Supplementary Information

This file contains the following additional tables.

Supplementary Table S1: Dietary, nutraceutical and herbal interventions for treating depression in human subjects found in reviews of dietary interventions for depression.

Supplementary Table S2: Dietary, nutraceutical and herbal interventions for treating depression in preclinical models found in reviews of dietary interventions for depression.

Supplementary Table S3: Lifestyle interventions for treating depression in humans found in reviews of lifestyle interventions for depression.

Supplementary Table S1: Dietary, nutraceutical and herbal interventions for treating depression in human subjects found in reviews of dietary interventions for depression. +, positive effect; -, negative effect; n.s. not significant; Mixed, mixed positive, negative and/or non significant findings.

	[42]	[65]	[66]	[68]	[69]	[70]	[75]	[76]	[77]	[78]	[79]	[80]	[81]	[82]
S-Adenosylmethionine (SAMe)	+		+	+			+ (n.s.)	+	+					
Folic Acid	+					+			+					
B vitamins	+(ns)	+	+/n.s.			+		n.s.						
Methyl folate	+		+	+					Mixed					
Vitamin B-12	+								n.s.					
Omega 3 (EPA+DHA)	+	+	+	+		+	+	+	+					
Ethyl-EPA	+													
Tryptophan	n.s.													
DL-Tryptophan	+													
5-HTP	+			+ / n.s.										
Zinc	+/ns		+		+				+					
Vitamin C	+/ns					n.s.								
Vitamin D3	+.		+			n.s.		n.s.	Mixed					
Inositol	n.s.			+ / n.s.					n.s.					
Amino Acids	+		+											
Creatine	+		+											
Catechins		+												
Cocoa		+												
Probiotics			+/n.s											
Magnesium			+		+									
Calcium			+											
Selenium			n.s.		+									
Caffeine			+	+	+[1]									
Curcumin			+											
Hydroxytyrosol			+											
Cannabidiol (CBD)			n.s.											
Gingko Biloba								n.s.				n.s.		
St. John's Wort				+			+	+/n.s.			+	+	+	+
Valerian							+							
Rhodiola				+/n.s.						+	n.s.		+	+
Empower plus				Mixed										
Chromium				Mixed										
Acetyl L-carnitine				+										
N-acetyl cystein				+/Mixed										
Alpha lipoic acid				Mixed										
Antioxidants					+									
Coenzyme Q10					+									
Crocin (Saffron)					+					+	+	+	+	+
Lavender										+	n.s.	+	+	+
Borage(Echium)										+(n.s.)	n.s.		+	+
Chamomile											n.s.			
Ginseng											n.s.		+	
Kava														
Dan zhi xiao yao														+

[1] Studies tested consumption of coffee and/or tea

Supplementary Table S2: Dietary, nutraceutical and herbal interventions for treating depression in preclinical models found in reviews of dietary interventions for depression.

Substance	Evidence	Source/ Scientific name of organism	Geographical range
Southern Maidenhair Fern	Preclinical improvement [158,159]	Adiantum capillus-veneris	USA
Bell Agapanthus	Preclinical improvement [160]	Agapathius campanulatus	South Africa
Flat-crown Albizia	Preclinical improvement [161,162]	Albizia adianthifolia	Tropical & S. Africa, E. & E. Central Madagascar.
Tarragon	Preclinical improvement [163,164]	Artemesia dracunculus	S. Europe to W. Asia.
Bushman Poison Bulb	Preclinical improvement [160]	Boophone disticha	Eastern and southern Africa
CBD	Preclinical improvement [165,166]	Cannabis sativa	Native to Eastern and southern Africa Cultivated worldwide
THC	Preclinical improvement [167]	Cannabis sativa	See above
Gotu Kola	Preclinical improvement [168]	Centella asiatica	E. Asia and Australia
Camphor Tree	Preclinical improvement [169]	Cinnamomum camphora	E. Asia
Hoodia	Preclinical improvement [170]	Hoodia gordonii	Namibia, South Africa
St. John's Wort	Preclinical improvement [171,172]	Hypericum perforatum	Europe, including Britain, south and east to N. Africa, the Azores, Madeira and W. Asia.
Wrinkled St. John's Wort	Preclinical improvement [173]	Hypericum revolutum	Nigeria to Bioko, Eritrea to E. Cape Prov., SW. Arabian Peninsula
Namib Bottle Tree	Preclinical improvement [174]	Maerua angolensis	Drier areas in Tropical Africa - Mauritania to Somalia, south to S. Africa.
Neem	Preclinical improvement [175]	Melia azedrach	native to Southeast Asia and northern Australia naturalised include parts of central and southern Australia, southern Europe, southern and eastern Africa, southern USA, Mexico, Central America, the Caribbean, tropical southern America and many Pacific islands.
Spearmint	Preclinical improvement [176]	Mentha spicata	Central Europe
White's Ginger	Preclinical improvement [160]	Mondia whitei	Tropical Africa - Senegal to Sudan and Kenya, south to Namibia, Zambia, Zimbabwe and Mozambique.
African Olive	Preclinical improvement [177-179]	Olea europaea cuspidate	Eritrea to S. Africa, Mascarenes, Arabian Peninsula to China (Yunnan).
Rosemary	Preclinical improvement [180-183]	Rosmarinus officinalis	S. Europe to W. Asia.
Serendipity Berry	Preclinical improvement [184]	Securidaca longipedunculata	Africa
Kanna	Preclinical improvement [185]	Sceletium tortuosum	South Africa
Pink Peppercorn	Preclinical improvement [186]	Schinus mole	Southern and western S. America - Argentina, Uruguay, Paraguay, Brazil, Bolivia, Peru, Ecuador.
Honeybush	Preclinical improvement[160]	Xysmalobium undulatum	astern parts of southern Africa (found in all the provinces of South Africa and in Namibia, Botswana, Lesotho and Swaziland). Its range extends to tropical Africa as far north as Kenya.
Buffalo Thorn	Preclinical improvement [187]	Ziziphus mucronate	South Africa northwards to Ethiopia and Arabia.
Reishi	Alleviates depression like behaviour in mice [188,189]	Ganoderma lucidum	Europe and parts of China, naturalized to USA
Lion's Mane	Alleviates depression like behaviour in mice [190]	Hericium erinaceus	North America, Europe, and Asia

Polygala	Alleviates depression like behaviour in mice [191]	genus of flowering plants	Temperate zones and tropics
Spirulina	Lower immobility time in FST[2] [192,193]	Spirulina platensis	Widely distributed in alkaline lakes, ponds, and brackish waters
Chlorella	Improvement in preclinical models [194]	Chlorella vulgaris	Global distribution in various aquatic environments
Hijiki	Improvement in preclinical models [195]	Sargassum fusiforme and Pyropia yezoensis or Pyropia tenera	Western Pacific, including China, Japan, and Korea
Sea Lettuce	Improvement in preclinical models [196]	Ulva lactuca	Worldwide, commonly found in coastal areas
Wakame	Improvement in preclinical models [195]	Undaria pinnatifida and Pyropia yezoensis or Pyropia tenera	Japan, Korea
Seaweed	Improvement in preclinical models [197]	Seaweed (general)	Worldwide
Botryococcus braunii	Improvement in preclinical models [198]	Botryococcus braunii	Global distribution in freshwater ecosystems
Chlorella	Improvement in preclinical models [199]	Chlorella vulgaris	Global distribution in various aquatic environments
Haematococcus	Improvement in preclinical models [200]	Haematococcus pluvialis	Worldwide distribution in freshwater habitats
Nizamuddinia zanardinii	Improvement in preclinical models [201]	Nizamuddinia zanardinii	Mediterranean region, Red Sea, Arabian Sea
Stoechospermum marginatum	Improvement in preclinical models [201]	Stoechospermum marginatum	Indian and Pacific Oceans, including the Red Sea
Sargassum swartzii C. Agardh	Improvement in preclinical models [201]	Sargassum swartzii C. Agardh	Indian and Pacific Oceans, including the Red Sea
Solieria filiformis	Improvement in preclinical models [202]	Solieria filiformis	Atlantic and Pacific Oceans
Sea Lettuce	Improvement in preclinical models [203]	Ulva sp.	Worldwide distribution in coastal areas
Brazilin	Alleviates depression like behaviour in mice [204]	Brazilwood tree (Caesalpinia ssp.)	Brazil
Resveratrol	Alleviates depression like behaviour in mice [205]	Grapes	
Anthocyanidins	Alleviates depression like behaviour in mice [206]	Berries	
Lemon Balm	Evidence of anti-depressant effect in humans [207]	Melissa officinalis	Europe, Asia, North Africa
Mexican Bay	Improvement in preclinical mouse model [208]	Litsea glaucescens	Mexico, Central America
Lavender	Improvements in human depression [209]	Lavandula angustifolia Mill. (Lamiacae)	Mediterranean region, Europe, Asia, North Africa
Essential oils of cataia	Improvements in mouse models [210]	Pimenta pseudocaryophyllus (Gomes) L.R. Landrum (Myrtaceae)	Brazil
Sensitive Plant	Improvement in rat model [211]	Mimosa pudica (Fabaceae)	Native to South America, now widespread tropical distribution
Alkaloid extract of Cherimoya	Improvement in mouse model [212]	Annona cherimola Mill.(Annonaceae)	Andes Mountains in South America, now grown in various regions
Mexican Tarragon	Improvement in rat model [213]	Tagetes lucida Cav. (Asteraceae)	Central and South America
Bugambilia glabra extract	Improvement in rat models [214]	Bougainvillea spectabilis Willd	Puebla, Coxcatlán
Kava kava	Improvement in symptoms in human subjects [141]	Piper methysticum G. Foster	South Pacific
Valerian	Improvements in human subjects [215,216]	Valeriana officinalis L.	Europe, Asia
Novel herbal treatment	Improvements in mouse models [217]	*Crataegus pinnatifida*, *Triticum aestivu*, *Lilium* *brownie* and *Fructus zizyphi jujubae*	
Banxia houpu	Improvement in rat model [218]	Pinellia ternata, Poria cocos, Magnoliaofficinalis,Perilla frutescens and Zingiber officinale	China

Supplementary Table S3: Lifestyle interventions for treating depression in humans found in reviews of lifes9

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[2] In Forced swim test (FST), which is often used as a mouse measure of depression. Immobility time is associated with depressive phenotype.

tyle interventions for depression. +, positive effect; -, negative effect; n.s. not significant; Mixed, mixed positive, negative and/or non significant findings.

	[281]	[282]	[283]	[284]	[285]	[286]	[287]	[288]	[289]
Whole foods diet	+				+				
Mediterranean diet				+					
Exercise	++			+	+	+			
Hobbies	Limited evidence								
Meditation	+	+							
Sleep	++			+		+			
Natural environment	++				+				
Animals	+								
Socialization	++								
Smoking	-				-	-			
Alcohol	-				Mixed	Mixed			
Combined healthy lifestyle		+	+				++	++	++