SYNBIO®
FOR HEALTHY AGING

L. rhamnosus IMC 501 + *L. paracasei* IMC 502

Stay young from within

The global population is aging faster than ever before (1), with life expectancy at birth reaching 72.8 years in 2019, an increase of almost 9 years since 1990 (2). Maintaining an active life as we age will be critical in the future as more then 50% of the disease burden globally in adults is attributed to age-related illnesses (3).

Ageing is associated with chronic, low-grade inflammaton called "Inflammaging", a risk factor for the development of several diseases.
Aging deeply affects gut homeostasis, dietary and lifestyle habits together with age-related physiological changes, causes gut microbiota dysbiosis in elderly adults.
This dysbiosis, along side inflammaging may contribute to the progression of disease and frailty in older people.

SYNBIO can help reverse the inflammaging process, and can be used in innovative formulations for healthy aging.

SYNBIO® reduces inflammaging, sarcopenia, and malnutrition in the elderly by positively modulating the gut microbiota to improve quality of life.

- Hypoallergenic
- Vegetarian
- Gluten free
- Kosher
- Halal
- GMO free
- Genome Sequenced
- Gastric resistant

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How does SYNBIO® support healthy aging?

Clinical studies in elderly volunteers have been instrumental in establishing SYNBIO®'s benefits to healthy aging [1,2]. Firstly, SYNBIO® significantly reduced inflammation (hs-CRP, TNF-α, and IL-6), addressing one of the problems linked to ageing. In addition, SYNBIO® improved sarcopenia, as it increased circulating IGF-1 – a regulator of bone and muscle mass [1,2]. Moreover, SYNBIO® improved the nutritional status of volunteers, reflected by the Mini Nutritional Assessment (MNA) questionnaire [2].

Finally, SYNBIO® reestablished normal gut microbiota patterns typical of the elderly: it doubled the proportion of intestinal *Bifidobacterium* spp. [1], and its sustained administration increased the abundance of *Akkermansia* spp. – a mucin-degrading microbe that provides energy to other beneficial gut bacteria and is found in abundance in ultracentenerians, making it a biomarker for healthy aging [2,3].

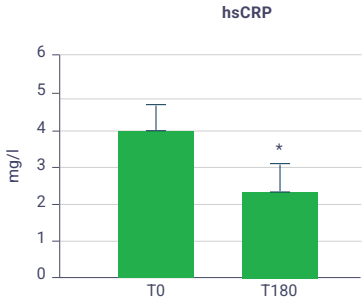
Changes in the gut microbiota composition can modulate the Short Chain Fatty Acid (SCFA) pool. These metabolites improve health in several ways, including the maintenance of intestinal barrier integrity, production of mucus, protection against inflammation, and regulation of growth hormones.

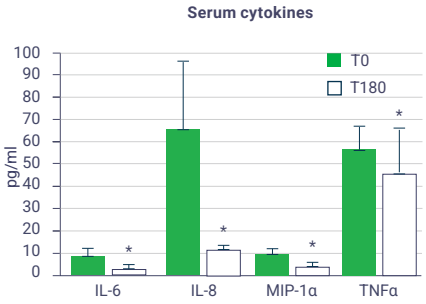
SYNBIO® is a valuable supplement that can improve inflammaging, malnutrition and sarcopenia in elderly.

SYNBIO® supports healthy ageing

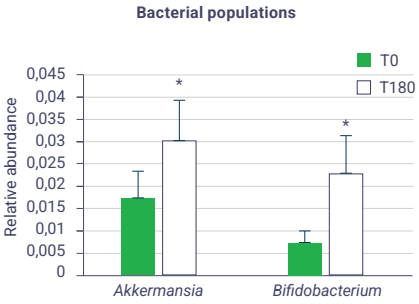
97 Elderly subjects | **5 Bn** CFU/day | **Six-Month Randomized, double blinded, placebo-controlled**

Improve the main inflammaging biomarkers

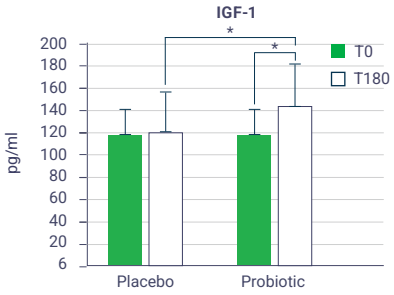




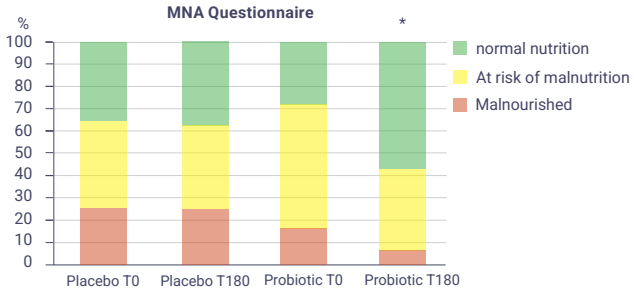
Restore a "younger" microbiota composition



Reduce risk of malnutrition and sarcopenia



Intestinal microbiota modulation



*Significantly different (P<0.05)

SYNBIO® facts

- SYNBIO® is a natural ingredient that supports healthy aging
- SYNBIO® improves inflammaging through modulation of the gut microbiota and the SCFA pool
- SYNBIO® supplementation modulates key biomarkers of sarcopenia in elderly subjects
- SYNBIO® supplementation improves the nutritional status of the elderly, reducing the risk of malnutrition

[1] Salvesi, C. et al. J App Microbiol, 133, 2941-2953 (2022). |[2] Salvesi et al. Microorganisms, 11 (3), 801 (2023). [3] Biagi et al. Current Biology, 26(11), 1480–1485 (2016).

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