

Zylaria™

The Route to Restorative, Restful Sleep

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Sleep Quality & Consequences on Wellness

Hans Christian's *Princess and the Pea* story sounds ludicrous at first read; how is it possible that the princess can feel a single pea under 20 mattresses and 20 foam beddings? But for anyone with sleep difficulties, something as minor as a pea can have major consequences for their sleep. The princess's struggles and complaints sound less far-fetched now when sleep has eluded people worldwide.

Sleep health has been neglected in the rapidly evolving modern world, and in its neglect, more people find themselves hopelessly fatigued when night approaches. In the United States alone, 50-70 million adults suffer from a sleep disorder, and about $\frac{1}{3}$ of Americans average less than 7 hours of sleep a night.¹

Beyond the dreadful nightmare that is sleep deprivation, short sleep is linked to an increased risk of heart disease, high blood pressure, stroke, diabetes, and kidney disease.¹ In terms of mental health, poor sleep is linked with mood irregularities, depression, and anxiety², all of which in turn negatively impact sleep habits. At a time when health is a global bedrock, recognizing the need for good sleep habits is the first step for supporting healthy brain functions to reinforce physical and mental health.

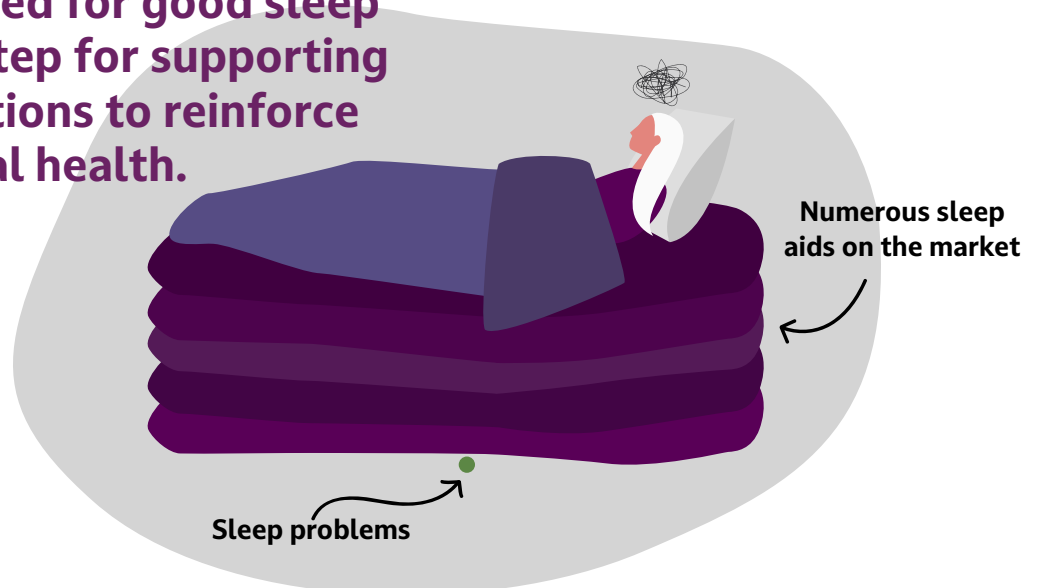
During the pandemic's peak, many consumers took the time to improve their sleep health—either getting more of it or improving its quality—but quickly ran into roadblocks. The causes of impaired sleep differ for each individual, hence why finding the right remedy can be difficult. Whether the cause is imperceptible like the princess and the pea, or easily detectable, that shared struggle for sleep led to worldwide demand for more and better sleep aids.

Because more consumers understand that optimized sleep equals better overall health, the global sleeping aids market is estimated to increase from USD 64.29 Billion to USD 101.7 Billion with a 6.7% CAGR.⁴ In 2020 alone, stress and sleep supplements enjoyed a surge from 12% to 18% sales growth, with continuous expansion.³

Moreover, consumers are especially conscious about the source of their health supplements, further expanding the market for herbal supplements and natural remedies. The boom in the sleep aids market should be a sign that consumers are properly addressing their sleep struggles, and yet studies still report increased stress and poor sleep quality.

Why does the world continue to share the princess's sentiments on disruptive sleep? Let's take a look at the road map to create a new route to promote sleep.

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In the past, consumers sought OTC and prescription medications for their insomnia and other related sleep troubles, but about 80% experienced chemical “hangovers” and residual effects like oversleeping and grogginess.⁵ These severe complications paved the way for melatonin to dominate the sleep aids market.

As a natural supplement, melatonin was well received for its regulation of circadian rhythms but comes with its unique side effects like daytime sleepiness, tiredness, dizziness, headaches, or irritability.⁶ Despite its overwhelming marketability, supplementing with melatonin is not an all-in-one solution for sleep, leaving many consumers struggling to stay asleep and feel rested in the morning.

Beyond disrupted circadian rhythms, consumers have additional options of natural herbal remedies that aim to promote calm and relaxation such as chamomile, passionflower, hops, and lavender, to name a few. Proper bedding like foam mattresses/pillows and products that provide the perfect sleep environment like black-out curtains have also seen incredible market growth. Some desperate consumers even invest in sleep tracking apps, hoping to pinpoint the cause of their poor sleep.

What Should Next-Generation Sleep Aids Focus On?

Introducing a natural, plant-based source of GABA. Gamma-aminobutyric acid (GABA) is an important inhibitory neurotransmitter well known to be linked to sleep. Essentially, it lowers the brain’s overall excitatory levels and induces relaxation by binding to its receptors in the central nervous system. Deficient GABA levels mean an overexcited CNS, leading to numerous sleep challenges.

Xylaria nigripes is a unique species of fungi that naturally contains high levels of

- Glutamic acid and γ-aminobutyric acid (GABA)
- Essential amino acids
- Vitamins
- Minerals
- Trace elements
- Decarboxylase
- Glycoproteins

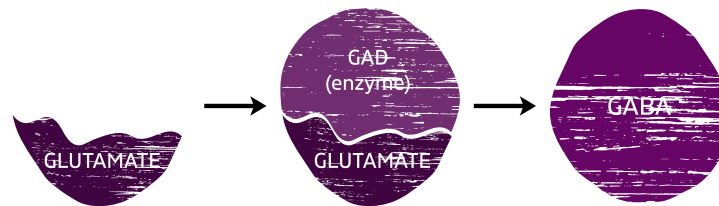


Unfortunately, it’s extremely rare and hard to find because it prefers to grow several feet deep underground inside the nests of termite species *Odontotermes formosanus*.

Zylaria™ is NuLiv’s proprietary *Xylaria nigripes* extract produced by a patented fermentation technology that preserves the essential nutrients identical to those found in wild *Xylaria nigripes*. Zylaria™ is a 100% natural, plant-based, and most importantly non-habit-forming ingredient intended to improve sleep quality, promote relaxation and elevate mood.

How Will Zylaria™ Free Consumers From the Proverbial Pea?

GABA shines in the limelight as the major inhibitory neurotransmitter, but what's often overlooked is glutamic acid and how it works in opposition to GABA to excite the nervous system. Even though these two neurotransmitters have opposing qualities, within the body, they work together to create a balanced feedback system that is critically tied to sleep.



The human body requires glutamic acid as a precursor to convert to GABA through the catalysis of an enzyme called glutamic acid decarboxylase (GAD). This means that consumers who still struggle with sleep after several sleep aids may have a GABA/Glu imbalance. Zylaria™ is the ingredient that can help restore this balance to promote sleep and general wellbeing.*

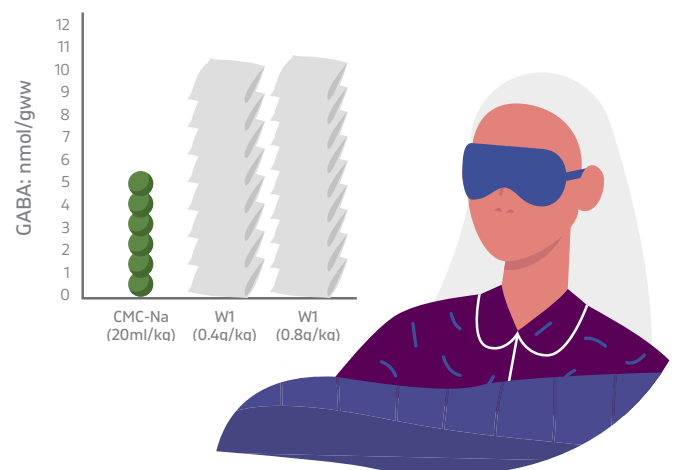
Similar to how wild *Xylaria nigripes* provide nutrients several feet underground in the termites' combs, Zylaria™ aims to target GABA/Glu levels deep within the brain. Ingredients that target an uptake of only GABA are feather beds; they work well occasionally but they won't be able to tackle the root problem.

Pharmacological studies on Zylaria™ prove its ability to increase the binding affinity of GABA receptors in the brain and increase GABA, Glu, and GAD levels.⁷

Higher levels of both neurotransmitters and the GAD enzyme create the perfect formula to raise GABA binding affinity through the body's natural regulatory processes.

The sedative effect that GABA has on the central nervous system is fairly straightforward. Clinical data with Zylaria™ shows a significant decrease in brain wave activity following treatment, translating to a noticeable improvement in sleep quality.

Furthermore, the continuous treatment decreased sleep onset latency and induced peaceful sleep in tested subjects. Human studies reported 90% of participants administered felt their sleep quality was improved, much improved, or symptom-free.*⁷



Concentration of ³H-GABA for control group was 5.33±0.99 nmol/gw.w. Treatment with *Xylaria nigripes* at a dosage of 0.4 g/kg and 0.8 g/kg significantly increased ³H-GABA concentration absorbed to 10.29±1.00 nmol/gw.w and 10.47±1.31 nmol/gw.w, respectively.

Zylaria™'s unique formulation may be the key to removing the metaphorical pea deep within and has promising applications in lulling away insomnia, promoting deep sleep, and restoring sleep quality for consumers.*

Ideal applications of Zylaria™ include but are not limited to:



Sleep formulas



Anxiety & Stress Formulas



General Wellness Formulas

With its bountiful essential nutrients and amino acids, Zylaria™ is a simple, perfect addition to current sleep aid blends or the final puzzle piece to an exciting new formula.

As a powder, this ingredient can be easily incorporated in all types of products and supplements such as capsules, powders, tablets, and RTD mixes.



Ensure your sleep aid is not just another mattress or featherdown bed piled on top of an insistent, problematic pea with Zylaria™.

References

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3. Supplement Business Report 2020, *Nutrition Business Journal*
4. Sleeping Aids Market by Offering (Mattresses and Pillows, Medication, Sleep Laboratory Services and Sleep Apnea Devices) and by Sleep Disorder (Insomnia, Sleep Apnea, Sleep Walking, Restless Legs Syndrome (RLS), Narcolepsy and Other Sleep Disorders): Global Industry Perspective, Comprehensive Analysis, and Forecast, 2020 – 2026.
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6. Besag, F.M.C., Vasey, M.J., Lao, K.S.J. et al. Adverse Events Associated with Melatonin for the Treatment of Primary or Secondary Sleep Disorders: A Systematic Review. *CNS Drugs* 33, 1167–1186 (2019). <https://pubmed.ncbi.nlm.nih.gov/31722088/>
7. Zylaria™ Product Dossier

Next Steps Have questions? Need help?

Get in touch with our team and let us know that you received this guide.
We look forward to connecting with you!
[Contact Us](#) or Call: (909) 594-3188

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**These statements have not been evaluated by the Food and Drug Administration.
This product is not intended to diagnose, treat, cure, or prevent any disease.*