>From [0084] “Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D.”</p> <p>From [0124] “(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom.”</p> <p>From [0240] “Serotonin is a neurotransmitter which contributes to human feelings of well being and calmness, with possible effects on neurogenesis; therefore, increasing the availability of this neurotransmitter in the brain will marked improve human mood and observable human cognitive functions. Accordingly, each nootropic serotonin agonist will provide these well established serotonin functional attributes and capabilities.”</p> <p>From [0100] “Notably, some nootropic agents work by increasing the quantity of nerve growth factor and cause new nerve cell growth in the brain; other nootropic agents work by increasing the oxygen supply of the brain (i.e., they are brain specific vasodilators); still others function as short term stimulants which cause a cognitive enhancing effect when used sparingly, in very small quantities.”</p>
<p>17. A method for treating mental health in a subject in need thereof, the method comprising administering to the subject a therapeutically effective amount of a composition comprising: psilocybin, psilocin, baeocystin, norbaeocystin,</p>	<p>1. U.S. Pat. App. Pub. No. 2015/0335689 “Integrative Fungal Solutions For Protecting Bees” (Published November 26, 2015)</p> <p>From [0134] “Filamentous, basidiomycetous fungi are also sources of neuroregenerative compounds. Species of Hericium (including but not limited to Hericium erinaceus, Hericium corralloides and Hericium abietis) produce potent nerve growth factors causing regeneration of myelin on the axons of nerves and nerve regeneration. See Stamets, Lion's Mane: A Mushroom That</p>

<p>N,N-dimethyltryptamine (DMT), or a combination thereof; and an extract of <i>Hericium erinaceus</i>.</p>	<p>Improves Your Memory and Mood?, The Blog, Huffington Post Healthy Living, Aug. 8, 2012. Psilocybin and psilocybin-producing fungi, including but not limited to species of Psilocybe, Panaeolus, Gymnopilus, Pluteus and Conocybe such as Psilocybe azurescens, Psilocybe cyanescens, Psilocybe allenii, Psilocybe cyanofibrillosa, Psilocybe cubensis, Psilocybe ovoideocystidiata, Psilocybe subaeruginosa, Copelandian Panaeoli (Copelandia cyanescens, Copelandia tropicalis, Copelandia bisporea), Pluteus salicinus, Gymnopilus luteofolius, Gymnopilus spectabilis, Conocybe cyanopus and Conocybe smithii can trigger neurogenesis. (See Catlow et al., Effects of psilocybin on hippocampal neurogenesis and extinction of trace fear conditioning, Exp Brain Res (2013) 228:481-491 DOI 10.1007/s00221-013-3579-0). Individually or in combination, mixtures of extracts of psilocybin mushroom and Hericium mushroom fruitbodies, or more preferably their mycelial extracts, could help repair neurons damaged by toxins, cholinergic pesticides, oxidation, old age, or other sources of neurotoxins...”</p>
<p>18. The composition of claim 17, further comprising niacin.</p>	<p>2. U.S. Pat. App. Pub. No. 2013/0156872 “Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject” (Published June 20, 2013)</p> <p>From [0136] “As exemplary of these highly diverse nootropic member substances, a representative and listing typically encompasses and includes all of the following: Ashwagandha (Withania somnifera), a root also known as Indian ginseng; Inositol, a sugar; Kava kava, a root; Lemon balm (Melissa officinalis), a herb; Passion Flower; Rhodiola Rosea, a herb; St John's Wort, a herb; Siberian Ginseng (Eleutherococcus senticosus), a root; Sutherlandia frutescens, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a vitamin; Picamilon (also known as nicotinoyl-GABAm, Pycamilon, or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (Vitis vinifera).”</p> <p>From [0083] “LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that may be due to ascending traffic in the reticular activation system, which can result in stimulus overload.”</p> <p>From [0084] “Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D.”</p>

	<p>From [0124] “(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom.”</p> <p>From [0002] “The present invention is concerned with the formulation of certain specifically blended compositions as an integrated neuromodulation system and is directed to the use of such blended compositions in-vivo as a food or beverage supplement for initiating positive mood enhancement in a living human subject. In particular, the present invention is directed to producing positive mood enhancement through an integrated system of neuromodulation by concurrently acting upon multiple naturally occurring neurotransmitter systems which collectively result in a balanced physiologic effect for the individual person.”</p>
<p>19. A method for treating mental health in a subject in need thereof, the method comprising administering to the subject a therapeutically effective amount of a composition comprising: an extract of <i>Hericum erinaceus</i>; and niacin.</p>	<p>2. U.S. Pat. App. Pub. No. 2013/0156872 “Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject” (Published June 20, 2013)</p> <p>From [0136] “As exemplary of these highly diverse nootropic member substances, a representative and listing typically encompasses and includes all of the following: Ashwagandha (<i>Withania somnifera</i>), a root also known as Indian ginseng; Inositol, a sugar; Kava kava, a root; Lemon balm (<i>Melissa officinalis</i>), a herb; Passion Flower; <i>Rhodiola Rosea</i>, a herb; St John's Wort, a herb; Siberian Ginseng (<i>Eleutherococcus senticosus</i>), a root; <i>Sutherlandia frutescens</i>, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a vitamin; Picamilon (also known as nicotinoyl-GABAm, Pycamilon, or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (<i>Vitis vinifera</i>).”</p> <p>From [0083] “LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that may be due to ascending traffic in the reticular activation system, which can result in stimulus overload.”</p> <p>From [0084] “Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D.”</p> <p>From [0124] “(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom.”</p> <p>From [0002] “The present invention is concerned with the formulation of certain specifically blended compositions as an integrated</p>

	<p>neuromodulation system and is directed to the use of such blended compositions in-vivo as a food or beverage supplement for initiating positive mood enhancement in a living human subject. In particular, the present invention is directed to producing positive mood enhancement through an integrated system of neuromodulation by concurrently acting upon multiple naturally occurring neurotransmitter systems which collectively result in a balanced physiologic effect for the individual person.”</p>
<p>20. The composition of claim 19, further comprising psilocybin, psilocin, baeocystin, norbaeocystin, N,N-dimethyltryptamine (DMT), or a combination thereof.</p>	<p>2. U.S. Pat. App. Pub. No. 2013/0156872 “Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject” (Published June 20, 2013)</p> <p>From [0136] “As exemplary of these highly diverse nootropic member substances, a representative and listing typically encompasses and includes all of the following: Ashwagandha (Withania somnifera), a root also known as Indian ginseng; Inositol, a sugar; Kava kava, a root; Lemon balm (Melissa officinalis), a herb; Passion Flower; Rhodiola Rosea, a herb; St John's Wort, a herb; Siberian Ginseng (Eleutherococcus senticosus), a root; Sutherlandia frutescens, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a vitamin; Picamilon (also known as nicotinoyl-GABA_m, Pycamilon, or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (Vitis vinifera).”</p> <p>From [0083] “LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that may be due to ascending traffic in the reticular activation system, which can result in stimulus overload.”</p> <p>From [0084] “Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D.”</p> <p>From [0124] “(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom.”</p> <p>From [0002] “The present invention is concerned with the formulation of certain specifically blended compositions as an integrated neuromodulation system and is directed to the use of such blended compositions in-vivo as a food or beverage supplement for initiating positive mood enhancement in a living human subject. In particular, the present invention is directed to producing positive mood enhancement through an integrated system of neuromodulation by</p>

	<p>concurrently acting upon multiple naturally occurring neurotransmitter systems which collectively result in a balanced physiologic effect for the individual person.”</p>
<p>21. A method for treating mental health in a subject in need thereof, the method comprising administering to the subject a therapeutically effective amount of a composition comprising: psilocybin, psilocin, baeocystin, norbaeocystin, N,N-dimethyltryptamine (DMT), or a combination thereof; and niacin.</p>	<p>1. U.S. Pat. App. Pub. No. 2015/0335689 “Integrative Fungal Solutions For Protecting Bees” (Published November 26, 2015)</p> <p>From [0134] “Filamentous, basidiomycetous fungi are also sources of neuroregenerative compounds. Species of <i>Hericium</i> (including but not limited to Hericium erinaceus, <i>Hericium corralloides</i> and <i>Hericium abietis</i>) produce potent nerve growth factors causing regeneration of myelin on the axons of nerves and nerve regeneration. See Stamets, Lion's Mane: A Mushroom That Improves Your Memory and Mood?, The Blog, Huffington Post Healthy Living, Aug. 8, 2012. Psilocybin and psilocybin-producing fungi, including but not limited to species of <i>Psilocybe</i>, <i>Panaeolus</i>, <i>Gymnopilus</i>, <i>Pluteus</i> and <i>Conocybe</i> such as <i>Psilocybe azurescens</i>, <i>Psilocybe cyanescens</i>, <i>Psilocybe allenii</i>, <i>Psilocybe cyanofibrillosa</i>, <i>Psilocybe cubensis</i>, <i>Psilocybe ovoideocystidiata</i>, <i>Psilocybe subaeruginosa</i>, <i>Copelandia Panaeoli</i> (<i>Copelandia cyanescens</i>, <i>Copelandia tropicalis</i>, <i>Copelandia bispora</i>), <i>Pluteus salicinus</i>, <i>Gymnopilus luteofolius</i>, <i>Gymnopilus spectabilis</i>, <i>Conocybe cyanopus</i> and <i>Conocybe smithii</i> can trigger neurogenesis. (See Catlow et al., Effects of psilocybin on hippocampal neurogenesis and extinction of trace fear conditioning, <i>Exp Brain Res</i> (2013) 228:481-491 DOI 10.1007/s00221-013-3579-0). Individually or in combination, mixtures of extracts of psilocybin mushroom and Hericium mushroom fruitbodies, or more preferably their mycelial extracts, could help repair neurons damaged by toxins, cholinergic pesticides, oxidation, old age, or other sources of neurotoxins...”</p> <p>2. U.S. Pat. App. Pub. No. 2013/0156872 “Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject” (Published June 20, 2013)</p> <p>From [0136] “As exemplary of these highly diverse nootropic member substances, a representative and listing typically encompasses and includes all of the following: Ashwagandha (<i>Withania somnifera</i>), a root also known as Indian ginseng; Inositol, a sugar; Kava kava, a root; Lemon balm (<i>Melissa officinalis</i>), a herb; Passion Flower; <i>Rhodiola Rosea</i>, a herb; St John's Wort, a herb; Siberian Ginseng (<i>Eleutherococcus senticosus</i>), a root; <i>Sutherlandia frutescens</i>, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a vitamin; Picamilon (also known as nicotinoyl-GABA_m, Pycamilon, or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (<i>Vitis vinifera</i>).”</p>

	<p>From [0083] “LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that may be due to ascending traffic in the reticular activation system, which can result in stimulus overload.”</p> <p>From [0084] “Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D.”</p> <p>From [0124] “(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom.”</p> <p>From [0002] “The present invention is concerned with the formulation of certain specifically blended compositions as an integrated neuromodulation system and is directed to the use of such blended compositions in-vivo as a food or beverage supplement for initiating positive mood enhancement in a living human subject. In particular, the present invention is directed to producing positive mood enhancement through an integrated system of neuromodulation by concurrently acting upon multiple naturally occurring neurotransmitter systems which collectively result in a balanced physiologic effect for the individual person.”</p>
<p>22. The composition of claim 21, further comprising an extract of <i>Hericium erinaceus</i>.</p>	<p>1. U.S. Pat. App. Pub. No. 2015/0335689 “Integrative Fungal Solutions For Protecting Bees” (Published November 26, 2015)</p> <p>From [0134] “... Individually or in combination, mixtures of extracts of psilocybin mushroom and Hericium mushroom fruitbodies, or more preferably their mycelial extracts, could help repair neurons damaged by toxins, cholinergic pesticides, oxidation, old age, or other sources of neurotoxins. The net effect of ingesting these mixtures of nerve regenerating Hericium and psilocybin species would improve the neurological health of bees through neurogenesis and re-myelination, and indeed of animals, including humans...”</p> <p>2. U.S. Pat. App. Pub. No. 2013/0156872 “Integrated Neuromodulation System For Mood Enhancement Of A Living Human Subject” (Published June 20, 2013)</p> <p>From [0136] “As exemplary of these highly diverse nootropic member substances, a representative and listing typically encompasses and includes all of the following: Ashwagandha (<i>Withania somnifera</i>), a root also known as Indian ginseng; Inositol, a sugar; Kava kava, a root; Lemon balm (<i>Melissa officinalis</i>), a herb; Passion Flower; <i>Rhodiola Rosea</i>, a herb; St John's Wort, a herb; Siberian Ginseng (<i>Eleutherococcus senticosus</i>), a root; <i>Sutherlandia</i></p>

	<p>frutescens, a herb; Theanine, an amino acid found in tea; Tianeptine, an anxiolytic anti-depressant; Vasopressin, a hormone; Niacin, a vitamin; Picamilon (also known as nicotinoyl-GABA_m, Pycamilon, or Pikamilon), a dietary supplement formed by combining Niacin with GABA; and Grape Seed (<i>Vitis vinifera</i>).”</p> <p>From [0083] “LSD, a psychedelic drug. When administered at higher doses, human sensory effects seem qualitatively different. Many psychedelic drugs are purported to produce this overwhelming effect on the mind. This effect on the creative process is a phenomenon that may be due to ascending traffic in the reticular activation system, which can result in stimulus overload.”</p> <p>From [0084] “Others examples include 4-methylaminorex; Pemoline (Cylert); Psilocybin and Psilocin; MDPV; Mescaline; and 2C-D.”</p> <p>From [0124] “(iii) Nerve Growth Stimulators. These typically include: Acetyl L-Carnitine (ALCAR); and Lion's Mane mushroom.”</p> <p>From [0002] “The present invention is concerned with the formulation of certain specifically blended compositions as an integrated neuromodulation system and is directed to the use of such blended compositions in-vivo as a food or beverage supplement for initiating positive mood enhancement in a living human subject. In particular, the present invention is directed to producing positive mood enhancement through an integrated system of neuromodulation by concurrently acting upon multiple naturally occurring neurotransmitter systems which collectively result in a balanced physiologic effect for the individual person.”</p>
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First Named Inventor/Applicant Name:	Paul Edward STAMETS
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2	Third-Party Submission Under 37 CFR 1.290	Third-party-preissuance-submission.pdf	61091 624c2a4e9722af5565b0c84ae38f9cdfeeec4b1	no	3
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3	Request for Notification of Non-compliant Third-Party Submission	Third-party-notification-request.pdf	23614 de9a8e27fd3c549597679624c2d04bbe5fc8e54e	no	1
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4	Concise Description of Relevance	Claims_Chart.pdf	385682 66434500ab03fb8399894a558fc49c2878e37e2	no	24
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5	Non Patent Literature	KHALIL.pdf	276035 60dde3e7f0b0cf0ec4ef6865dad5d6b61ce4f96e	no	3
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6	Fee Worksheet (SB06)	fee-info.pdf	37296 c089648044b9e89aeb16bb44178cb88a2c131a	no	2
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