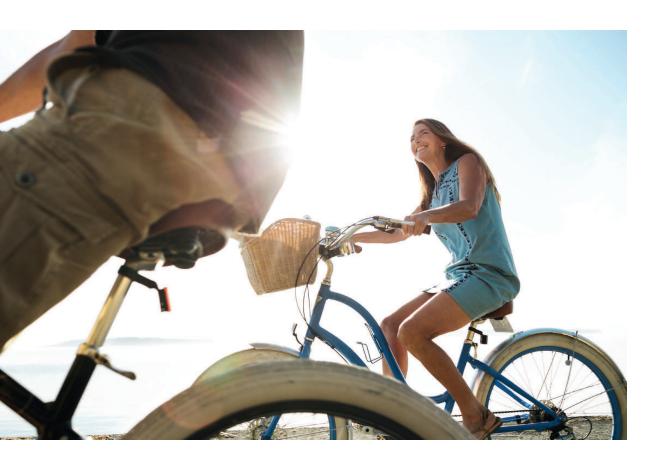




# portfolio.

clinically supported ingredients



#### **INDICATIONS**

ENERGY SUPPORT
COGNITIVE HEALTH
SPORTS NUTRITION
STRESS MANAGEMENT



highly concentrated microencapsulated magnesium source for products effective at restoring and maintaining a healthy level of this mineral in human cells and bones

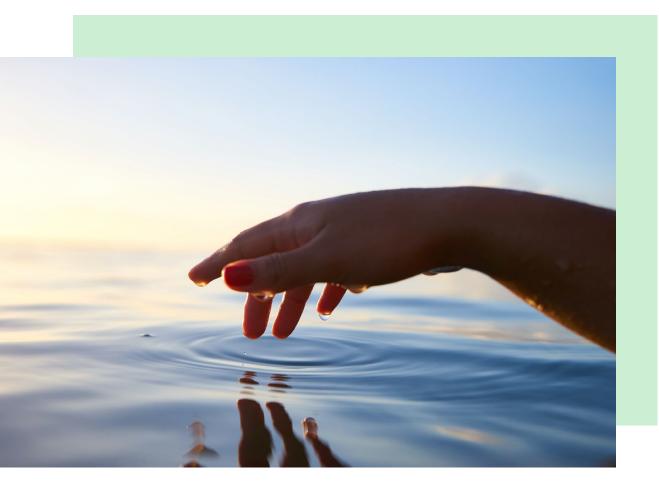
- supplierLipofoods
- product grade
   powder suitable for capsules, tablets,
   chewables and orosoluble powder products
- daily dose
   Recommended Daily Allowance (RDA) for magnesium in the European Union is 375 mg
- stability18 months shelf life
- certificates
  Halal, Kosher, Vegetarian, Vegan

- highly concentrated magnesium (30%)
- microencapsulation technology provides improved flowability and compressibility
- in vitro results show relaxation effect on the nervous transmission inhibits release of neurotransmitter noradrenaline
- improves muscular function thanks to relaxation the muscle relaxes more quickly

### mechanisms of action:

### magnesium contributes to:

- reduction of tiredness and fatigue
- electrolyte balance
- normal functioning of the nervous system and psychological function
- normal muscle function and normal energyyielding metabolism
- maintenance of normal bones and teeth
- has a role in the process of cell division



INDICATIONS STRESS MANAGEMENT



### clinically studied standardized herbal extract from *Ocimum tenuiflorum*, developed to support stress management and mental well-being

- supplierNatural Remedies
- product grade
   powder suitable for capsules (strong taste)
- daily dose1200 mg
- stability24 months shelf life
- certificates
   Kosher, Halal, Vegan, non-GMO Project
   verified

- clinically tested stress management support
- effective in reducing forgetfulness, exhaustion and sleep problems
- sustainably cultivated, strong supply chain

### mechanisms of action:

- inhibits the release of stress hormone cortisol
- acts on receptors and enzymes involved in anxiety and stress pathways

### clinical study:

 Saxena et al., 2012: Efficacy of an extract of Ocimum tenuiflorum (OciBest) in the management of general stress: a double- blind, placebo-controlled study (alleviates stress symptoms like forgetfulness, exhaustion, sleep problems)

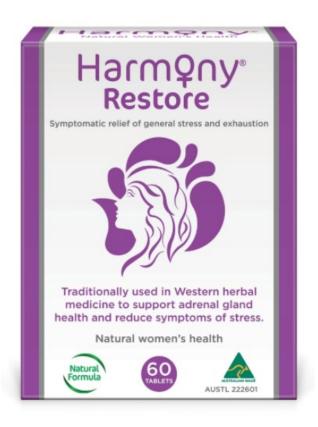
### pre-clinical studies:

- Kumar et al., 2007: Effect of Ocimum sanctum (Linn) extract on restraint stress induced behavioral deficits in male Wistar rats (memoryenhancing effects)
- Chandrasekaran et al., 2013: Evaluation of the mutagenic potential and acute oral toxicity of standardized extract of Ocimum sanctum (OciBest™)
- Raina et al., 2015: Evaluation of subacute toxicity of methanolic/aqueous preparation of aerial parts of O. sanctum in Wistar rats: Clinical, haematological, biochemical and histopathological studies
- Richard et al., 2016: Anti-stress activity of Ocimum sanctum: Possible effects on hypothalamic-pituitary-adrenal axis

## product examples









milk protein hydrolysate containing a bioactive decapeptide alpha-casozepine with relaxing properties, effective in situations of psychological stress

- supplierIngredia Nutritional
- product grade powder suitable for capsules, tablets, sachets, chewing gums and beverages
- daily dose150-600 mg
- stability48 months shelf life
- certificatesHalal, Kosher



INDICATIONS
SLEEP SUPPORT
STRESS MANAGEMENT

- natural, safe food grade ingredient from milk
- unique ingredient for stress, anxiety and sleep support
- no habituation, addiction or sedation
   compared to typical ingredients for this indication
- no toxic effect on the body even at high doses
- one of the most clinically supported ingredients
   > 10 clinical studies
- improves stress-related symptoms and sleep disturbances
- effective in situations of psychological stress
- suitable for long-term use

### mechanisms of action:

- due to structural similarities it binds to the benzodiazepine binding site of central GABAA receptors
- anxiolytic properties lowers anxiety
- reduces "stress hormone" cortisol release, manages blood pressure
- improves sleep efficiency

### clinical studies:

- Messaoudi et al., 2005: Effects of a tryptic hydrolysate from bovine milk αS1-casein on hemodynamic responses in healthy human volunteers facing successive mental and physical stress situations
- Kim et al., 2007: Efficacy of as1-casein hydrolysate on stress-related symptoms in women
- Saint-Hilaire et al., 2009: Effects of a bovine alpha S1casein tryptic hydrolysate (CTH) on sleep disorder in japanese general population
- Boutrou et al., 2013: Sequential release of milk proteinderived bioactive peptides in the jejunum in healthy humans
- Jacquet et al., 2014: Burnout: Evaluation of the efficacy and tolerability of TARGET 1 for professional fatigue syndrome (burnout) (finished product)

- Phing et al., 2019: Effects of alpha-S1-casein tryptic hydrolysate and L-theanine on sleep disorder and psychological components: a randomized, double-blind, placebo-controlled study (combination product)
- Kim et al., 2019: A double-blind, randomized, placebo-controlled crossover clinical study of the effects of alpha-s1 casein hydrolysate on sleep disturbance
- Thiagarajah et al., 2022: Effect of alpha-S1casein tryptic hydrolysate and L-theanine on poor sleep quality: a double blind, randomized placebo-controlled crossover trial (combination product)

+ 9 pre-clinical studies

# product examples









### sardine protein hydrolysate with anxiolytic-like effects for stress management

- supplierAbyss Ingredients
- product grade
   powder dry or liquid suitable for powder forms, sticks, tablets, capsules, softgels, (need to be shaken)
- daily dose1000-1400 mg
- stability24 months shelf life
- certificatesHalal



- high digestibility and bioavailability of peptides
- produced by environmentally friendly process of water extraction using a natural enzyme
- scientifically supported effects

### mechanisms of action:

- diazepam-like action but without adverse effects
- reduction of stress hormone secretion
- modulation of stress-responsive gene expression

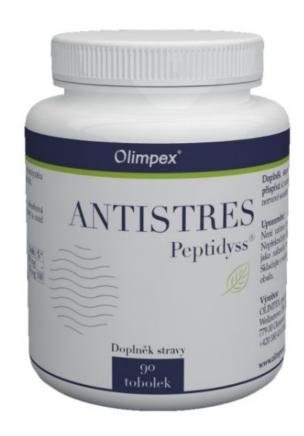
### clinical study:

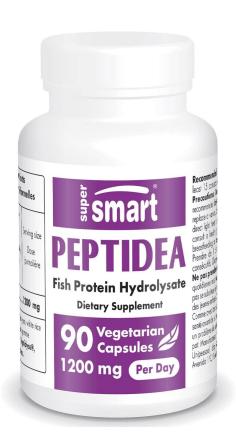
 2022: Novel clinical trial results: Peptidyss®, the anti-stress solution for a better sleep

### pre-clinical studies:

- Bernet et al., 2000: Diazepam-like effects of a fish protein hydrolysate (Gabolysat PC60) on stress responsiveness of the rat pituitaryadrenal system and sympathoadrenal activity
- Dinel et al., 2021: Supplementation with low molecular weight peptides from fish protein hydrolysate reduces acute mild stress-induced corticosterone secretion and modulates stress responsive gene expression in mice
- internal study: anxiolytic-like effects of the HVS hydrolysate, orally administered at the doses of 300, 600 and 1200 mg/kg, in the conditioned defensive burying model in the male wistar rat

## product examples







### Ocimum tenuiflorum (Holy Basil/Tulsi) Commonly used in Ayurveda

- supplierNatural Remedies
- product grade powder form suitable for tablet, capsules, shots, gummies, sachets
- daily dose250 mg
- certificate
   self-affirmed GRAS, Halal, Kosher



### INDICATIONS SLEEP SUPPORT

STRESS MANAGEMENT

### mechanisms of action:

- antioxidant and anti-inflammatory properties
- activating AMPK regulates glucose (energy) uptake
- activating SIRT regulates stressors associated with longevity and healthy aging
- vasoactive action increases blood flow, delivering more oxygen and nutrients

### advantages:

- produced using an innovative yeast fermentation
- >98% pure *trans*-resveratrol
- clinically supported
- free of contaminants (e.g., pesticides, emodin, PAHs, etc.)
- large cGMP production capacity

### benefits:

- **bone health -** support bone mineralization and formation, improves lumbar spine bone mineral density
- cognitive function improves cognitive performance by improving executive function and working memory capacity
- cardiovascular health supports blood circulation (blood flow velocity) and healthy blood pressure
- blood glucose support supports healthy blood glucose levels, improves insulin sensitivity



### hermes consilium

#### Hermes Consilium Ltd.