

# **Neurogen Cognition**

GENESTRA BRANDS®

Herbal Formula

# Research-driven support for cognitive health

- Combines LONGVIDA™ Optimized Curcumin with BACOGNIZE™ Bacopa and standardized ginger extracts
- LONGVIDA™ Optimized Curcumin is clinically demonstrated to
  - help improve cognitive function, reduce fatigue and improve the psychological effects of stress on mood
  - enhance working memory, which may reverse or prevent age-related memory impairments
- Bacopa is traditionally used in Ayurveda for memory enhancement

Neurogen Cognition was specifically developed to support cognitive health and brain function. It offers LONGVIDA<sup>™</sup> Optimized Curcumin, which has been demonstrated in clinical research to help improve cognitive functions; reduce fatigue; improve the psychological effects of stress on mood; and enhance working memory, which may reverse or prevent age-related memory impairments. LONGVIDA<sup>™</sup> provides curcumin in a solid lipid formulation, which helps to increase its bioavailability.<sup>1</sup> This formula also offers BACOGNIZE<sup>™</sup> Bacopa, a standardized extract of the plant *Bacopa monnieri*, which has been traditionally used in Ayurveda for memory enhancement. BACOGNIZE<sup>™</sup> Bacopa has been clinically shown to support cognitive health and brain function, increasing performance in a test measuring attention, freedom from distractibility, and working memory.<sup>2</sup> Additionally, Neurogen Cognition provides a standardized extract of ginger, another important plant used in Herbal Medicine.



### EACH CAPSULE CONTAINS:

LONGVIDA™ Optimized Curcumin	g
Providing	D
Curcumin (from <i>Curcuma longa</i> rhizome)	g
BACOGNIZE™ Bacopa (Bacopa monnieri) Aerial Parts	0
Std. Extract (12% Bacosides) 150 mg	g

Ginger (*Zingiber officinale*) Rhizome Std. Extract (14.6:1). . 50 mg (5% Gingerols/730 mg Dried Equivalent)

Non-Medicinal Ingredients: Hypromellose, cellulose, silica, sunflower lecithin, stearic acid, maltodextrin, ascorbyl palmitate

Longvida™ is a trademark of Verdure Sciences, Inc. Patents: www.vs-corp.com/ip.html

BACOGNIZE™ is a trademark of Verdure Sciences Inc.

### **Recommended Dose**

Adults: Take 2 capsules daily or as recommended by your healthcare practitioner. Use for a minimum of 6 weeks to see beneficial effects. Consult your healthcare practitioner if symptoms persist or worsen.

### Size

60 Vegetarian Capsules

NPN 80067711

Product Code 07643



#### REFERENCES

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<sup>1.</sup> Gota, VS, Maru, GB, Soni, TG, Gandhi, TR, Kochar, N, Agarwal, MG. J Agric Food Chem. 2010; 58(4): 2095-9.

Kumar, N, Abichandani, LG, Thawani, V, Gharpure, KJ, Naidu, MU, Venkat, Ramana, G. Evid Based Complement Alternat Med. 2016; 2016; 4103423.

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## Scientific Rationale:

Cognitive function is influenced by a number of factors, such as genetics, diet, lifestyle, medication and aging.<sup>1</sup> Proper brain function during aging depends in part on an equilibrium of free radical production and antioxidant defence (with oxidative damage normally accumulating in the aging brain).<sup>1</sup> Maintaining vascular health during aging is also important, as the brain constantly requires an adequate supply of blood, nutrients and oxygen to capillary beds.<sup>2</sup> Research suggests that age-related decreases in cognitive function normally occur in healthy individuals, beginning in their late 20s and extending throughout the lifespan.<sup>1</sup>

Bacopa has been traditionally used in Ayurveda for memory enhancement for over 3,000 years.<sup>3</sup> It contains a wide variety of phytochemicals that support cognitive health, including bacosides.<sup>2</sup> Emerging evidence suggests that bacopa acts by a variety of actions, such as promoting antioxidant defence, increasing cerebral blood flow and regulating neurotransmitter levels.<sup>2</sup>

In a randomized, double-blind, placebo-controlled trial, daily supplementation with 300 mg of bacopa for 12 weeks supported cognitive performance in adults aged 65 or older.<sup>4</sup> Participants in the bacopa group demonstrated better delayed word recall memory and improved reaction times in a cognitive test when compared to the placebo.<sup>4</sup> Similarly, a recent meta-analysis of nine randomized, placebo-controlled trials concluded that bacopa supplementation for at least 12 weeks improved cognitive function, including measures of memory and attention (when taken at 300 mg daily).<sup>3</sup>

Neurogen Cognition provides BACOGNIZE<sup>™</sup>, a proprietary, clinically researched bacopa extract standardized to total bacosides. Preclinical research has shown that BACOGNIZE<sup>™</sup> can bind to and regulate the activity of serotonin receptor 5HT1a, which plays an important role in neurochemical responses.<sup>5,6</sup> BACOGNIZE<sup>™</sup> also contains flavonoids and polyphenols with antioxidant capacity found to be greater than acai, cocoa and curry powder, which may further contribute to its beneficial effects on health.<sup>5</sup>

In a randomized, double-blind, placebo-controlled trial involving healthy students in their second year of medical school, twice daily supplementation with 150 mg of BACOGNIZE™ for 45 days significantly improved measures of cognitive function.<sup>7</sup> BACOGNIZE<sup>™</sup> improved performance in a test measuring attention, freedom from distractibility, and working memory, as well as a logical memory test, a measure of immediate recall of logical material and language comprehension.<sup>7</sup>

Curcumin is the primary bioactive ingredient in turmeric, which has been used for more than 4,000 years in traditional Ayurvedic medicine.<sup>8,9</sup> Research suggests that curcumin may have a role in supporting cognitive health by regulating oxidative stress and cytokine release.<sup>10</sup>

One of the primary challenges of curcumin supplementation is its low bioavailability and rapid metabolism in the body.<sup>11</sup> As a result, scientists have developed LONGVIDA™, a solid lipid curcumin particle formulation that was shown to achieve greater peak plasma concentrations of free (unglucuronidated) curcumin (the form that readily crosses the bloodbrain barrier) than standard curcumin.<sup>11,12</sup>

LONGVIDA<sup>™</sup> has been clinically evaluated for its ability to support cognitive health. In a placebo-controlled trial involving healthy adults aged 40–60, daily administration of LONGVIDA<sup>™</sup> (400 mg for four weeks) significantly enhanced antioxidant activities, including increased salivary radical scavenging activity and catalase activity (an antioxidant enzyme).<sup>13</sup> LONGVIDA<sup>™</sup> also decreased the activity of salivary amylase, a marker of sympathetic nervous system stress.<sup>13</sup>

An additional randomized, placebo-controlled trial reported that the same dose of LONGVIDA<sup>™</sup> significantly increased performance on sustained attention and working memory tasks one hour after intake.<sup>11</sup> Following chronic (four-week) intake, significant improvements were observed for working memory and mood (general fatigue and change in state calmness, contentedness and fatigue induced by psychological stress).<sup>11</sup> Additionally, acute-on-chronic administration promoted beneficial effects on alertness and contentedness.<sup>11</sup> As working memory decreases in normal aging, LONGVIDA<sup>™</sup> may be especially useful for supporting cognitive health and brain function in an aging population.<sup>11</sup>

Neurogen Cognition also contains ginger, another plant with a long history of traditional use.<sup>14</sup> This ginger extract is standardized to 5% gingerols, the pungent compounds primarily evaluated in scientific research.<sup>14</sup>

#### REFERENCES

- Vauzour, D, Camprubi-Robles, M, Miquel-Kergoat, S, Andres-Lacueva, C, Bánáti, D, et al. Ageing Res Rev. 2017; 35: 222-240.
- 2. Aguiar, S, Borowski, T. Rejuvenation Res. 2013; 16(4): 313-26.
- Kongkeaw, C. Dilokthornsakul, P. Thanarangsarit, P. Limpeanchob, N. Norman Scholfield C. J Ethnopharmacol. 2014; 151(1): 528–35.
- Norman Scholfield C. J Ethnopharmacol. 2014; 151(1): 528–35. 4. Calabrese, C, Gregory, WL, Leo, M, Kraemer, D, Bone, K, Oken, B. J
- Altern Complement Med. 2008;14(6): 707–13. 5. Verdure Sciences. [White paper]. Data on file.
- GenestraBrands.ca | 1.800.263.5861
- 6. Barnes, NM, Sharp, T. Neuropharmacology. 1999; 38(8): 1083-152.
- Kumar, N, Abichandani, LG, Thawani, V, Gharpure, KJ, Naidu, MU, Venkat, Ramana, G. Evid Based Complement Alternat Med. 2016; 2016:
- 4103423.
- 8. Jurenka, JS. Altern Med Rev. 2009 Jun;14(2):141-53.
- 9. Epstein, J., Sanderson, IR, Macdonald, TT. Br J Nutr. 2010; 103(11): 1545-57.
- 10. Potter, PE. J Exp Pharmacol. 2013; 5: 23-31.

- 11. Cox, KH, Pipingas, A, Scholey, AB. J Psychopharmacol. 2015; 29(5):642-51.
- 12. Gota, VS, Maru, GB, Soni, TG, Gandhi, TR, Kochar, N, Agarwal, MG. J Agric Food Chem. 2010; 58(4): 2095-9.
- 13. DiSilvestro, RA, Joseph, E, Zhao, S, Bomser, J. Nutr J. 2012; 11: 79.
- 14. White, B. Am Fam Physician. 2007; 75(11): 1689-91.

