

SP 1

we are probiotic makers™



Lacticaseibacillus rhamnosus SP 1

Your skin support probiotic

Acne is a common skin condition that affects around 85% of people at some point in their lives. It mainly presents itself in teenagers but can also appear in adults, and symptoms include pesky pimples that can be frustrating and difficult to get rid of.

The issue of acne is beyond an aesthetic one. Acne can take a toll on one's emotional health, as it makes people feel unattractive, embarrassed, or self-conscious, and can impact one's social life.

The pathogenesis of acne is complex and involves the skin microbiota, characterized by the over-proliferation of virulent variants of *Cutibacterium acnes*, and the host's inflammatory and hormonal status.

Current acne support can include the use of antibiotics and anti-inflammatory drugs. Probiotics, acting as modulators of the gut-skin axis, can be a promising approach to addressing this common dermatological condition.

80% of subjects experienced improvement of their acne when using SP 1

Hypoallergenic

Vegetarian

Gluten free

Kosher

Halal

GMO free

Genome Sequenced

Gastric resistant

CultureScience



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How SP 1 modulates the gut-skin axis

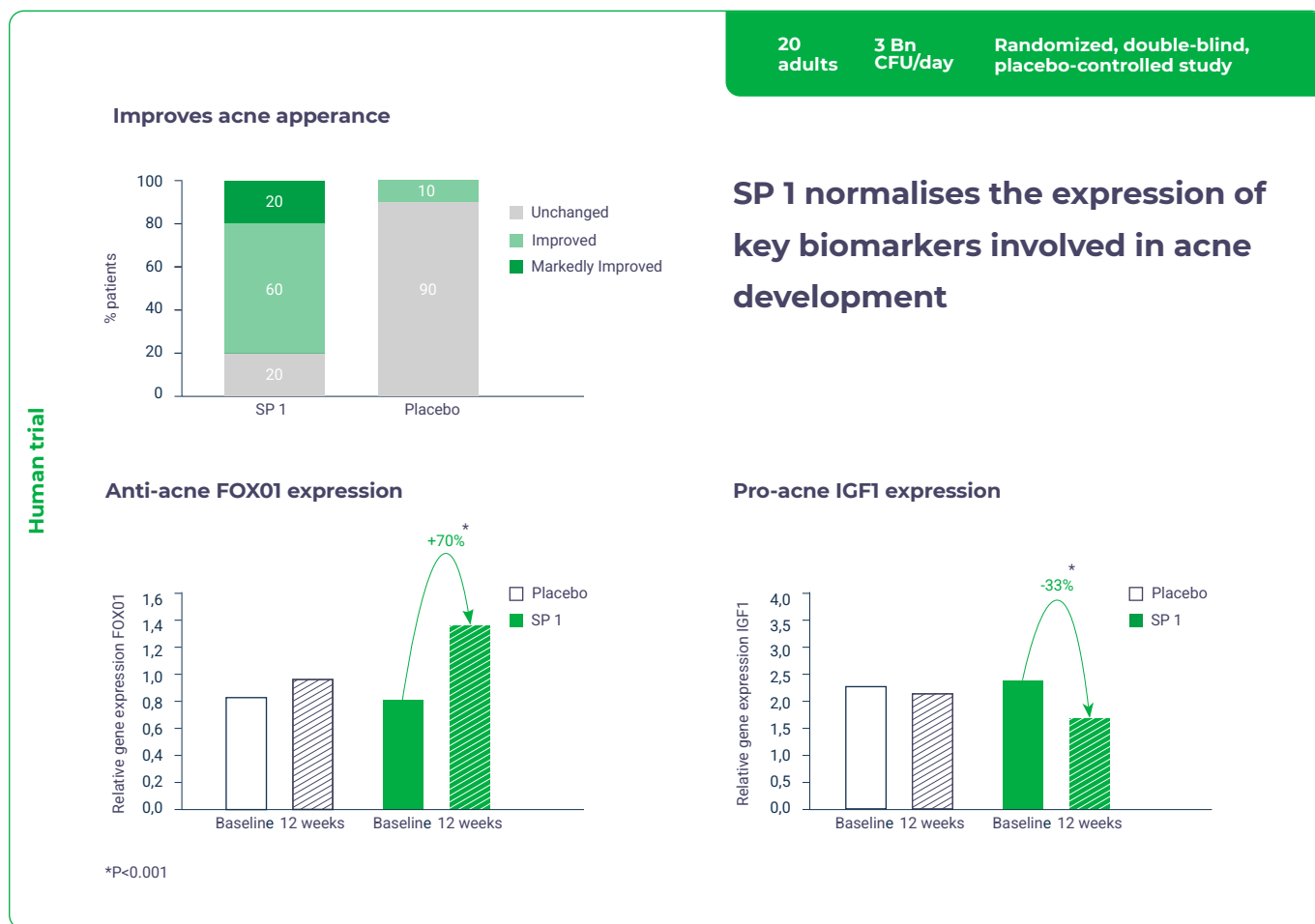
SP 1 acts systemically, improving the hormonal and inflammatory pathways linked to acne development. Insulin signaling plays a significant role in the pathogenesis of acne: in particular, insulin and insulin-like growth factor-1 (IGF1) exert acne-promoting actions, stimulating sebaceous lipogenesis.

Moreover, IGF1 stimulates the androgen receptor signaling, by promoting the nuclear extrusion of the androgen receptor through the transcription factor Forkhead box protein 01 (FOX01).

Downregulation of nuclear FOX01 expression, as observed in acne, promotes lipogenesis, upregulation of inflammatory cytokines, and increases keratinocytes proliferation.

A downregulation of IGF-1 and an increase in FOX01 expression in acne lesions were observed in patients when consuming SP 1 orally. This modulation allowed a return to normal skin homeostasis, as well as markedly improved skin appearance.

SP 1 reduces pimple formation



SP 1 facts

- When orally consumed, *L. rhamnosus* SP 1 has shown to improve the appearance of acne, revealing its efficacy in the gut-skin axis
- SP 1 is a natural solution, reducing the needs of retinoid-like drugs and antibiotics
- SP 1 mechanism of action is based on modulation of the inflammatory process that causes acne breakouts.

[1] Das S, et al., Am J Clin Dermatol. 15(6):479-88 (2014) [2] Tan JK and Bhate K, Br J Dermatol. 172 Suppl 1:3-12 (2015) [3] Fabbrocini G, et al., Benef Microbes 7(5):625-630 (2016)
[4] Konishi N, et al., Ther Clin Risk Manag. 3(1):205-9 (2007)



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