



glac

Biotech Co., Ltd.



GL-156

Lactobacillus paracasei



Glac Biotech Co., Ltd.
Address : 7F., No. 3-2, Park St., Nangang Dist., Taipei City 115603, Taiwan (R.O.C)
Email : michael.hsiao@glac.com.tw

Freeze-Dried Probiotic Ingredient

- ✓ Strain name : *Lactobacillus paracasei* GL-156
- ✓ Specification : 3×10^{11} CFU/g
- ✓ Packing size : 1kg a bag with nitrogen filling and vacuum packing.
- ✓ Storage : $\leq 4^{\circ}\text{C}$, 24 months
- ✓ Strain Origin : Isolated from healthy human's intestines with no microbial domestication and mutation process
- ✓ **Application** : Immunity Strengthening Oral care Skin Whitening
- ✓ Production process: Through fermentation, centrifuging, freeze-drying and packaging

Published Paper

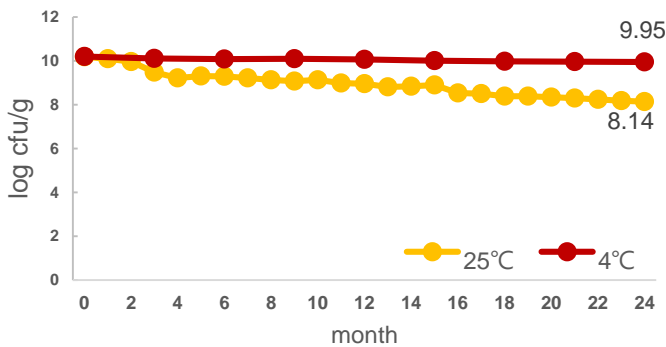
Year	Academy/ Journal	Title	Source
2017	Academy	Comparison of the inhibition effect of lactic acid bacteria fermentation metabolites on different vaginal pathogens and developing gynecological probiotic products	2017.CIFST.
2017	Academy	Applications of lactic acid bacteria to inhibit the growth of fish pathogens and improve the feed conversion rate in aquaculture	2017. IUMS.
2017	Academy	Inhibitory effects of viable and heat-killed lactic acid bacteria against different vaginal pathogens: toward development of gynecological probiotic	2017. IUMS.
2017	Journal	Clinical observation of active probiotics in the treatment of allergic rhinitis and analysis of its effect on immunoregulation	China Modern Doctor Vol. 55 No. 5 February 2017.
2018	Journal	Clinical observation of probiotics in treating allergic eczema and its influence on immune indexes	Medical Innovation of China,2018.
2018	Journal	Therapeutic effect of active probiotics on allergic rhinitis	China Continuing Medical Education, Vol. 11, No.15
2018	Academy	Functional characterization and application of probiotic strains advantages on oral health care	2018. CIFST.
2019	Journal	Metabolites from lactic acid bacteria inhibit growth of skin pathogens and may improve skin health	2019.Skin Microbiome.
2019	Journal	Clinical efficacy of probiotics in the treatment of allergic rhinitis and its influence on related immune factors	Contemporary Medicine · Nov.2019 · Vol.25 No.33
2020	Journal	Efficacy of probiotics in the treatment of allergic rhinitis: a meta-analysis	Chin J Otorhinolaryngol Skull Base Surg.2020.Dec.
2020	Journal	Antibacterial activity of viable and heat-killed probiotic strains against oral pathogens	Lett Appl Microbiol. 2020 Apr;70(4):310-317.

Patent

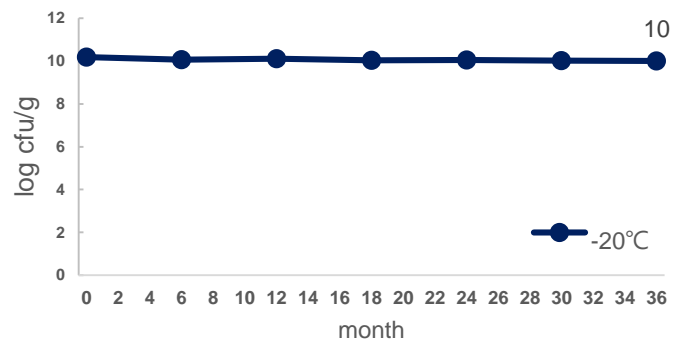
Country	Obtained/ In Progress	Patent No.	Patent title
TW	Obtained	I639389	Food, oral cleaning and pharmaceutical composition for inhibiting lactic acid bacteria strains of oral pathogenic bacteria
CN	Obtained	ZL201711155468.8	Food, oral cleaning and pharmaceutical composition for inhibiting lactic acid bacteria strains of oral pathogenic bacteria
US	In Progress	16/685,445	Method of inhibiting oral pathogens
TW	In Progress	108140747	Composition containing lactic acid bacteria ferment for whitening effect and use thereof
CN	In Progress	2019107878700.6	Composition containing lactic acid bacteria ferment for whitening effect and use thereof
US	In Progress	16/939.936	Skin-whitening composition with fermentation metabolite of lactic acid bacterium and applications thereof

Long Term Stability

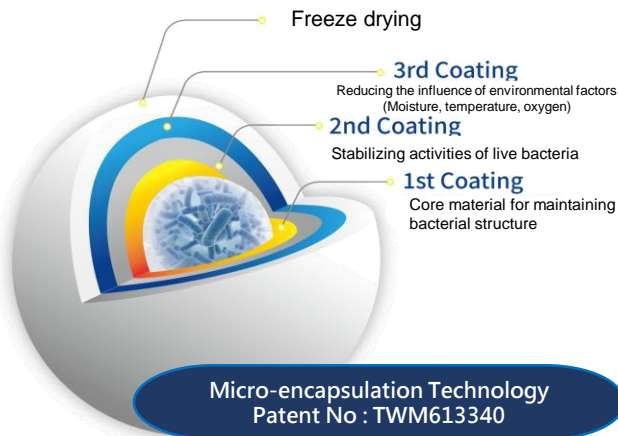
GL-156 remains stable at 4°C and 25°C for 24 months



GL-156 remains stable at -20°C for 36 months



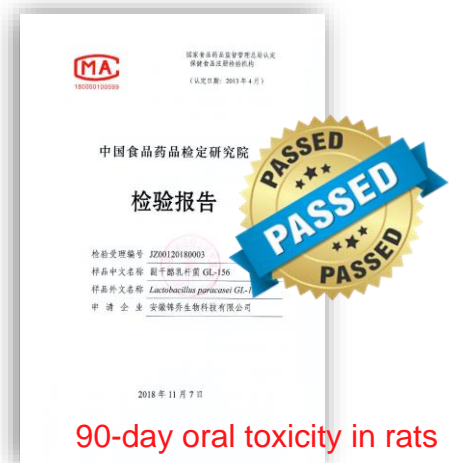
Micro-Encapsulation Technology



- ✓ **EFSA QPS approved Probiotic Strain**
- ✓ **Approved by China SFDA for food supplement.**
- ✓ **Approved by Taiwan FDA for food supplement.**

Safety Test

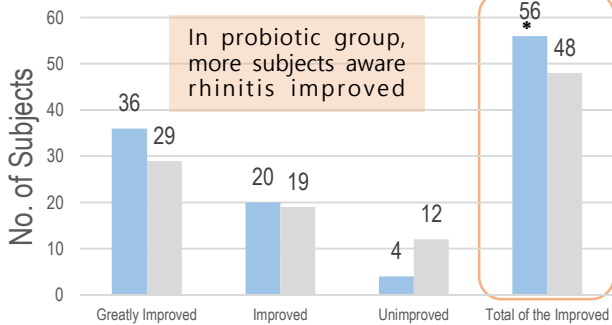
Passed safety evaluation by National Medical Products Administration



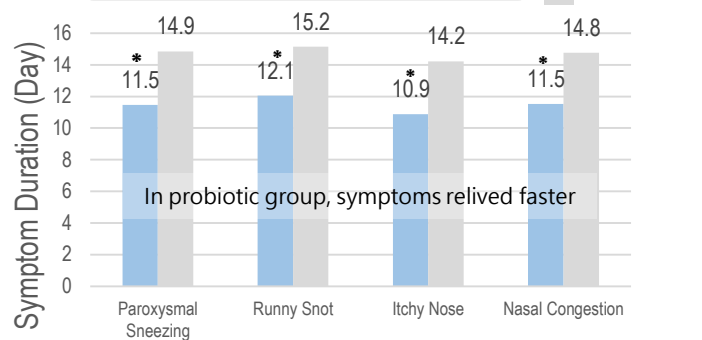
Allergy Rhinitis Relief

- Clinical trial : 120 subjects with allergic rhinitis, study period was 12 weeks. Randomly allocated 60 subjects into control group using anti-histamine only, and the rest 60 subjects were probiotic group using anti-histamine and PRONULIFE® NosRelieve, including GL-156 (* p < 0.05 compare with control, ** p < 0.05 compare with before treatment)

Complementary treatment of allergic rhinitis

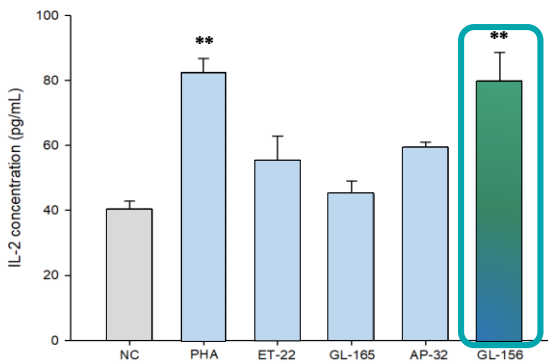


Relieved allergic symptoms significantly

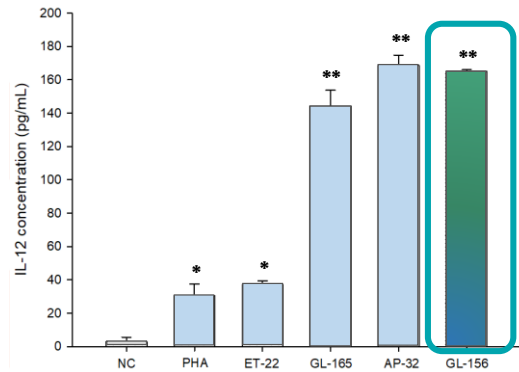


Immunity Regulation

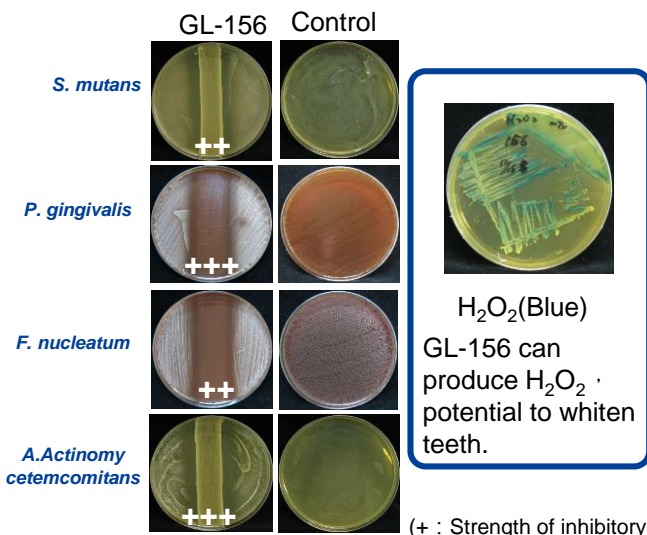
Induce DC immune cells to secrete cytokine IL-2 (Th1)



Induce DC immune cells to secrete cytokine IL-12 (Th1)



Oral Care



Urinary tract / reproductive pathogen inhibitory effect

