
SIBELIUS™: SAGE

David Foreman, RPh



FEBRUARY 2020

Table of Contents

<i>Sibelius™: Sage: Ancient Botanical with Modern Applications for Cognitive Support</i>	2
History of Sage	2
Inside the Numbers: Who is Impacted by Decreased Focus and Concentration? ...	3
Sage: Memory, Focus and More	4
Sibelius™: Sage Stands Above the Rest!	4
Sibelius™: Sage: Unique and Specific with regards to Extraction, Growing Region & Harvesting	5
Chronoscreen™ Identifies and Confirms the Evidence of Potential Health Benefits	5
Sibelius™: Sage and Modern Applications	6
The Proof is in the Science	6
<i>Sibelius™: Sage</i>	7
References	8

Sibelius™: Sage: Ancient Botanical with Modern Applications for Cognitive Support

Before getting started, sit back, relax, take a deep breath, and have a serving of Sibelius™: Sage. Why? Because in the next 15-30 minutes you will most likely begin to feel its effects. It may seem strange to start a white paper with such a silly request, but many say the experience is better than the presentation. Taking this little challenge will help you better understand the impact Sibelius™: Sage can have on an individual, product line, or business. What will you feel? Most people comment on **feeling more alert or focused**, while others comment on feeling "sharper". Granted, these are testimonies which do not make for an excellent white paper, but in the end, Sibelius™: Sage has the research to back up what you are feeling. The following will dig into the background in the area of focus and concentration and the role Sibelius™: Sage will play, and the clinical research to back up what you may be feeling.



History of Sage

Before delving deeper into the science behind Sibelius™: Sage, it is beneficial to take a quick peek into the history of sage. Like many natural ingredients marketed these days, it was the historical use of botanicals by indigenous people that made modern scientists look into "what makes them tick." The same can be said about Sage. The genus *Salvia*, commonly known as sage, is the largest member of the *Lamiaceae* or mint family containing over 900 species throughout the world.ⁱ Many species of *Salvia*, including *Salvia officinalis* (common sage), are native to the Mediterranean region and some of the *Salvia* species have been used worldwide as flavouring spices as well as traditional herbal medicine.

Dating back to over 4000 years, Ancient Egyptians believed it helped with infertility.ⁱⁱ Sage has a longstanding reputation as traditional herbal remedies used by ancient Greek and Roman, Ayurvedic, Native American and Chinese folk medicines. Sage possesses well-known carminative, antispasmodic, antiseptic, astringent, and antihidrotic properties.ⁱⁱⁱ For centuries, the botanical has been used for conditions such as pain relief, oxidative stress, inflammation, hot flashes, digestive problems, gas, bloating, elevated blood fats, **cognitive performance**, and **memory**.^{iv}



Of the last of these historical benefits, the impact on cognitive performance primarily in the areas of **concentration** and **focus** appears to be the leading area of "Focus" in the realm of the scientific community. Why? Perhaps because of the sudden rise in consumer interest in dealing with family struggles with dementia or maybe the demand to stay sharp or focused at work and school.

This is where Sibelius™: Sage shines!

Inside the Numbers: Who is Impacted by Decreased Focus and Concentration?

Before digging into the clinical applications of Sibelius™: Sage, it is essential to look inside the numbers with regards to consumer wants and needs with regards to **brain health** and cognitive or **focus help**.

- One in nine Americans aged 45 and older say they are experiencing thinking declines.
- Among those aged 45 and older who were living alone, **14%** said they were suffering from declines in mental function. ^v
- Attention spans have shrunk by **50%** over the past decade.

Vitafoods Insider has expanded the reach of cognitive health products to ALL demographics. In a recent publication, it stated, "Cognitive health products are not limited to aging consumers looking to prevent cognitive decline; consumers across the demographics are increasingly interested in natural ingredients for brain health. Interest in **supplements for cognition** rose by **93%** from 2017 in the United States and growth is only expected to continue as aging consumers, in particular, prioritize their health."^{vi}



If those numbers don't speak to the importance of focus and concentration, then this study on concentration drives home the importance of improved concentration in youth. The study was conducted with over 1,000 children in New Zealand by psychology and neuroscience professors at Duke University. The study tested children born in 1972 and 1973 regularly for eight years, measuring their ability to pay attention and to ignore distractions. Then, the researchers tracked those same children down at the age of 32 to see how well they fared in life. The **ability to concentrate** was the strongest **predictor of success**. The ability to concentrate was considered **more important than IQ** or the socio-economic status of the family you grew up in for determining career success, financial success, and health.^{vii}

Sage: Memory, Focus and More

Generally speaking, researchers have been primarily researching two types of sage, *S. officinalis*, and *lavandulaefolia*. In the paper published in CNS Neuroscience & Therapeutics titled "Systematic Review of Clinical Trials Assessing Pharmacological Properties of Salvia Species on Memory, Cognitive Impairment and Alzheimer's Disease", researchers summarized published clinical trials assessing the effectiveness and safety of both *S. officinalis* and *S. lavandulaefolia* in the enhancement of cognitive performance in healthy subjects and neurodegenerative illnesses. Six of the studies reviewed involved healthy individuals and their effects on cognitive performance. The results showed that they exert beneficial effects by enhancing cognitive performance. This same review though pointed out that there were methodological issues, differences in herbal preparations (extracts, oils, use of raw material) and lack of details on herbal products used.ⁱⁱⁱ **This last point regarding the preparations is a key component when we discuss Sibelius™ Sage later in this paper.**

Sibelius™: Sage Stands Above the Rest!

Not all Sage Products are the Same.

As the researchers mentioned above, the differences in herbal preparations i.e., extracts, oils, use of raw material played a role in the studies outcomes. This is one of the areas in which **Sibelius™: Sage** stands out. Sibelius™: Sage is a unique and specific extract of the sage species *Salvia officinalis*. The unique and specific Sibelius™: Sage extract is derived from plants grown in Hampshire in the UK. The herbal extract has a unique profile when analysed by NMR spectroscopy and



pattern recognition. Different varieties of *Salvia officinalis* grown under the same conditions, and even the same variety of *Salvia officinalis* grown at the same location but harvested at a different time do not present the same under analysis.

Sibelius™: Sage: Unique and Specific with regards to Extraction, Growing Region & Harvesting

Sibelius™ Limited, the parent company who produces Sibelius™: Sage has developed this product using its patented Chronoscreen™ platform. Chronoscreen™ measures the effect natural ingredients have on the life span extension of whole organisms exposed to a treatment. Chronoscreen™ enables Sibelius™ to research, track, and measure how nutraceuticals may affect human health. The Chronoscreen™ platform can accurately be applied for biological testing of a broad range of natural ingredients. It identifies and confirms the evidence of their potential health benefits, from which can then determine the pathways essential for the ingredient's activity. This helps to address consumer demands and concerns as well as regulatory and policy issues.

Chronoscreen™ Identifies and Confirms the Evidence of Potential Health Benefits

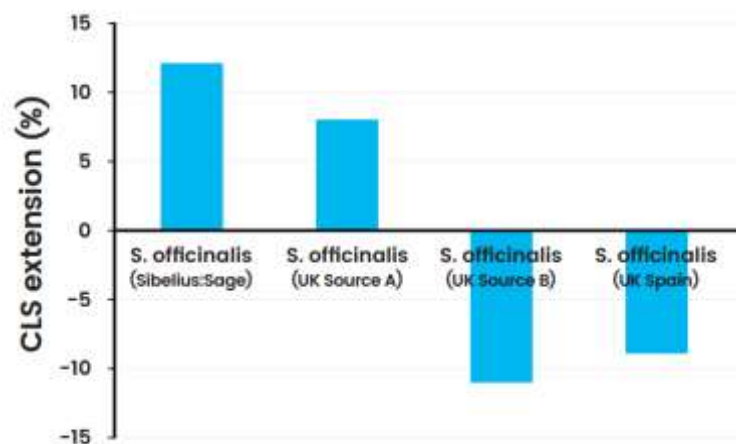


Figure 1: Chronological Life Extension (CLS Extension) is measured using Sibelius' patented Chronoscreen™ technology and allows for the identification of biologically active natural products in the model organism *C. elegans*. Sibelius™: Sage shows increases in lifespan of around 10-15%.

In short, Sibelius™: Sage is a scientifically, evidence-based and clinically-validated sage extract standardized to 2.5% rosmarinic acid. It is *specifically designed to enhance **secondary memory, alertness, and to help maintain cognitive health.*** It is derived from a proprietary non-GMO cultivar of sage grown in the UK.

Sibelius™: Sage and Modern Applications

One of the essential questions needing to be addressed is the potential mechanism of action of Sibelius™: Sage. To date, how sage works in the body has not been fully uncovered primarily due to the potential for several mechanisms of action. Researchers have identified at least **six areas which influence physiological pathways**; amyloid-β peptide, cholinergic activity, neurotrophic, anti-inflammatory, anxiolytic/anti-depressive, and antioxidant.^{viii} One of the primary areas of focus is its impact on neurotransmitters. Sage extracts have been shown **to inhibit the action of acetylcholinesterase**; the enzyme that breaks down the neurotransmitter acetylcholine. Acetylcholine is found in the brain in areas associated with attention, memory, and motivation.

As mentioned above, sage has been shown to possess antioxidant, anti-inflammatory, and estrogenic properties. Hormonal imbalance, inflammation, and oxidative stress may all contribute to decreased cognitive function.

The Proof is in the Science

Sibelius™: Sage has clinical studies substantiating its benefits. Current research conducted with **Sibelius™: Sage** on 20 healthy volunteers (65-90-year-old) taking either 167mg or 333mg showed a significant improvement in cognitive performance within 1-hour of treatment. This included the improvement of **secondary memory, recognition, recall, accuracy and speed of attention.**^{ix}

Additionally, a study done with 30 healthy 20-29-year-old adults was done using either a placebo, 300mg or 600mg of *S. officinalis*. The researchers noticed improved ratings of mood (in the absence of stressor), increased alertness and calmness after just a single dose^x

Finally, the most recent study that is so new that is waiting for publication found some amazing results as well using **Sibelius™: Sage** extract. The study was a randomized, double-blind, and placebo-controlled study with a total of 72-participants ages 12-25. Participants took either placebo, 150mg, or 300mg single dose. The results will be published soon.

Face it; there aren't many ingredients in the natural botanical extract market that can provide documented effects in a short period of time. With consumers becoming savvy with regards to science and the desire to "feel" the result, **Sibelius™: Sage** is an excellent addition to any product line either as a "stand-alone" ingredient or when combined with other ingredients that offer either **nutritional brain health benefits** such as choline and serine or with other botanicals which possess differing mechanisms of action.

Sibelius™: Sage

Fast Acting

Patent Pending

Proprietary

Non-GMO

GRAS

Standardized

Chronoscreen™

Sustainably sourced

Traceable manufacturing

Safe

What more could you want from your Cognitive Health and Focus Ingredients?



David Foreman is a pharmacist, author and media personality known internationally as, “**The Herbal Pharmacist®**.” His background in both pharmacy and natural medicine puts David in an elite class of health experts who can teach integrative medicine practices. David's focus is to help all to achieve the health and vitality they seek by teaching his 4-Pillars of Health: Diet, Exercise, Spirituality and Supplements. David is also highly sought for his abilities as a science engineer by helping companies connect their science to their sales and marketing teams. David is a graduate of the University of South Carolina College of Pharmacy, currently serves on Organic & Natural Health Association's Scientific Advisory Board and is author of, “4 Pillars of Health: Heart Disease.”

References

ⁱ Hamidpour M, Hamidpour R, Hamidpour S, Shahlari M. Chemistry, Pharmacology, and Medicinal Property of Sage (Salvia) to Prevent and Cure Illnesses such as Obesity, Diabetes, Depression, Dementia, Lupus, Autism, Heart Disease, and Cancer. *J Tradit Complement Med.* 2014;4(2):82-8

ⁱⁱ Salvia Kornati website, <https://salvia.bio/sage-history/> Accessed 9/3/2019

ⁱⁱⁱ Miroddi M, Navarra M, Quanttropani M, et al., Systematic Review of Clinical Trials Assessing Pharmacological Properties of Salvia Species on Memory, Cognitive Impairment and Alzheimer's Disease, *CNS Neuroscience & Therapeutics*, 2014 June:20(6): 485-495 doi: [10.1111/cns.12270](https://doi.org/10.1111/cns.12270)

^{iv} Natural Medicines Website: <https://naturalmedicines.therapeuticresearch.com/databases/food-herbs-supplements/professional.aspx?productid=504> Last reviewed 8/14/2019, Accessed September 4, 2019

^v HealthDay Website “1 in 9 Adults over 45 reports memory problems” <https://consumer.healthday.com/cognitive-health-information-26/memory-problems-health-news-468/1-in-9-u-s-adults-over-45-reports-memory-problems-735750.html> Last Updated July 13, 2018, Accessed July 9, 2019

^{vi} Vitafoods Insights website, <https://www.vitafoodsinsights.com/media-assets/cognitive-health-feeding-mind> August 14, 2018, Accessed September 4, 2019

^{vii} Scientific American Mind website, *Kids' Self-Control Is Crucial for Their Future Success*, July 1, 2011, Accessed September 4, 2019

^{viii} Lopresti, Adrian L. “Salvia (Sage): A Review of its Potential Cognitive-Enhancing and Protective Effects.” *Drugs in R&D* vol. 17,1 (2017): 53-64. doi:10.1007/s40268-016-0157-5

^{ix} Scholey, Andrew B., et al. “An Extract of Salvia (Sage) with Anticholinesterase Properties Improves Memory and Attention in Healthy Older Volunteers.” *Psychopharmacology*, vol. 198, no. 1, 2008, pp. 127–139., doi:10.1007/s00213-008-1101-3.

^x Kennedy DO et al., Effects of cholinesterase inhibiting sage (Salvia officinalis) on mood, anxiety, and performance on a psychological stressor battery. *Neuropsychopharmacology* 2006 Apr;31(4):845-52.