Individual Anteaox Phenols and Mood Disorders

Ferulic acid, Catechin, Epicatechin, EGCG, Resveratrol, Quercetin, Caffeic acid, Ellagic acid, Apigenin, Genistein, Vanillic acid, Chlorogenic acid, Cryptochlorogenic acid, Protocatechuic acid

"As demonstrated in this review with the support of mechanistic studies, this synbiotic approach may instigate a paradigm shift in the treatment regime of depression as probiotic and polyphenol rich botanical supplementation is a cost-effective, long-term treatment option with limited side effects that may be more robust that traditional pharmacological paradigms that target specific depression risk factors." 164. Frontiers in Neuroscience, 2019

Curcumin

"Thus, curcumin could embody the dawn of nutraceuticals as anti-inflammatory and antioxidant components appear to be a possible alternative in the treatment of depression. As curcumin displays neuroprotective effects, especially against stress-induced toxicity, it also suggests the use of such molecules as prophylactic agents." 165. Frontiers in Psychiatry, 2020

Cinnamic and p-coumaric acids

"The studies discussed show that the antidepressant action of these natural products occurs via important neurotransmitters such as serotonin, as well as via the participation of inflammation-related metabolites such as AA-COX-2/5-LOX and BDNF. In some reports, there is a similarity in the mechanism of action with commercial antidepressant drugs. This data confirms the therapeutic potential of these compounds against behavioural disorders, such as depression."
166. Molecules, 2019

Gallic acid

"Today, researchers attempt to find the pharmaceutical compounds with several mechanisms for preventing the progress and disturbance of mood disorders by affecting the mechanisms involved in the damages and death of neural cells. The neuroprotective property of gallic acid is because of the inhibition of free radicals and lipid peroxidation, anti-inflammatory properties, glutathione reduction, and anti-apoptosis properties." 167. International Journal of Food Properties, 2020

3,4-Dihydroxyphenylacetic acid (DOPAC)

"Gut–brain module analysis of faecal metagenomes identified the microbial synthesis potential of the dopamine metabolite 3,4-dihydroxyphenylacetic acid as correlating positively with mental quality of life and indicated a potential role of microbial γ-aminobutyric acid production in depression."
168. Nature Microbiology, 2019

Caffeic Acid Phenylacetic Ester (CAPE)

"In conclusion, the present study is the first to demonstrate the antidepressant-like activity of CAPE, which may be mediated by enhanced GR function that is, in-turn, linked to p38MAPK signaling. Although further investigation is required to identify ligand-independent mechanisms of GR function, our findings suggest that CAPE might represent a novel pharmacological option for patients with neuropsychiatric disorders, including major depression."
169. Evidence-Based Complementary and Alternative Medicine, 2014,

Formononetin

"It was reported that the extract of Puerariae Radix and its monomeric compounds have the effects on antioxidation, anti-high blood pressure, anticancer, anti-diabetes/nephropathy, and neuroprotective. In addition, previous studies have found that Puerariae Radix and its extracts have powerful antidepressant effects in recent years."
170. Oxidative Medicine and Cellular Longevity, 2021

Kaempferol

"KPF has shown an important neuroprotective action in all addressed diseases, mainly promoting an anti-inflammatory and antioxidant effect. In addition, KPF promoted a protective effect on the brain, inhibiting proinflammatory cytotoxicity and the activity of important inflammatory pathways as NF-kB, p38MAPK, and AKT, resulting in an overall anti-inflammatory action. In conclusion, we suggest that KPF and some glycosylated derivatives (KPF-3-O-rhamnoside, KPF-3-Oglucoside, KPF-7-O-rutinoside, and KPF-4'-methyl ether) have multipotential neuroprotective actions in the CNS diseases." 171. Frontiers in Pharmacology, 2021

Hydroxybenzoic acid

"Natural compounds of plant origin are extensively researched to find a better and safer alternative treatment. Experimental studies have shown that phytochemicals such as alkaloids, terpenes, flavonoids, phenolic acids as well as lipids have significant potential in in vitro and in vivo models of psychiatric disorders." 172. Frontiers in Pharmacology, 2021