

# BifiZen<sup>®</sup>

A gut-brain axis innovative  
range from Probiotal  
for cognitive health destined  
to the whole family



Probiotics like nobody else



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# BifiZen<sup>®</sup>

Probiotic product • Gut brain

A probiotic blend to reduce depressive mood state, fatigue and anger and improve the quality of sleep and of mood state in healthy individuals (1)

*Lactobacillus fermentum* LF16 (DSM 26956)  
*Lactobacillus rhamnosus* LR06 (DSM 21981)  
*Lactobacillus plantarum* LP01 (LMG P-21021)  
*Bifidobacterium longum* 04 (DSM 23233)

## The gut-brain axis

It is now well established that our gut microbiota and brain communicate in a mutual signalling network through the nervous, endocrine and immune systems. This interconnection is known as the gut-brain axis and it is emerging as a key factor in the stress-related body responses (2-4).

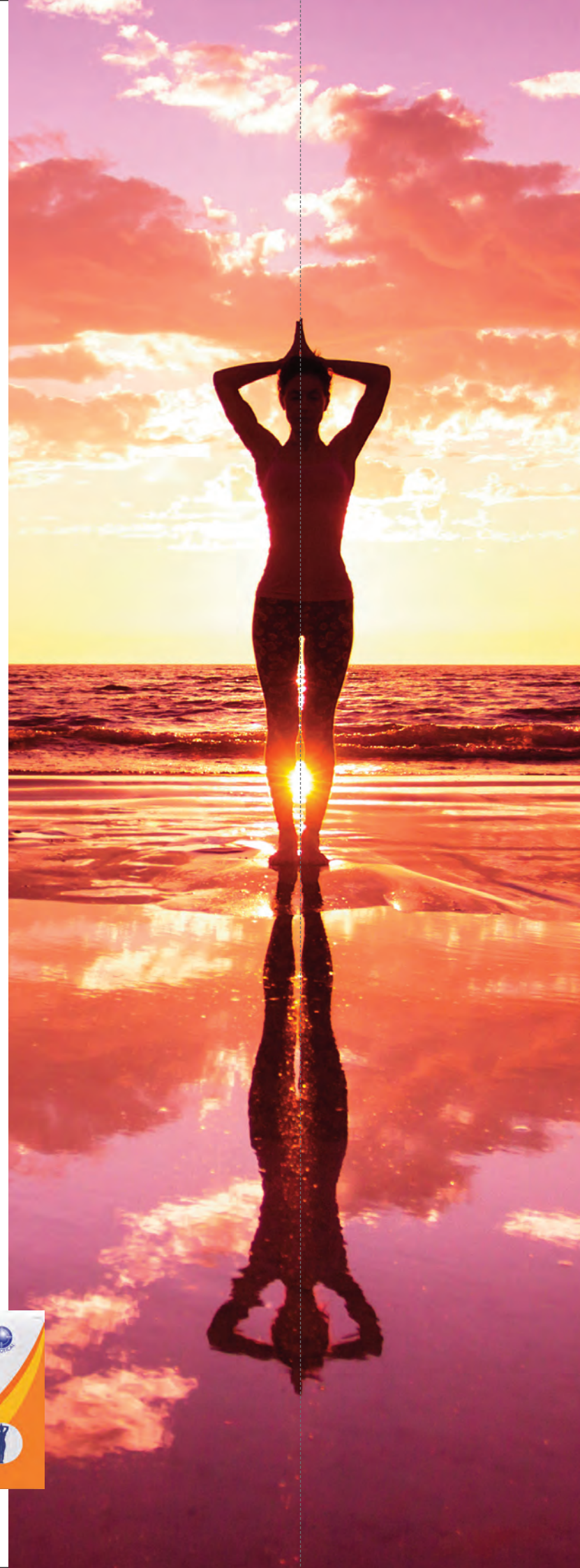
The intestinal microbiota can influence our mood and cognitive sphere by producing important metabolites that act as neurotransmitter precursors. By their impact on gut microbiota, intervention through probiotics intake demonstrated to improve and restore mood and cognitive functions.

## Functionality

BifiZen supplementation significantly improved mood, in a double-blind, placebo-controlled, randomized supplementation of 38 healthy subjects, according to a study by University of Verona, with a reduction in depressive mood state, anger and fatigue, as well as significant improvements in acceptance (which correlates with decreased depression sensitivity) and sleep quality. Interestingly, all these observed significant effects were maintained after 3 weeks of wash-out, showing prolonged benefits after cessation of probiotics intake (1).

## How to use

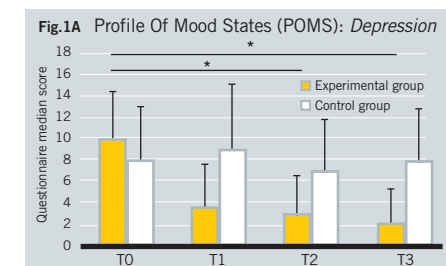
One dose per day for 6 weeks, available in different dosage forms including sachets, sticks or capsules.



## SCIENTIFIC REFERENCES

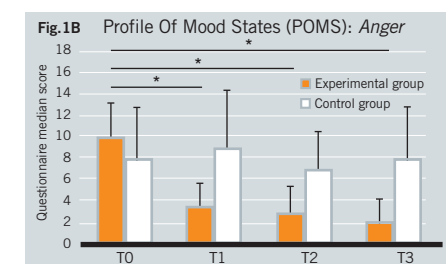
### Human clinical trials

1) Marotta A. et al., Effects of Probiotics on Cognitive Reactivity, Mood, and Sleep Quality, 2019 Frontiers in Psychiatry.

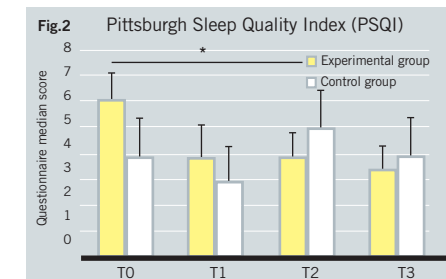
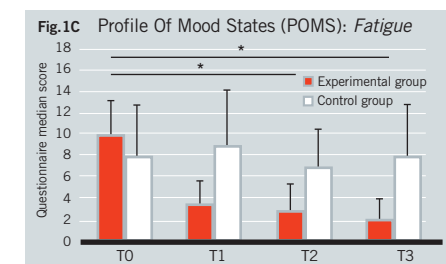


**Fig.1** Median POMS subscale score for the experimental and the control groups at all-time points.

(A) Depression subscale; (B) Anger subscale; (C) Fatigue subscale.



Error bars represent 95% confidence interval. Asterisks indicate within-groups significant differences (Bonferroni corrected  $p < 0.017$ ).



**Fig.2** Median PSQI score for the experimental and the control groups at all time points. Error bars represent 95% confidence interval. Asterisks indicate within-groups significant differences (Bonferroni corrected  $p < 0.017$ ).

- Grenham S, et al. Brain-gut-microbe communication in health and disease. Front Physiol. (2011) 2:94.
- Mayer EA. Gut feelings: the emerging biology of gut-brain communication. Nat Rev Neurosci. (2011)
- Mayer EA, et al. Gut microbes and the brain: paradigm shift in neuroscience. J Neurosci. (2014) 34:15490–6.

## PLUS POINTS:

- Clean-label, safe and natural
- Allergen free (patented technology)
- Careful selection of the strains based on synergistic modes of action
- Available in different dosage forms
- Release in colony forming units (cfu) or active fluorescent units (afu) possible



# BifiZen® Stress

A natural, probiotic-based solution for stress management

## ■ Composition:

Bifizen®, Ashwagandha (*Withania somnifera*), Vitamin B8

## ■ Activity:

**BifiZen®** has been shown to reduce anger in healthy students (1).

**Ashwagandha** is documented for a reduction of cortisol and stress, anxiety and depression (2).

**Vitamin B8** (biotin) contributes to normal functioning of the nervous system and to normal psychological function.

## ■ Recommended use:

1 to 2 sachets per day for 8 weeks.

## ■ SCIENTIFIC REFERENCES

1) Marotta A. et al., Effects of Probiotics on Cognitive Reactivity, Mood, and Sleep Quality, 2019 Frontiers in Psychiatry.

2) Chandrasekhar K, Kapoor J, Anishetty S. A prospective, randomized double-blind, placebo-controlled study of safety and efficacy of a high-concentration full-spectrum extract of ashwagandha root in reducing stress and anxiety in adults. Indian J Psychol Med. 2012 Jul;34(3):255-62. doi: 10.4103/0253-7176.106022. PubMed PMID: 23439798; PubMed Central PMCID: PMC3573577.



# BifiZen® Focus

A natural, probiotic-based solution to improve attention and memory

## ■ Composition:

Bifizen®, Ashwagandha (*Withania somnifera*), Vitamin B5

## ■ Activity:

**BifiZen®**, through the improvement of sleep quality, mood, sensibility to depression, anger and fatigue, could improve focus and clear-thinking (1).

**Ashwagandha** was proven in a clinical study to increase memory, attention, executive functions and processes of information elaboration (2). Ashwagandha also improved significantly the quality of sleep and mental alertness in a recent study in elderly (3).

**Vitamin B5** (pantothenic acid) contributes to normal mental performance and to the reduction of tiredness and fatigue.

## ■ Recommended use:

1 to 2 sachets per day for 4 weeks.

## ■ SCIENTIFIC REFERENCES

1) Marotta A. et al., Effects of Probiotics on Cognitive Reactivity, Mood, and Sleep Quality, 2019 Frontiers in Psychiatry.

2) Choudhary D, Bhattacharyya S, Bose S. Efficacy and Safety of Ashwagandha (*Withania somnifera* (L.) Dunal) Root Extract in Improving Memory and Cognitive Functions. J Diet Suppl. 2017 Nov 2;14(6):599-612. doi: 10.1080/19390211.2017.1284970. Epub 2017 Feb 21. PubMed PMID: 28471731.

3) Kelgane S B, Salve J, Sampara P, et al. (February 23, 2020) Efficacy and Tolerability of Ashwagandha Root Extract in the Elderly for Improvement of General Well-being and Sleep: A Prospective, Randomized, Double-blind, Placebo-controlled Study. Cureus 12(2): e7083. DOI 10.7759/cureus.7083.



# BifiZen® Night

A natural, probiotic-based solution to sleep better

## ■ Composition:

Bifizen®, Melatonin, Vitamin B12

## ■ Activity:

**BifiZen®** has been shown to improve quality of sleep (1)

**Melatonin** contributes to the reduction of time to fall asleep and to the alleviation of subjective feelings of jetlag (2, 3).

**Vitamin B12** contributes to the reduction of tiredness and fatigue.

## ■ Recommended use:

1 sachet, stick or capsule half an hour before going to bed.

## ■ SCIENTIFIC REFERENCES

1) Marotta A. et al., Effects of Probiotics on Cognitive Reactivity, Mood, and Sleep Quality, 2019 Frontiers in Psychiatry.

2) Xie Z et al. A review of sleep disorders and melatonin. Neurol Res. 2017 Jun;39(6):559-565.

3) Zisapel N. New perspectives on the role of melatonin in human sleep, circadian rhythms and their regulation. Br J Pharmacol. 2018 Aug;175(16):3190-3199.

4) Tardy AL et al. Vitamins and Minerals for Energy, Fatigue and Cognition: A Narrative Review of the Biochemical and Clinical Evidence. Nutrients. 2020 Jan 16;12(1). pii: E228





## BifiZen<sup>®</sup> AgeWell

A natural, probiotic-based solution against age-related cognitive decline and to improve memory, focus and attention

### ■ Composition:

Bifizen<sup>®</sup>, Alpha-GPC, Zinc

### ■ Activity:

**BifiZen<sup>®</sup>** is useful to improve mood, fatigue, anger and sensibility to depression (1), and will be further tested in a population with major depression.

**Alpha-GPC** is a precursor of phosphatidylcholine, which increases the release of acetylcholine, the neurotransmitter involved in cognitive functions such as memory and attention. It significantly improved mental and cognitive function in patients with Alzheimer (2) and showed neuroprotective action in animals (3).

**Zinc** contributes to normal cognitive functions.

### ■ Recommended use:

1 sachet, stick or capsule per day.

### ■ SCIENTIFIC REFERENCES

(1) Marotta A. et al., Effects of Probiotics on Cognitive Reactivity, Mood, and Sleep Quality, 2019 Frontiers in Psychiatry.

(2) De Jesus Moreno Moreno M. Cognitive improvement in mild to moderate Alzheimer's dementia after treatment with the acetylcholine precursor choline alfoscerate: a multicenter, double-blind, randomized, placebo-controlled trial. Clin Ther. 2003 Jan;25(1):178-93. PubMed PMID: 12637119.

(3) Traini E, Bramanti V, Amenta F. Choline alfoscerate (alpha-glyceryl-phosphoryl-choline) an old choline- containing phospholipid with a still interesting profile as cognition enhancing agent. Curr Alzheimer Res. 2013 Dec;10(10):1070-9. Review. PubMed PMID: 24156263.



## BifiZen<sup>®</sup> Kids

A natural, probiotic-based solution for Kids mental and cognitive health

### ■ Composition:

Bifizen<sup>®</sup>, *L. rhamnosus* GG (ATCC 53103), Passiflore extract (*Passiflora incarnata*)

### ■ Activity:

**BifiZen<sup>®</sup>** is useful to improve mood, anger, sensibility to depression, fatigue and quality of sleep (1).

***L. rhamnosus* GG** early administration may reduce the risk of developing autism and Attention Deficit Hyperactivity Disorder (ADHD) (2).

***Passiflora incarnata*** was shown as effective in decreasing (by more than half) symptoms of ADHD (Attention Deficit Hyperactivity Disorder) as the standard of care, with much less side effects (3).

### ■ Recommended use:

1 sachet, stick or capsule per day.

### ■ SCIENTIFIC REFERENCES

(1) Marotta A. et al., Effects of Probiotics on Cognitive Reactivity, Mood, and Sleep Quality, 2019 Frontiers in Psychiatry.

(2) Pärtty A, Kalliomäki M, Wacklin P, Salminen S, Isolauri E. A possible link between early probiotic intervention and the risk of neuropsychiatric disorders later in childhood: a randomized trial. Pediatr Res. 2015 Jun;77(6):823-8. doi: 10.1038/pr.2015.51. Epub 2015 Mar 11. PubMed PMID: 25760553.

(3) Akhondzadeh S, Mohammadi MR, Momeni F. *Passiflora incarnata* in the treatment of attention-deficit hyperactivity disorder in children and adolescents. Therapy. 2005;2(4):609-614.

BifiZen<sup>®</sup> Stress

BifiZen<sup>®</sup> Night

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Focus

BifiZen<sup>®</sup> AgeWell

BifiZen<sup>®</sup> Kids

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