

THE BRAIN TRUST OF *INGREDIENTS*



by
SABINSA

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The brain is the master regulatory organ that directly or indirectly controls the function of all the other organs and tissues in the body. Any dysfunctions in the brain eventually have an effect on other body functions. The human brain controls the central nervous system, the peripheral nervous system and regulates almost all human activity.⁽¹⁾

The combination of high fat content and low antioxidant levels in the brain makes the brain vulnerable to fatty acid oxidation, called lipid peroxidation. Most degenerative diseases of the brain can be traced back to lipid peroxidation.⁽²⁾

Alzheimer's disease is characterized by the presence of oxidized protein called amyloid beta peptide. There is a direct association between amyloid beta peptide formation and lipid peroxidation. Furthermore, amyloid beta peptide causes further damage to brain cells by causing further lipid peroxidation which produces more 4-hydroxynonenyl, a neurotoxic agent and which inhibits glucose uptake by brain cells.⁽²⁾



BRAIN

SUPPORT

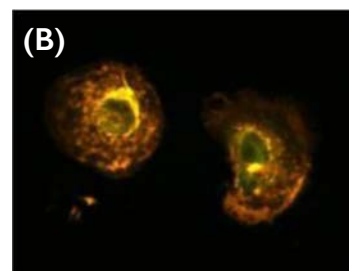
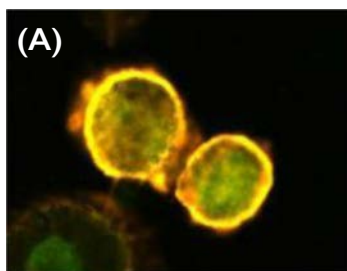
INGREDIENTS



Sabinsa, a premier ingredients supplier inspired by Ayurveda, has developed dietary supplements and nutraceuticals derived from plant sources using the latest technology. In the course of its research, it discovered several plant compounds that have various beneficial actions on brain health.

CURCUMIN C³ COMPLEX[®]

Sabinsa's Curcumin C³ Complex[®] (protected by US Patent 5,861,415 & EU Patent 0839037) is obtained from Turmeric and standardized for minimum 95% Curcuminoids [Curcumin, Demethoxycurcumin (DMC) and Bisdemethoxycurcumin (BDMC)].



Phagocytosis of A β by Alzheimer's disease macrophages is increased by Curcumin C³ Complex[®] treatment Confocal microscopy, FITC-A β (green), phalloidin-FITC (red), colocalization (yellow).

Note surface binding in (A) vs. intracellular uptake in (B)


Testing anti-amyloid-beta phagocytosis in Alzheimer's disease macrophages might be helpful for assessing the ability of patients to respond to immunomodulatory therapy with Curcumin C³ Complex[®].⁽³⁾



SELENIUM SELECT®

Low plasma selenium status has been associated with senility and cognitive decline in the elderly and with Alzheimer's disease. Selenium supplementation improves depressed mental states, mental fatigue and anxiety in adults.^{3,4} Sabinsa's Selenium SeLECT® (L-Selenomethionine) and Methyselene® (L-Se-Methylselenocysteine, US Patents 6,794,537 & 6,982,273) are two organic selenium complexes, more bioavailable compared to other inorganic selenium compounds.^(4, 5)





Sabinsa's Bacopin® is *Bacopa monniera* extract, a natural memory enhancing herb standardized for Bacosides. Bacosides promote nerve impulse transmission by repairing damaged neurons.

This is done by enhancing kinase activity, neuronal synthesis and restoration of synaptic activity.⁽⁶⁾ *Bacopa monniera* inhibits lipid peroxidation and thereby prevents damage to cortical neurons.⁽⁷⁾

Centella asiatica, branded as Centellin®, or gotu kola, is widely known in Ayurvedic medicine. It boosts memory, has wound healing properties, and increases concentration, alertness, anti-anxiety and anti-stress. Centella improves short-term memory and learning performance due to its nootropic action involving cholinergic and GABAergic modulation. Centella also inhibits lipid peroxidation.⁽⁸⁾

Discover these and much more at www.sabinsa.com, or contact your Sabinsa sales representative today. For the complete white paper on this topic, visit: <http://www.sabinsa.com/newsroom/whitepapers/>.

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