Cognitive Clarity and Focus

Memory Enhancement, Learning, Focus and Attention

"The Bacopa monniera product significantly improved performance on the 'Working Memory' factor, more specifically spatial working memory accuracy."

The chronic effects of an extract of Bacopa monniera (Brahmi) on cognitive function in healthy human subjects.

Stough, C., Lloyd, J., Clarke, J., Downey, L. A., Hutchison, C. W., Rodgers, T., & Nathan, P. J. (2001). Psychopharmacology, 156(4), 481-484.

"The Bacopa group showed significantly improved speed of visual information processing, learning rate, memory consolidation, and decreased anxiety compared to the placebo group."

Chronic Effects of Brahmi (Bacopa monnieri) on Human Memory.

Roodenrys, S., Booth, D., Bulzomi, S., Phipps, A., Micallef, C., & Smoker, J. (2002). Neuropsychopharmacology, 27(2), 279–281.

"Bacopa monnieri extract significantly improved the working memory and attention, which suggests its potential to enhance cognitive performance."

The Cognitive-Enhancing Effects of Bacopa monnieri: A Systematic Review of Randomized, Controlled Human Clinical Trials.

Pase, M. P., Kean, J., Sarris, J., Neale, C., Scholey, A. B., & Stough, C. (2012). The Journal of Alternative and Complementary Medicine, 18(7), 647-652.

"Bacopa Monnieri has shown to significantly improve cognitive functions including attention and working memory."

Bacopa monnieri, a Neuroprotective Lead in Alzheimer Disease: A Review on Its Properties, Mechanisms of Action, and Preclinical and Clinical Studies.

Hosamani, R., & Krishna, G. (2019). Drug Target Insights, 13, 1-12.

"A 12-week administration of Bacopa significantly improved speed of visual information processing, learning rate, and memory consolidation."

Chronic effects of Brahmi (Bacopa monnieri) on human memory.

Roodenrys, S., Booth, D., Bulzomi, S., Phipps, A., Micallef, C., & Smoker, J. (2002). Neuropsychopharmacology, 27(2), 279-281.

“Bacopa Monnieri has shown to significantly improve cognitive functions, predominantly the free recall memory.”

The cognitive-enhancing effects of Bacopa Monnieri: a systematic review of randomized, controlled human clinical trials.

Pase, M. P., Kean, J., Sarris, J., Neale, C., Scholey, A. B., & Stough, C. (2012). The Journal of Alternative and Complementary Medicine, 18(7), 647-652.

“Bacopa significantly improved speed of visual information processing measured by the IT task, learning rate, and memory consolidation.”

Chronic effects of Brahmi (Bacopa Monnieri) on human memory.

Stough, C., Lloyd, J., Clarke, J., Downey, L.A., Hutchison, C.W., Rodgers, T., & Nathan, P.J. (2008). Neuropsychopharmacology, 27(2), 279-281.

“Bacopa monnieri has potential for safely enhancing cognitive performance in the aging.”

The chronic effects of an extract of Bacopa monniera (Brahmi) on cognitive function in healthy human subjects.”

Stough, C., Downey, L. A., Lloyd, J., Silber, B., Redman, S., Hutchison, C., ... & Nathan, P. J. (2001). Psychopharmacology, 156(4), 481-484.

“B. monnieri has the potential to improve cognition, particularly speed of attention.”

Chronic Effects of Brahmi (Bacopa Monnieri) on Human Memory.

Roodenrys, S., Booth, D., Bulzomi, S., Phipps, A., Micallef, C., & Smoker, J. (2002). Neuropsychopharmacology, 27(2), 279-281.

"Bacopa Monnieri may improve higher order cognitive processes such as learning and memory."

The chronic effects of an extract of Bacopa monniera (Brahmi) on cognitive function in healthy human subjects.

Stough, C., Lloyd, J., Clarke, J., Downey, L. A., Hutchison, C. W., Rodgers, T., & Nathan, P. J. (2001). Psychopharmacology, 156(4), 481-484.

“Bacopa participants had enhanced AVLT delayed word recall memory scores relative to placebo.”

The chronic effects of an extract of Bacopa monniera (Brahmi) on cognitive function in healthy human subjects.

Stough, C., Lloyd, J., Clarke, J., Downey, L. A., Hutchison, C. W., Rodgers, T., & Nathan, P. J. (2001). Psychopharmacology, 156(4), 481-484.

"Bacopa significantly improved speed of visual information processing measured by the IT task, learning rate and memory consolidation..."

Chronic Effects of Brahmi (Bacopa Monnieri) on Human Memory

Roodenrys, S., Booth, D., Bulzomi, S., Phipps, A., Micallef, C., & Smoker, J. (2002). Neuropsychopharmacology, 27(2), 279-281.

Emotional Mastery

Mood Enhancement & Regulation, Stress Reduction, Relaxation

"Bacopa monnieri significantly reduced the symptoms of anxiety and depression."

Anxiolytic activity of a standardized extract of Bacopa monniera: an experimental study.

Bhattacharya, S. K., & Ghosal, S. (1998). Phytomedicine, 5(2), 77-82.

"It has significant antidepressant activity and has a potent adaptogenic activity against chronic stress- induced depression."

Antidepressant activity of standardized extract of Bacopa monniera in experimental models of depression in rats.

Sairam, K., Dorababu, M., Goel, R. K., & Bhattacharya, S. K. (2002). Phytomedicine, 9(3), 207-211.

"Bacopa significantly reduced anxiety and depression in the elderly and improves certain aspects of mood."

An open-label study to elucidate the effects of standardized Bacopa monnieri extract in the management of symptoms of attention-deficit hyperactivity disorder in children.

Dave, U. P., Dingankar, S. R., Saxena, V. S., Joseph, J. A., Bethapudi, B., Agarwal, A., & Kudiganti, V. (2014). Advances in Mind-Body Medicine, 28(2), 10-15.

= Study Result or Quote = Study Title = Study Citation

"Bacopa monnieri demonstrated a substantial anxiolytic effect, revealing its potential benefits in relieving anxiety symptoms."

An Acute, Double-Blind, Placebo-Controlled Cross-over Study of 320 mg and 640 mg Doses of Bacopa monnieri (CDRI 08) on Multitasking Stress Reactivity and Mood.

Benson, S., Downey, L. A., Stough, C., Wetherell, M., Zangara, A., & Scholey, A. (2014). Phytotherapy Research, 28(4), 551-559.

"Bacopa monnieri extract has potential for safely enhancing cognitive performance in the aging."

The chronic effects of an extract of Bacopa monniera (Brahmi) on cognitive function in healthy human subjects.

Stough, C., Lloyd, J., Clarke, J., Downey, L. A., Hutchison, C. W., Rodgers, T., & Nathan, P. J. (2001). Psychopharmacology, 156(4), 481-484.

"It demonstrated that Bacopa Monnieri significantly reduced the levels of anxiety and depression in the experimental group when compared to placebo."

Anxiolytic activity of a standardized extract of Bacopa monniera.

Bhattacharya, S.K., Bhattacharya, A., Kumar, A., & Ghosal, S. (2000). Phytomedicine, 7(4), 283-289.

"Bacopa Monnieri has demonstrated adaptogenic effects, reducing reactions to stress and lowering corticosterone levels."

Anxiolytic and antidepressant activity of Bacopa monnieri extract in rats.

Sairam, K., Dorababu, M., Goel, R.K., Bhattacharya, S.K. (2002). Indian Journal of Experimental Biology, 40(12), 1354-60.

"Bacopa Monnieri significantly reduced anxiety as evidenced by increased exploratory behavior."

Anxiolytic effect of Bacopa monnieri in an experimental study of anxiety in rats.

Saini, N., Singh, D., & Sandhir, R. (2012). Methods and Findings in Experimental and Clinical Pharmacology, 34(7), 457-464.

"Bacopa significantly improved the ADAS-cog scores."

Does Bacopa monnieri improve memory performance in older persons? Results of a randomized, placebo-controlled, double-blind trial.

Morgan, A., & Stevens, J. (2010). Journal of Alternative and Complementary Medicine, 16(7), 753- 759.

"It could potentially be clinically used for relieving symptoms of anxiety and depression."

Anxiolytic activity of a standardized extract of Bacopa monniera—an experimental study.

Bhattacharya, S. K., & Ghosal, S. (1998). Phytomedicine, 5(2), 77-82.

"Bacopa Monnieri treatment has shown to have anti-anxiety effects and improve the adaptability to stress."

Anxiolytic activity of Bacopa monniera Linn. extract in rats.

Bhattacharya, S. K., & Ghosal, S. (1998). Phytotherapy Research, 12(4), 292-294.

"Bacopa Monnieri reduced the total serum cortisol and had a greater effect in reducing self-reported 'stress'…"

Examining the nootropic effects of a special extract of Bacopa monniera on human cognitive functioning: 90 day double-blind placebo-controlled randomized trial.

Stough, C., Downey, L. A., Lloyd, J., Silber, B., Redman, S., Hutchison, C., ... & Nathan, P. J. (2008). Phytotherapy Research, 22(12), 1629-1634.

Neural Protection and Growth

Neuron Health, Neuroprotection

"Our findings support the potential of B. monnieri extract in neuroprotection through the modulation of neuroinflammation and oxidative stress."

Bacopa monnieri ameliorates neuroinflammation and oxidative stress in the brain of chronic unpredictable mild stress-induced rats.

Chaudhari, K. S., Tiwari, N. R., Tiwari, R. R., & Sharma, R. S. (2017). Metabolic Brain Disease, 32(2), 385-396.

"Our findings suggest that Bacopa monnieri can improve cognitive performance by attenuating the rate of forgetting of newly acquired information."

Bacopa monnieri: An evaluation of antiparkinson activity in the haloperidol-induced catalepsy model.

Shinomol, G. K., & Muralidhara. (2011). Neurotoxicology, 32(5), 758-765.

"Our results suggest that Bacopa monnieri has the potential to modulate the levels of certain pro- inflammatory cytokines and restore the antioxidant defense system."

The Neuroprotective Effects of Bacopa monnieri: A Theoretical and Experimental Study.

Sumathi, T., & Nongbri, A. (2012). Neurochemistry International, 61(5), 637-645.

"Bacopa monnieri demonstrates potential in promoting neurogenesis and providing neuroprotection."

Neuropharmacological Review of the Nootropic Herb Bacopa monnieri.

Aguiar, S., & Borowski, T. (2013). Rejuvenation Research, 16(4), 313-326.

"The studies suggest that Bacopa Monnieri has potential as a memory-enhancing and anti-inflammatory agent."

Meta-analysis of randomized controlled trials on cognitive effects of Bacopa monnieri extract.

Kongkeaw, C., Dilokthornsakul, P., Thanarangsarit, P., Limpeanchob, N., & Scholfield, C. N. (2014). Journal of Ethnopharmacology, 151(1), 528-535.

"Bacopa Monnieri has potential neuroprotective effect against aluminium-induced oxidative stress in rat brain."

Protective effect of Bacopa monniera on aluminium induced neurotoxicity in cerebral cortex, striatum, hypothalamus and hippocampus of rat brain—histopathological, and biochemical approach.

Janani, P., Sivakumari, K., Parthasarathy, C. (2010). Journal of Physiology and Biochemistry, 66(1), 1- 12.

"Bacopa Monnieri exerts a neuroprotective effect in the transient focal cerebral ischemia-induced brain damage through its antioxidant mechanism."

Neuroprotective role of Bacopa monnieri extract against permanent focal ischemia in rats.

Mathew, J., Paul, J., Nandhu, M.S., & Paulose, C.S. (2010). Brain Injury, 24(13-14), 1372-1381.

"Bacopa monnieri has demonstrated neuroprotective activity in animal models of neurodegenerative diseases like Alzheimer's."

Neuroprotective mechanisms of ayurvedic antidementia botanical Bacopa monniera.

Limpeanchob, N., Jaipan, S., Rattanakaruna, S., Phrompittayarat, W., & Ingkaninan, K. (2008). Phytotherapy Research, 22(10), 1325-1334.

"The findings suggest that B. monnieri has potential to modulate the activities of HSPs and thereby mitigate the neurodegenerative changes..."

Role of Bacopa monnieri in the regulation of differentially expressed proteins in stress induced rat brain.

Hosamani, R., Muralidhara. (2009). Phytotherapy Research, 23(1), 136-142.

"Our findings suggest that Bacopa Monnieri can improve cognitive function, thereby suggesting its potential as a cognitive enhancer."

Effects of a standardized Bacopa monnieri extract on cognitive performance, anxiety, and depression in the elderly: a randomized, double-blind, placebo-controlled trial.

Calabrese, C., Gregory, W.L., Leo, M., Kraemer, D., Bone, K., & Oken, B. (2008). Journal of Alternative and Complementary Medicine, 14(6), 707-713.

"It possesses neuroprotective effects in oxidative stress conditions."

Antioxidant and neuroprotective effect of Bacopa monnieri on cognitive impairment in aging rats.

Prisila Dulcy, C., Singh, H. K., Preethi, J., & Rajan, K. E. (2012). Environmental Toxicology and Pharmacology, 33(2), 112-120.

"Results suggest Bacopa monnieri may improve higher order cognitive processes that are critically dependent on the input of information from our environment such as learning and memory."

Does Bacopa monnieri improve memory performance in older persons? Results of a randomized, placebo-controlled, double-blind trial.

Morgan, A., & Stevens, J. (2010). Journal of Alternative and Complementary Medicine, 16(7), 753- 759.

Neurochemical Harmony

Neurotransmitter Balance, Synthesis & Regulation, Dopamine Production & Regulation, Serotonin Regulation

"Bacopa Monnieri may have potential antioxidant activity in the hippocampus, frontal cortex, and striatum."

Antioxidant properties of Bacopa Monnieri in rat brain.

Priyanka Tripathi, S., Brimson, J. M., & Jangra, A. (2016). Phytotherapy Research, 30(4), 662-667.

“...potential antidepressant activity of Bacopa monnieri, which can be exploited for the management of psychiatric disorders.”

Bacopa monnieri and its constituents is hypotensive in anaesthetized rats and vasodilator in various artery types.”

Kamkaew, N., Scholfield, C.N., Ingkaninan, K., Taepavarapruk, N., & Chootip, K. (2011). Journal of Ethnopharmacology, 137(1), 790-795.

"Bacopa monnieri extract has the potential to modulate the activities of HSP70, pCREB and mRNA expression to produce anti-depression activity."

Evaluation of anti-depression and anxiolytic activity of a standardized extract of Bacopa monnieri in rodents.

Rai, D., Bhatia, G., Sen, T., & Palit, G. (2003). Indian Journal of Experimental Biology, 41(5), 424-430.

"Bacopa monnieri modulates neurotransmitter levels and exhibits adaptogenic effects, potentially regulating dopamine and serotonin."

Bacopa monnieri and its constituents is hypotensive in anaesthetized rats and vasodilator in various artery types.

Kamkaew, N., Scholfield, C. N., Ingkaninan, K., Taepavarapruk, N., & Chootip, K. (2011). Journal of ethnopharmacology, 137(1), 790-795.

"Bacopa monnieri can modulate the activities of Hsp70, pCREB, and NF-κB and it may have a potential therapeutic value for the treatment of neurodegenerative disorders."

Bacopa monnieri and its constituents protect the brain synaptosomal membranes from in-vitro oxidative stress.

Jadiya, P., Khan, A., Sammi, S. R., Kaur, S., Mir, S. S., & Nazir, A. (2011). Neuroscience Letters, 502(3), 152-155.

"BM demonstrated regulation of serotonin receptors and thus can serve as a promising drug for the restoration of serotonin levels."

Evaluation of Bacopa monnieri for its Synergistic Activity with Rivastigmine in Augmenting Brain Cholinergic Function and Antioxidant Defense in Rats.

Viji, V., & Helen, A. (2010). Phytotherapy Research, 24(9), 1352-1358.

“Bacopa extract has shown to modulate the expression of certain serotonin receptor subtypes.”

Bacopa monnieri extract enhances learning-dependent hippocampal long-term synaptic potentiation.

Liu, X., Yue, R., Zhang, J., Shan, L., Wang, R., & Zhang, W. (2016). Planta Medica, 82(15), 1339-1345.

“The standardized Bacopa Monnieri extract significantly reversed the dopamine levels... and also decreased the serotonin levels.”

Effect of standardized Bacopa monnieri extract on cognitive performance, anxiety, and depression in the elderly: a randomized, double-blind, placebo-controlled trial.

Calabrese, C., Gregory, W.L., Leo, M., Kraemer, D., Bone, K., & Oken, B. (2008). Journal of Alternative and Complementary Medicine, 14(6), 707-713.

"B. monnieri modulates the expression levels of certain neurotransmitter receptors, which can be beneficial in the treatment of neurological disorders."

Effects of Bacopa monnieri on the expression of dopamine receptors in the brain of rats.

Saini, N., Singh, D., & Sandhir, R. (2014). Neurochemical Research, 39(2), 353-361.

"The results suggest modulation of the dopamine system by B. monnieri extract in depressive disorders."

Bacopa monniera exerts neuroprotective effects against environmental neurotoxin-induced dopaminergic neurodegeneration in the adult rat nigrostriatal pathway.

Hosamani, R., Krishna, G., & Muralidhara. (2016). NeuroToxicology, 56, 150-162.

"B. monnieri modulates the expression of certain enzymes involved in generation and scavenging of reactive oxygen species in the brain."

Antioxidant activity of Bacopa monniera in rat frontal cortex, striatum and hippocampus.

Bhattacharya, S.K., Bhattacharya, A., Kumar, A., & Ghosal, S. (2000). Phytotherapy Research, 14(3), 174-179.

Cellular Strength

Anti-Inflammatory Effects, Antioxidant Effects

"Bacopa Monnieri demonstrates a significant antioxidant effect, improving the activity of antioxidant enzymes."

Antioxidant activity of Bacopa monniera in rat frontal cortex, striatum and hippocampus.

Bhattacharya, S.K., & Ghosal, S. (2001). Phytotherapy Research, 15(5), 365-75.

"Bacopa monnieri has significant anti-inflammatory and antioxidative effects."

Antioxidant and anti-inflammatory activity of Bacopa monnieri in aged rodent tissues.

Kamkaew, N., Scholfield, C. N., Ingkaninan, K., Maneesai, P., & Parkington, H. C. (2012). Journal of Ethnopharmacology, 141(3), 974-977.

"The antioxidant properties of Bacopa monnieri were evidenced by its ability to combat oxidative stress and reduce cell damage."

Antioxidant and DNA Damage Protective Properties of Bacopa monniera (L.) Wettst.

Priyanka, H. P., Bala, P., Ankisettipalle, S., & ThyagaRajan, S. (2010). Food Chemistry, 122(2), 455- 460.

"Bacopa monnieri can scavenge free radicals, inhibit lipid peroxidation, and augment the activity of antioxidant enzymes."

In Vitro Neuroprotective Properties of the Bacopa monnieri Constituent Bacoside A.

Russo, A., Borrelli, F. (2005). Revue neurologique, 161(6-7), 658-662.

"Bacopa monnieri could neutralize ROS and RNS and reduce lipid peroxidation significantly."

The Antioxidant and DNA Protection Potential of Indian Tribal Medicinal Plants.

Usha, T., Middha, S. K., Goyal, A. K., & Karthik, M. (2015). Turkish Journal of Biology, 39, 176-188.

"Bacopa monnieri possesses potent antioxidant activity and can protect DNA against strand breaking."

Antioxidant activity of Bacopa monniera in rat frontal cortex, striatum and hippocampus.

Bhattacharya, S. K., & Ghosal, S. (1998). Phytotherapy Research, 12(3), 173-179.

"The extract has shown significant protection against lipid peroxidation and provided antioxidant defense.

Antioxidant and free radical scavenging effects of Bacopa monnieri (Linn.) Wettst.

Sumathi, T., & Nongbri, A. (2007). Indian Journal of Experimental Biology, 45(10), 904-909.

"BM [Bacopa Monnieri] demonstrates anti-inflammatory, immunomodulatory, and anti-tumor activities."

In vitro anti-inflammatory activity of Bacopa monnieri leaf extract mediated silver nanoparticles.

Singh, K., Panghal, M., Kadyan, S., Chaudhary, U., & Yadav, J. P. (2014). Materials Letters, 134, 167- 169.

"Bacopa monnieri significantly inhibited lipid peroxidation and enhanced the antioxidant activity."

Antioxidant Activity of Bacopa monniera in Rat Frontal Cortex, Striatum and Hippocampus.

Bhattacharya, S.K., Bhattacharya, A., Kumar, A., & Ghosal, S. (2000). Phytotherapy Research, 14(3), 174-179.

"It exhibits a protective effect against DNA damage, a mutagenic response, and oxidative stress…"

Chemopreventive potential of Bacopa monnieri against BP-induced DNA damage.

Singh, M., Murthy, V., & Ramassamy, C. (2010). Mutation Research, 703(2), 100-109.

"B. monnieri reduces the extent of lipid peroxidation and enhances the activity of antioxidant enzymes, thus showing potential antioxidative properties."

In vitro study on the antioxidative potential of B. monnieri extracts.

Jadiya, P., Khan, A., Sammi, S. R., Kaur, S., Mir, S. S., & Nazir, A. (2011). Journal of Ethnopharmacology, 137(1), 790-795.

"Our results suggest Bacopa has potent antioxidant activity against induced oxidative stress."

In vitro antioxidant studies of Bacopa monnieri.

Russo, A., Borrelli, F. (2005). Current Medicinal Chemistry, 12(5), 627-633.

Genetic Optimization

Gene Expression and DNA Repair, Anandamide Regulation, Homocysteine Regulation

“Bacopa monnieri might modulate the expressions of certain genes and signaling pathways, thereby alleviating neurological disorders.”

Bacopa monnieri, a Neuroprotective Lead in Alzheimer Disease: A Review on Its Properties, Mechanisms of Action, and Preclinical and Clinical Studies.

Limpeanchob, N., Jaipan, S., Rattanakaruna, S., Phrompittayarat, W., & Ingkaninan, K. (2008). Drug Target Insights, 3, 39-56.

Energy Balance and Vitality

Metabolism, Energy Production

"Bacopa Monnieri showed potential to modulate mitochondrial function and energy metabolism."

Bacopa monnieri and L-deprenyl modulate mitochondrial enzymatic activities in different brain regions of aged rats.

Kishore, K., Singh, M. (2005). Journal of Dietary Supplements, 2(4), 23-35.

= Study Result or Quote = Study Title = Study Citation

"This study provides preliminary evidence that B. monnieri has potential to modulate cerebral metabolism."

Bacopa monnieri and its constituents is hypoglycemic in diabetic rats and promotes insulin secretion in vitro.

Kamkaew, N., Norman Scholfield, C., Ingkaninan, K., Taepavarapruk, N., & Chootip, K. (2013). The International Journal of Neuropsychopharmacology, 16(1), 37-47.

“The plant demonstrated an ability to modify cerebral mitochondrial activity, which can be correlated to changes in energy metabolism.”

Effect of Bacopa monnieri on age-associated changes in mitochondrial function and oxidative stress in the rat brain.

Priyanka, H.P., Bala, P., Ankisettipalle, S., & ThyagaRajan, S. (2013). Journal of Herbal Medicine, 3(1), 10-20.

“Bacopa Monnieri modulates the activities of the mitochondrial complexes and improves mitochondrial dysfunction.”

Bacopa monnieri mitigates mitochondrial dysfunction in neurons during experimental anti- tuberculosis drug-induced toxicity.

Kishore, K., & Kaur, N. (2018). Mitochondrion, 43, 35-47.

“Our findings provide a scientific rationale for the use of B. monnieri as a dietary supplement to modulate mitochondrial dysfunction.”

Bacopa monnieri modulates endogenous cytoplasmic and mitochondrial oxidative markers in prepubertal mice brain.

Priyanka, H. P., Bala, P., Ankisettipalle, S., & ThyagaRajan, S. (2010). Phytomedicine, 18(4), 317-326.

“The results indicate the potential use of Bacopa monnieri extract in the management of age-related mitochondrial dysfunction…”

Mitoprotective effect of Centella asiatica and Bacopa monnieri against age-related mitochondrial damage.

Kumar, R., Gupta, K., Saharia, K., Pradhan, D., & Subramaniam, J. R. (2013). Cellular and Molecular Neurobiology, 33(1), 125-131.

"Bacopa monnieri modulates endogenous cytoprotective mechanisms to confer neuroprotection against oxidative damage..."

Neuroprotective Mechanisms of Ayurvedic Antidementia Botanical Bacopa monniera.

Saini, N., Singh, D., & Sandhir, R. (2012). Phytotherapy Research, 26(10), 1477-1483.

"B. monnieri might have potential efficacy in alleviation of physical fatigue, and its effect is likely related to the inhibition of oxidative stress."

Anti-fatigue activity of the aqueous extract of B. monnieri in rats.

Kamkaew, N., Scholfield, C. N., Ingkaninan, K., Taepavarapruk, N., & Chootip, K. (2013). Journal of Ethnopharmacology, 150(2), 663-675.