

RELISSA™

Relissa™: Sleep well and live better, with Indena's Melissa phytosome®, a melatonin-free botanical solution

Sleep is a critical part of our overall health; moreover, the quality and quantity of our sleep are deeply connected to our mental and emotional well-being. During sleep, the body and mind go through various restorative processes, including repairing and rejuvenating cells, consolidating memories, processing emotions, and cleansing toxins from the brain. Good sleep can help us regulate our emotions better as well as improve cognitive skills like learning and attention¹.

Many factors could directly impact anybody's sleeping habits and mood: the perception of risk and instability due to economic, social, health and

evidence that the demand for natural ingredients that can help in balancing sleep and consequently mood and general health is increasing.

Melissa officinalis is a member of the mint family. It has been known for centuries and used for various applications thanks to its calming

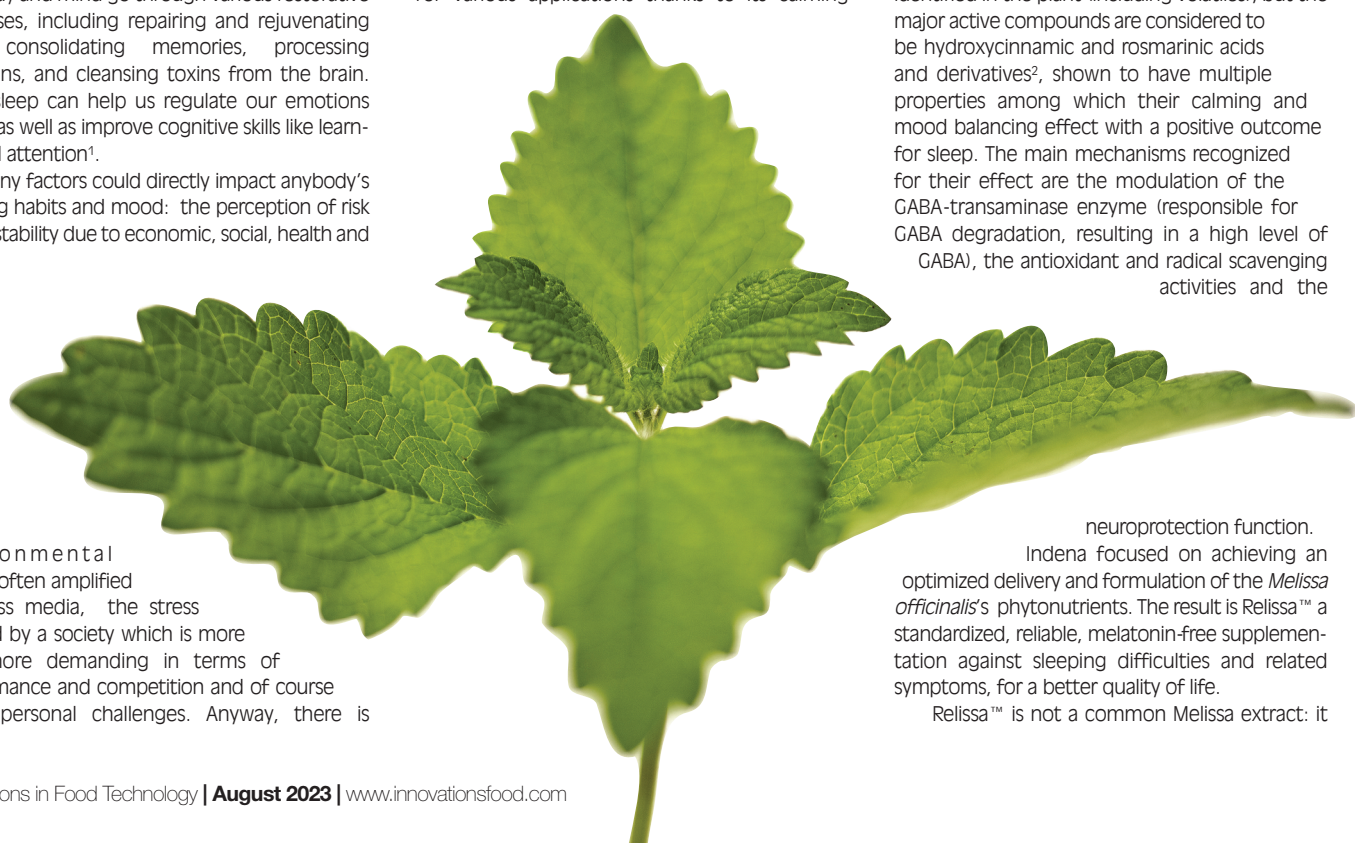
and "anti-stress" action, promoting sleep and relaxation. Other investigated effects of the botanical include antioxidant and spasmolytic activity, neuroprotection, and anxiolytic action²⁻⁵.

More than 50 compounds have been identified in the plant (including volatiles), but the major active compounds are considered to be hydroxycinnamic and rosmarinic acids and derivatives², shown to have multiple properties among which their calming and mood balancing effect with a positive outcome for sleep. The main mechanisms recognized for their effect are the modulation of the GABA-transaminase enzyme (responsible for GABA degradation, resulting in a high level of GABA), the antioxidant and radical scavenging activities and the

environmental issues, often amplified by mass media, the stress created by a society which is more and more demanding in terms of performance and competition and of course other personal challenges. Anyway, there is

neuroprotection function. Indena focused on achieving an optimized delivery and formulation of the *Melissa officinalis*'s phytonutrients. The result is Relissa™ a standardized, reliable, melatonin-free supplementation against sleeping difficulties and related symptoms, for a better quality of life.

Relissa™ is not a common Melissa extract: it





stands out for its content of hydroxycinnamic and rosmarinic acid, quantified and standardized for better and effective results. But, moreover, it is based on the formulation of *Melissa officinalis* with phospholipids, i.e. Melissa Phytosome®, to optimize dispersion in gastrointestinal fluids and biological performance.

Phytosome® is Indena's technology to optimize the delivery of botanical extracts and compounds creating lecithin-based solid dispersions that allows enhanced ingredient's distribution in gastrointestinal fluids and bioaccessibility profile.

The Phytosome® technology platform grants the phytonutrients contained in *Melissa officinalis* offer better biological performances, while still fully respecting their natural profile. Leveraging the same technology, Relissa™ (Melissa Phytosome®) can also be provided in the form of gummies, an increasingly popular solution on the supplement market.

Recent clinical evidence shows that Relissa™ offers a clear support to sleep, mood, stress, emotional health and quality of life with significant results based on

validated self-assessed questionnaires given to 100 subjects⁶.

In addition, a specific potential interaction was closely analyzed to dispel any concern within the context of recent increased interest in how the microbiome may influence our wellbeing, especially in the realm of mood and sleep. *Lactobacillus rhamnosus* – a type of bacteria that is able to colonize the human gastrointestinal tract – has been proven able to improve night rest and rapid eye movement (REM) sleep⁷, thanks to a positive influence over short-chain fatty acids (SCFAs) controlling the expression of genes responsible for sleep-wake rhythms⁸. Relissa™ has shown no negative interactions with *Lactobacillus rhamnosus*, thus safeguarding

its beneficial effect.

Another value of Indena's Relissa™ is sustainability. The *Melissa officinalis* extracts chosen for Relissa™ not only comply with Indena's high standards but are also part of a sustainable journey that keeps a careful eye on carbon footprint, renewable energy and supply chains. In fact, *Melissa officinalis* is cultivated by organic farms and suppliers based in Europe, which can guarantee high quality and environmental awareness at the same time. These elements are translated in a virtuous and eco-sustainable path, using driers powered by renewable energy, leveraging waste-heat from systems that run on biogases generated from the fermentation of agro-industrial by-products, and feeding back leftover biomasses into the growing phase, as a soil conditioner.

Relissa™ is the Indena solution for turning a good ingredient (*Melissa officinalis*) into a great ingredient. It is the new botanical ally, melatonin-free solution, for relaxation and peaceful sleep: proved by science and approved by Nature.

References:

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- 3 J., Appl. Bot. Food Qual 92 (2019): 327-335.
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- 5 ESCOP – *Melissa officinalis*. 5. WHO Monograph – *Folium Melissae*
- 6 Khan A. et al., Neuropharmacology 2023
- 7 Thompson R.S. et al., Front Behav Neurosci 2017
- 8 Dailly B. et al., Nat Rev Gastroenterol Hepatol 2019

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