Individual Anteaox Phenols and Obesity

Resveratrol

"Resveratrol, which is a polyphenolic compound, has been widely accepted as an anti-obesity agent and a metabolic effector. A multitude of evidence has demonstrated that stimulating WAT browning through the AMPK-SIRT1-PGC1α pathway or the cAMP signaling pathway is one of the critical mechanisms that is utilized by resveratrol to combat obesity." 26. Frontiers in Endocrinology, 2019

"Among the therapeutic strategies against obesity, resveratrol has aroused great interest. This polyphenol has anticancer and antioxidant properties and cytoprotective and anti-inflammatory effects. Other favorable effects attributed to resveratrol are anti-lipid, anti-aging, anti-bacterial, anti-viral, and neuroprotective actions. Administration of resveratrol appears to improve the metabolic profile in obese and/or insulin-resistant patients."
27. International Journal of Molecular Sciences, 2021

Curcumin

"In summary, the findings of the present review indicate that curcumin supplementation may exert beneficial effects against obesity among overweight or obese adults. These effects are mediated through its regulation of lipid metabolism by enhancing energy expenditure and suppressing transcriptional factors, enzymes and pro-inflammatory cytokines involved in adipogenesis."
28. Nutrients, 2021

Caffeic, Cinnamic, Ferulic, Gallic, Ellagic, Protocatechuic, Hydroxybenzoic, p-Coumaric acids, Quercetin, Kaempferol, Catechin and EGCG

"The in vitro and in vivo studies reviewed above demonstrate that antioxidants, such as polyphenols offer potential in weight reduction and that beneficial dietary strategies may suppress oxidative stress and prevention obesity, related mitochondrial dysfunction, inflammation, and over-activation of the sympathetic nervous system." 29. International Journal of Molecular Sciences, 2019

Formononetin

"Taken together, our study demonstrates that the Chinese herbal medicine from A. membranaceus and its constituent formononetin have the potential to reduce obesity and associated metabolic disorders. Our results suggest that formononetin regulates adipocyte thermogenesis as a non-classical PPARγ agonist." 30. British Journal of Pharmacology, 2018

Caffeic Acid Phenethyl Ester

"Treatment with Cape restores the lost balance between fatty acid synthesis, triglycerides synthesis, lipolysis, and beta-oxidation." 31. PPAR Research, 2015

3,4 Dihydroxyphenylacetic Acid and Benzoic Acid

"In conclusion, consumption of a low calorie, high polyphenol CEB reduced CVD risk factors by improving redox status, vasodilation, glucose homeostasis, and HDL cholesterol in healthy overweight/obese adults." 32. European Journal of Nutrition, 2019