



hermes consilium



# portfolio.

clinically  
supported  
ingredients



# ZINCNOVA™

microcapsules

stable and tasteless source of zinc, with microencapsulated zinc oxide

- **supplier**  
Lipofoods
- **product grade**  
powder suitable for functional foods and dietary supplements
- **daily dose**  
Recommended Daily Allowance (RDA) for zinc in the European Union is 10 mg
- **stability**  
48 months shelf life

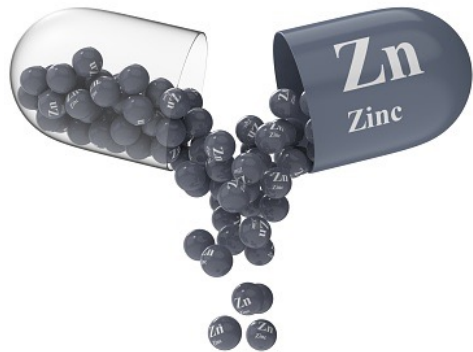


#### INDICATIONS

IMMUNE SUPPORT  
ANTI-OXIDATIVE SUPPORT  
EYE HEALTH  
FERTILITY  
SKIN HEALTH & BEAUTY

## advantages:

- **controlled interactions** with other components in the formulation
- **no grainy texture**
- **reduced metallic taste**
- **effective release** in the stomach



## mechanisms of action:

- **normal cognitive** function
- **normal fertility** and reproduction
- **maintenance** of normal bones, hair, nails, and skin
- **maintenance of normal testosterone levels** in the blood
- **maintenance of normal vision**
- **normal function** of the immune system
- **protection** of cells from oxidative stress
- **has a role** in the process of cell division



#### INDICATIONS

PRENATAL HEALTH  
FERTILITY  
CARDIOVASCULAR HEALTH  
MOOD & COGNITIVE HEALTH

**EXTRA**<sup>®</sup>  
*folate-S*

next-generation folate source - the calcium salt of (6S)-5-methyltetrahydrofolate, intended for use as an alternative to folic acid

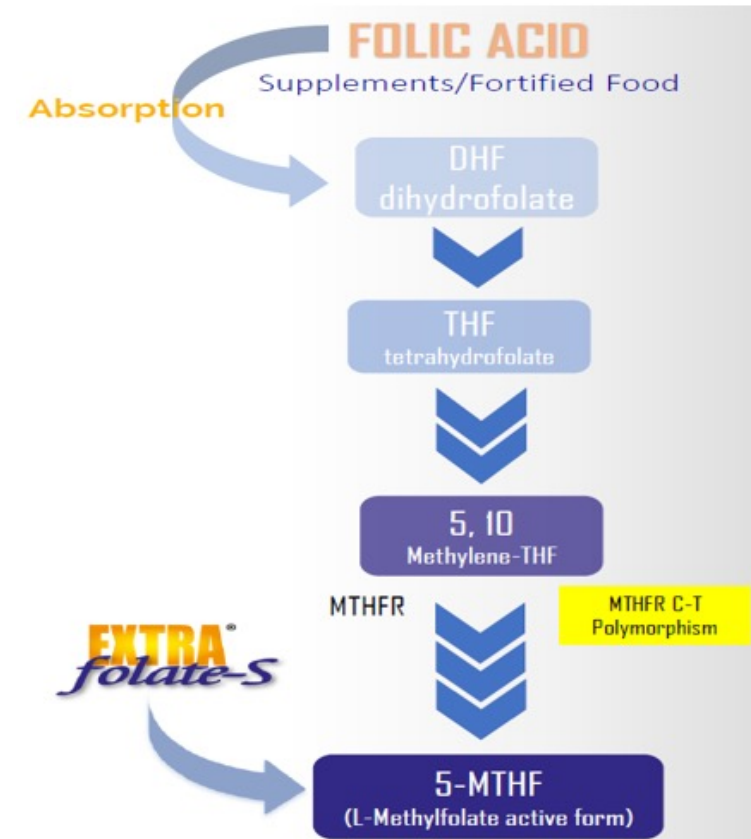
- **supplier**  
Gnosis by Lesaffre
- **product grade**  
powder
- **daily dose**  
200 mcg (100 % RDA), daily dose for pregnant women 400 mcg
- **stability**  
24 months in its closed under vacuum original packaging; storage conditions: 2 - 8 °C
- **certificates**  
lactose free, gluten free, non-GMO, Kosher, Halal

### advantages:

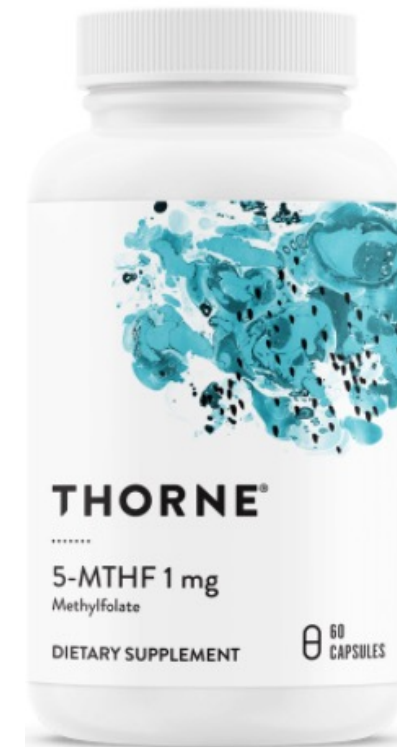
- **biologically active form**  
can enter the folate cycle directly, without further metabolism
- **does not result in unmetabolized folic acid (UMFA) which the body cannot use**
- **suitable for people with polymorphisms in MTHFR gene**  
up to 50% of the population in some countries

### mechanisms of action:

- **maternal tissue growth** during pregnancy
- **normal homocysteine metabolism**
- **normal psychological function**, amino acid synthesis and blood formation
- **normal function** of the immune system
- **reduction** of tiredness and fatigue
- **folate has a role** in the process of cell division



# product examples





next generation folate source - glucosamine salt of 6S-5-methyltetrahydrofolate (6S-5-MTHF) is an active folate the body can immediately use without conversion, avoiding the accumulation of unmetabolized folic acid (UMFA)

- **supplier**  
Gnosis by Lesaffre
- **product grade**  
powder
- **daily dose**  
200 mcg (100 % RDA)  
for pregnant women 400 mcg
- **stability**  
24 months when stored below 25°C
- **certificates**  
Kosher, Halal, Vegetarian, Vegan, approved Novel Food status in EU



#### INDICATIONS

PRENATAL HEALTH  
FERTILITY  
CARDIOVASCULAR HEALTH  
MOOD & COGNITIVE HEALTH

## advantages:

- **100 times improved solubility** due to glucosamine salt as a carrier
- **higher bioavailability**
- **biologically active form**  
can enter the folate cycle directly without prior metabolization
- **does not result in unmetabolized folic acid (umfa) which the body cannot use**
- **suitable for people with polymorphisms in MTHFR gene**  
up to 50% of the population in some countries
- **highly clinically supported**  
tested in couples with fertility problems

## awards:

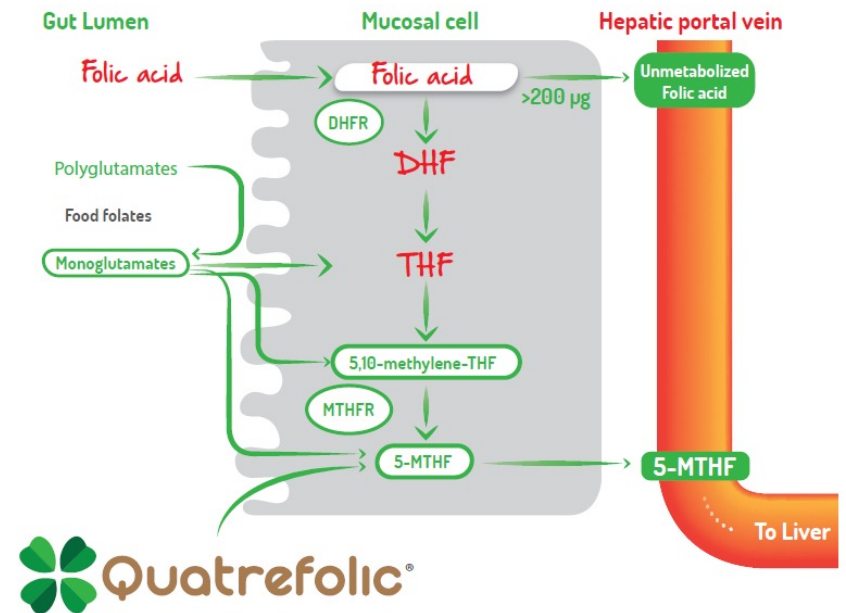
- **“Most Effective Strategic Product Development”** at Nutraceutical Business & Technology (NBT) Awards 2011 Finalist
- **“Best New Ingredient”** NaturAward 2012 Finalist
- **Finished product of the Year** in the Medical Food category - NutraIngredients Awards 2016 Winner



## mechanisms of action:

Folate is involved in many processes in the body:

- **maternal tissue growth** during pregnancy
- **normal homocysteine metabolism**
- **normal psychological function**, amino acid synthesis and blood formation
- **normal function** of the immune system
- **reduction** of tiredness and fatigue
- **has a role** in the process of cell division



Quatrefolic® passes the gastric barrier and is absorbed mainly in the small intestine by a carrier mediated mechanism. The carrier is not saturated and this enables Quatrefolic® to ensure a higher folate uptake (3,4).

## Clinical studies:

- **Miraglia et al., 2016: Enhanced oral bioavailability of a novel folate salt: comparison with folic acid and a calcium folate salt in a pharmacokinetic study in rats**
- **Internal clinical study: Crossover comparative bioavailability study of Quatrefolic® compared with the reference Metafolin® in healthy volunteers**
- **Mazza et al., 2016: Nutraceutical approaches to homocysteine lowering in hypertensive subjects at low cardiovascular risk: a multicenter, randomized clinical trial** (study on finished product)
- **Servy et al., 2018: MTHFR isoform carriers. 5-MTHF (5-methyl tetrahydrofolate) vs folic acid: a key to pregnancy outcome: a case series** (study in couples with fertility problems)
- **Clément et al., 2020: 5-Methyltetrahydrofolate reduces blood homocysteine level significantly in C677T methyltetrahydrofolate reductase single-nucleotide polymorphism carriers consulting for infertility** (couples with fertility problems)
- **Cirillo et al., 2021: 5-methyltetrahydrofolate and vitamin B12 supplementation is associated with clinical pregnancy and live birth in women undergoing assisted reproductive technology**



# product examples



# Turmacin™

water-soluble composition from turmeric (*Curcuma longa*), standardized to bioactive polysaccharides called 'turmerosaccharides' and without curcuminoids

- **supplier**  
Natural Remedies
- **product grade**  
powder suitable for shots, tablets, lozenges, spray, gummies, biscuits, capsules, candies, creams
- **daily dose**  
500-1000 mg
- **stability**  
24 months shelf life
- **certificates**  
non-GMO Project verified, clean label, Kosher, Halal



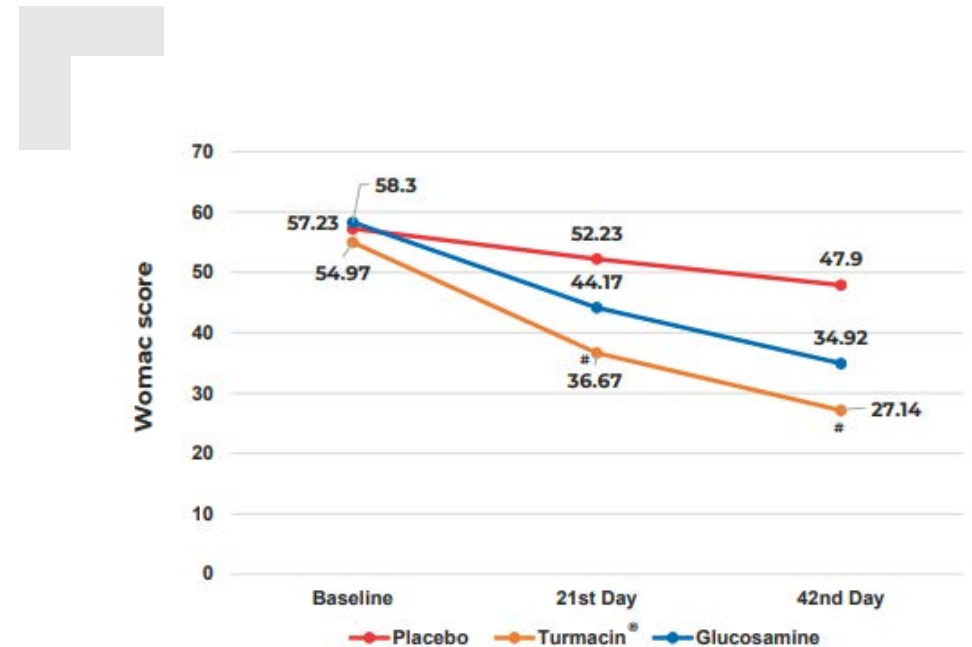
**INDICATIONS**  
JOINT HEALTH  
ANTI-INFLAMMATORY SUPPORT  
SPORTS NUTRITION

## advantages:

- **first turmeric ingredient** not based on curcuminoids
- **water-soluble**  
naturally bioavailable, no need to further improve absorption like with standard turmeric extracts
- **water-extracted turmeric product**  
no use of solvents
- **clinically researched and supported**  
5 clinical studies
- **powerful anti-inflammatory activity**  
reduces pain severity by 50% in 3 hours
- **significantly improves joint pain, stiffness and function** based on the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score (graph on the right) – compared to glucosamine and placebo
- **patented composition**

## mechanisms of action:

- **reduces production of inflammatory mediators**, reactive oxygen species (ROS) and collagen degradation markers
- **increases synthesis of collagen**, proteoglycans and anti-inflammatory cytokines
- **reduces cartilage damage** and ageing of cartilage cells



## clinical studies:

- **Madhu et al., 2012: Safety and efficacy of *Curcuma longa* extract in the treatment of painful knee osteoarthritis: a randomized placebo-controlled trial**  
naturally bioavailable, no need to further improve absorption like with standard turmeric extracts
- **Calderon-Perez et al., 2020: Acute effects of turmeric extracts on knee joint pain: a pilot, randomized controlled trial** (finished product)
- **Raj et al., 2020: Effect of Turmacin supplementation on joint discomfort and functional outcome among healthy participants – A randomized placebo-controlled trial**
- **Wang et al., 2020: Effectiveness of *Curcuma longa* extract for the treatment of symptoms and effusion-synovitis of knee osteoarthritis, A randomized trial**
- **Selvi et al., 2020: Safety of NR-INF-02, an extract of *Curcuma longa* containing turmerosaccharides, in healthy volunteers: a randomized, open-label clinical trial**

## pre-clinical studies:

- **Chandrasekaran et al., 2013: Safety evaluation of turmeric polysaccharide extract: assessment of mutagenicity and acute oral toxicity**
- **Chandrasekaran et al., 2013: Immune-stimulatory and anti-inflammatory activities of *Curcuma longa* extract and its polysaccharide fraction**
- **Illuri et al., 2015: Anti-inflammatory activity of polysaccharide fraction of *Curcuma longa* extract (NR-INF-02)**
- **Bethapudi et al., 2017: Bioactive turmerosaccharides from *Curcuma longa* extract (NR-INF-02): Potential ameliorating effect on osteoarthritis pain**



# product examples



**INDICATIONS**

COGNITIVE HEALTH  
MEMORY SUPPORT  
ADHD  
HEALTHY AGEING

clinically proven standardized extract of *Bacopa monnieri* (Brahmi), a plant from ayurvedic medicine, supporting memory and cognitive abilities in children and adults

- **supplier**  
Natural Remedies
- **product grade**  
powder suitable for beverages, candies, bakery products
- **daily dose**  
adults: 300-450 mg  
children: 225 mg
- **stability**  
24 months shelf life
- **certificates**  
GRAS, Halal, USDA Organic, non-GMO Project verified, India Organic, Kosher, Vegan

## advantages:

- **full spectrum extract** with 9 different bioactives
- **patented composition**
- **1st Bacopa extract** to receive GRAS status
- **5 clinical studies**  
2 efficacy studies in children and 2 in elderly + safety study
- **improves memory acquisition**, retention, attention and learning in the elderly
- **improves attention**, learning, impulsivity, restlessness and self-control in children ADHD
- **improves memory in children** requiring individual education program
- **sustainable** supply chain

## mechanisms of action:

- **neuroprotective**  
high antioxidant activity, protection from oxidative stress
- **neurotrophic**  
stimulating neuronal growth
- **supports neurotransmission**
- **nootropic**  
cognitive enhancement, improved learning and memory
- **increases dopamine levels** in the cortex
- **neuroprotective and antioxidant effects** on the hippocampus and the frontal cortex
- **action on specific brain regions** associated with attention, inhibition and neurotransmitters



## clinical studies:

- Pravina et al., 2007: Safety evaluation of BacoMind™ in healthy volunteers: A phase I study
- Barbhaiya et al., 2008: Efficacy and tolerability of BacoMind® on memory improvement in elderly participants – a double blind placebo-controlled study (improved attention and verbal memory)
- Usha et al., 2008: BacoMind®: A cognitive enhancer in children requiring individual education programme
- Morgan et al., 2010: Does *Bacopa monnieri* improve memory performance in older persons? Results of a randomized, placebo-controlled, double-blind trial (improved memory acquisition and retention)
- Dave et al., 2014: An open-label study to elucidate the effects of standardized *Bacopa monnieri* extract in the management of symptoms of attention-deficit hyperactivity disorder in children (alleviates symptoms of ADHD, well-tolerated)

## pre-clinical studies:

- Allan et al., 2007: Safety evaluation of a standardized phytochemical composition extracted from *Bacopa monnieri* in Sprague-Dawley rats
- Kasture et al., 2007: Nootropic activity of BacoMind™, an enriched phytochemical composition from *Bacopa monnieri*
- Dipanwita et al., 2008: In vitro safety evaluation and anticlastogenic effect of BacoMind™ on human lymphocytes (antioxidant, inhibits damage to chromosomes)

# product examples



# Proferrin

milk-derived protein, recognized for its role in immunity, digestive health and iron metabolism, suitable for all age groups

- **supplier**  
Ingredia Nutritional
- **product grade**  
powder perfectly adapted to both dietary supplements (tablets, capsules, softgels, gummies) and functional foods (bars, dairies, beverages)
- **daily dose**  
250-1000 mg
- **stability**  
24 months of shelf life
- **certificates**  
Halal



## INDICATIONS

IMMUNE SUPPORT  
GUT HEALTH  
ANTI-INFLAMMATORY SUPPORT  
ANTI- OXIDATIVE SUPPORT

## advantages:

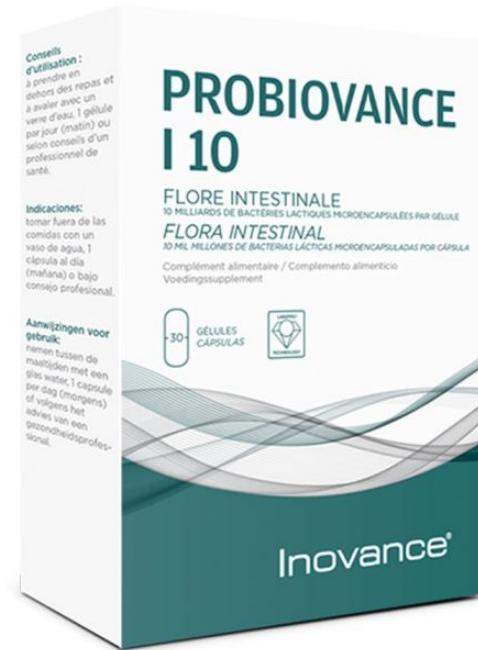
- **natural ingredient**, found also in human secretions like saliva, tears and breast milk
- **suitable for the most sensitive target groups** such as infants with few other available options for immune and gut support
- **the highest purity on the market (>95%)**
- **native lactoferrin** as found in fresh cow's milk
- **gentle processing to preserve structure** and biological activity
- **high bioactivity**, with iron binding ability
- **scientifically supported**

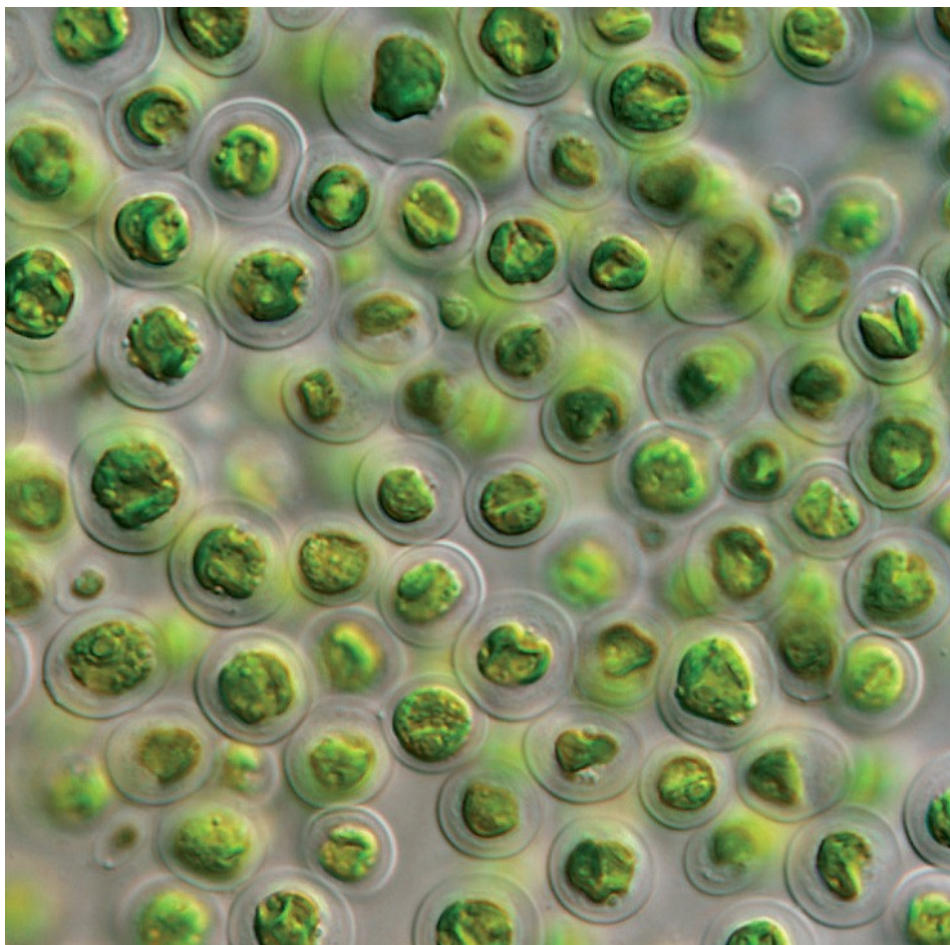
## mechanisms of action:

- **in vitro immuno-stimulatory effect**  
stimulates lymphocytes (immune cells) proliferation to improve adaptive immune response
- **in vitro anti-inflammatory effect**  
significantly reduces the release of a pro-inflammatory marker TNFalpha
- **in vitro action against viral infection**  
inhibition of virus entry into the cell and replication
- **high bioactivity**, with iron binding ability
- **reduces** pathogenic bacterial colonies



# product examples





#### INDICATIONS

ANTI-OXIDATIVE SUPPORT  
SPORTS NUTRITION  
SKIN HEALTH & AND BEAUTY  
HEALTHY AGEING  
FERTILITY



healthy functional marine ingredient from microalgae *Tetraselmis chuii*, rich in superoxide dismutase or SOD - one of the body's most powerful natural antioxidant enzymes

- **supplier**  
Fitoplancton Marino
- **product grade**  
powder form
- **daily dose**  
25 mg
- **stability**  
36 months shelf life
- **certificates**  
approved Novel Food status in EU, Vegan

## advantages:

- **much more than a typical SOD ingredient**  
contains other crucial antioxidative enzymes (glutathione peroxidase and catalase)
- **rich in naturally present nutrients from the cell**  
essential fatty acids, vitamins, minerals, amino acids, and pigments
- **clinically tested**
- **small dose allows flexibility in formulations**
- **versatile ingredient**  
suitable for many indications linked to oxidative stress
- **stable at high temperatures**  
no need for coating or microencapsulation
- **produced by sustainable patented technology**

## mechanisms of action:

- **antioxidant and anti-inflammatory action,**  
oxidative stress reduction
- **SOD provides the first shield** against oxidative stress and damage in the body
- **induces other primary antioxidant enzymes** ((glutathione peroxidase and catalase)
- **activates genes** for antioxidant protection in human cells
- **improves performance** during stress tests and decreases lipid peroxidation in athletes



### clinical study:

- **Bellido et al., 2017: Effects of *Tetraselmis chuii* intake on oxidative stress in athletes**

(improved performance, strong antioxidant effect: decreased lipid peroxidation, increased vitamin E levels in erythrocytes in plasma, increased O<sub>2</sub> consumption)

### pre-clinical studies:

- **Mantecon et al., 2019: Safety assessment of a lyophilized biomass of *Tetraselmis chuii* (TetraSOD®) in a 90 day feeding study**
- **Ramirez et al., 2020: TetraSOD® activates the antioxidant response pathway in human cells: An in vitro approach**



# product examples



innovative, patented composition of low molecular weight marine peptides & omega-3 to prevent cognitive decline

- **supplier**  
Abyss Ingredients
- **product grade**  
powder suitable for capsules
- **daily dose**  
2,35 g
- **stability**  
24 months shelf life
- **awards**  
innovation Awards from Business France  
during the last FI Europe





### advantages:

- **unique composition** from natural source (sardine hydrolysate)
- **produced from upcycled** local marine by-products
- **gentle, solvent-free**, eco-friendly proprietary process
- **scientifically supported**

### mechanisms of action:

- **significant improvement** of short-term and long-term memory
- **reduction** of age-related neuroinflammation
- **significant improvement** of inflammatory response compared to DHA
- **restores stress-hormone levels** and prevents the deleterious effects of age-related stress on memory



### pre-clinical studies:

- Chataigner et al., 2021: Fish hydrolysate supplementation containing n-3 long chain polyunsaturated fatty acids and peptides prevents LPS-induced neuroinflammation
- Chataigner et al., 2020: Dietary fish hydrolysate supplementation containing n-3 LC-PUFAs and peptides prevents short-term memory and stress response deficits in aged mice
- Chataigner et al., 2021: Dietary fish hydrolysate improves memory performance through microglial signature remodeling during aging

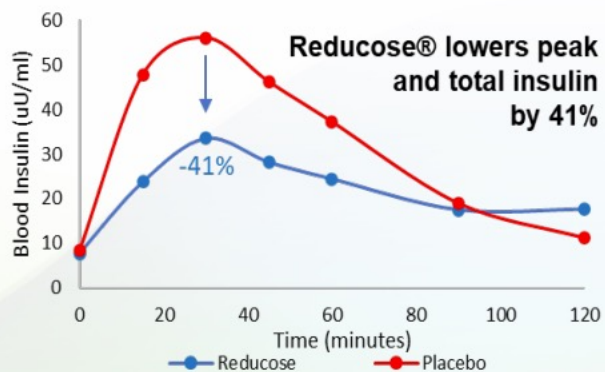
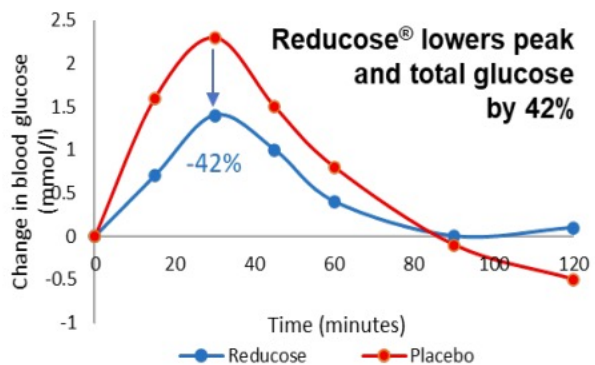


proprietary mulberry (*Morus alba*) leaf extract,  
turns fast sugars and other carbs into slow ones

- **supplier**  
Phynova
- **product grade**  
powder suitable for tablets, capsules, soft melts, foods (baked goods, bars, fortified rice, congee), beverages (RTD beverages...)
- **daily dose**  
200-250 mg
- **stability**  
30 months shelf life
- **certificates**  
Halal, Kosher, vegetarian, non-GMO



**INDICATIONS**  
BLOOD SUGAR MANAGEMENT

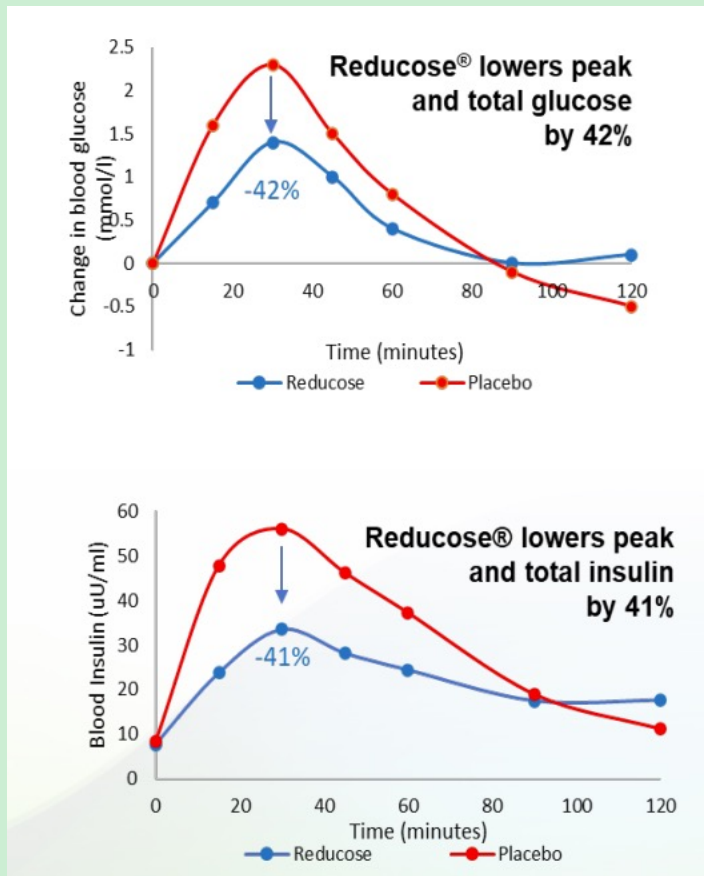


### advantages:

- **patented, unique & natural water extract** for healthy blood glucose with immediate effect
- **clinically proven ~ 40% reduction** in post-meal blood glucose and insulin response
- **unlike typical carb-blockers**, prevents absorption of a wide range of carbohydrates
- **reduced cravings** and feeling of hunger
- **undigested carbs feed the good bacteria**

### mechanisms of action:

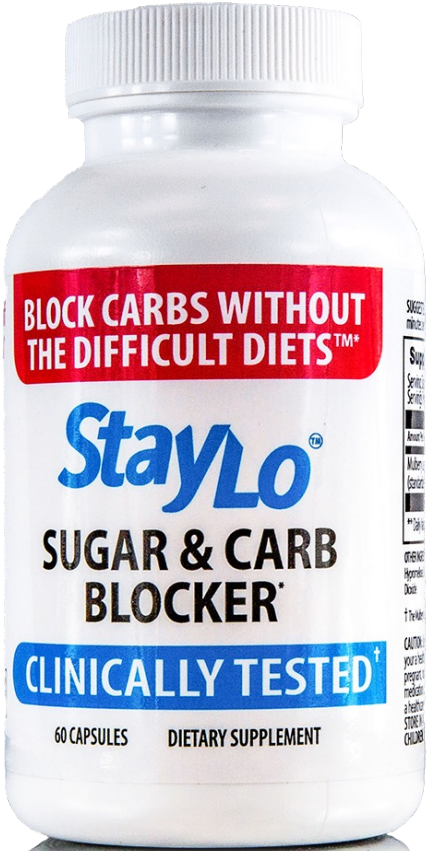
- **contains 1-deoxynojirimycin** (structurally similar to D-glucose) which inhibits intestinal  $\alpha$ -glucosidase enzymes, responsible for breakdown of carbohydrates before absorption
- **adding Reducose® to a meal lowers the glycemic index** of the food and lowers the postprandial blood glucose response, as it stops the carbohydrates from being digested
- **Reducose® is normally absorbed and excreted** unmetabolized after its action



## clinical studies:

- Lown et al., 2015: Mulberry extract to modulate blood glucose responses in normoglycaemic adults (MULBERRY): study protocol for a randomised controlled trial
  - Lown et al., 2017: Mulberry-extract improves glucose tolerance and decreases insulin concentrations in normoglycaemic adults: Results of a randomised double-blind placebo-controlled study
  - Wang et al., 2018: Mulberry leaf extract reduces the glycemic indexes of four common dietary carbohydrates (Co-consumption of Reducose with sucrose, maltose, or maltodextrin can reduce the GI values of these carbohydrates)
  - Thondre et al., 2021: Mulberry leaf extract improves glycaemic response and insulaemic response to sucrose in healthy subjects: results of a randomized, double blind, placebo-controlled study
- pre-clinical study:
- Liu et al., 2016: Prevention Effects and Possible Molecular Mechanism of Mulberry Leaf Extract and its Formulation on Rats with Insulin-Insensitivity

# product examples





hermes consilium

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