



We provide healthy life from nature

BE NATURE FRIENDLY

Focused on R&D Health supplements foods,
Lactic Acid Bacteria



About VITECH

In-House Technical Capability

Development of health functional food raw materials

Main functions: immune enhancement, joint health, skin health, stomach health, respiratory health, male/female menopause, liver health, body fat reduction, and other various functional studies



LEADER IN HEALTH FUNCTIONAL FOOD INDUSTRY

Enterprise specialized in functional health food materials leading future market with a focus on probiotics



VALUE CREATION

Enterprise developing & offering variety of natural raw materials and realizing value of health for people

History & Profile of VITECH

2014.12.23

Date of Establishment

2015.05

Venture company Certification

2017.10

Attached research institute Certification (Korea National Food Cluster)

2018.11

GMP Certification (Jeonju Plant)

2018.12

Awarded the Minister of SMEs and Startups Jeonbuk Regional SMEs and Startups office Prize.

2025

KFDA Individually Approval Material Registration

2025.5.12 Kiwibiotics®

2022.12

FSSC 22000 Certification

ISO 9001&14001 Certification (Iksan Plant)

2021.05

Obtained Halal Certification for the product

2024

KFDA Individually Approved Raw Material Registration

2024.06.27 7-MEGA™

2020.09

HACCP Certification (Iksan Plant)

2020.12

The first L.N.F facility in Korea

2019.10

Awarded the Prime Minister's Prize at 2019 KOREA FOOD OUTLOOK.

2019.11

Awarded the Grand Prize at Jang, Young-sil National Science and Technology Competition.

2019.12

GMP Certification (Iksan Plant)

Awarded the Innovative Jeonbuk Industry Grand Prize from Jeonbuk Technopark.



CUSTOMER SATISFACTION

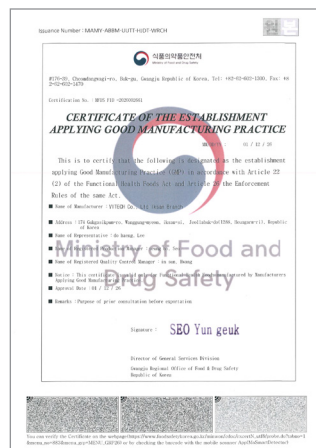
Enterprise always deliberating from customer's position for customer satisfaction and creating added values



CHALLENGING AND CREATIVE THINKING

Enterprise growing with creative thinking and sense of challenge

Certification



Production Plant



Iksan Plant I

Location and Area

- 174, Gukgasikpum-ro, Wanggung-myeon, Iksan-si, Jeollabuk-do, Republic of Korea (Located in Korea National Food Cluster)

Major Facility Status

- GMP - ISO9001&14001
- HACCP - FSSC22000
- L.N.F Facility under operation
- HALAL



Iksan Plant II (Planned)

Location and Area

- 1286, Heungam-ri, Wanggung-myeon, Iksan-si, Jeollabuk-do, Korea (Located in Korea National Food Cluster)
- Land: 12,883m² / Building Area: 5,950m²

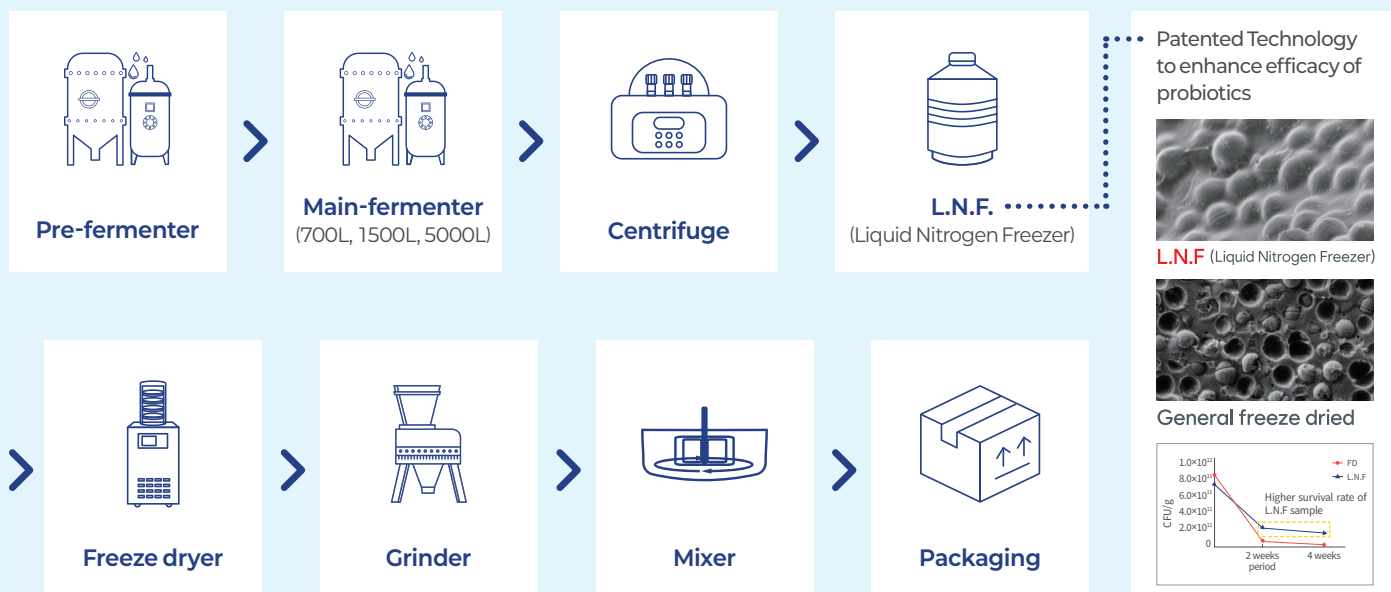
Major Facility Status

- GMP
- HACCP
- HALAL
- FSSC22000

Production Capability

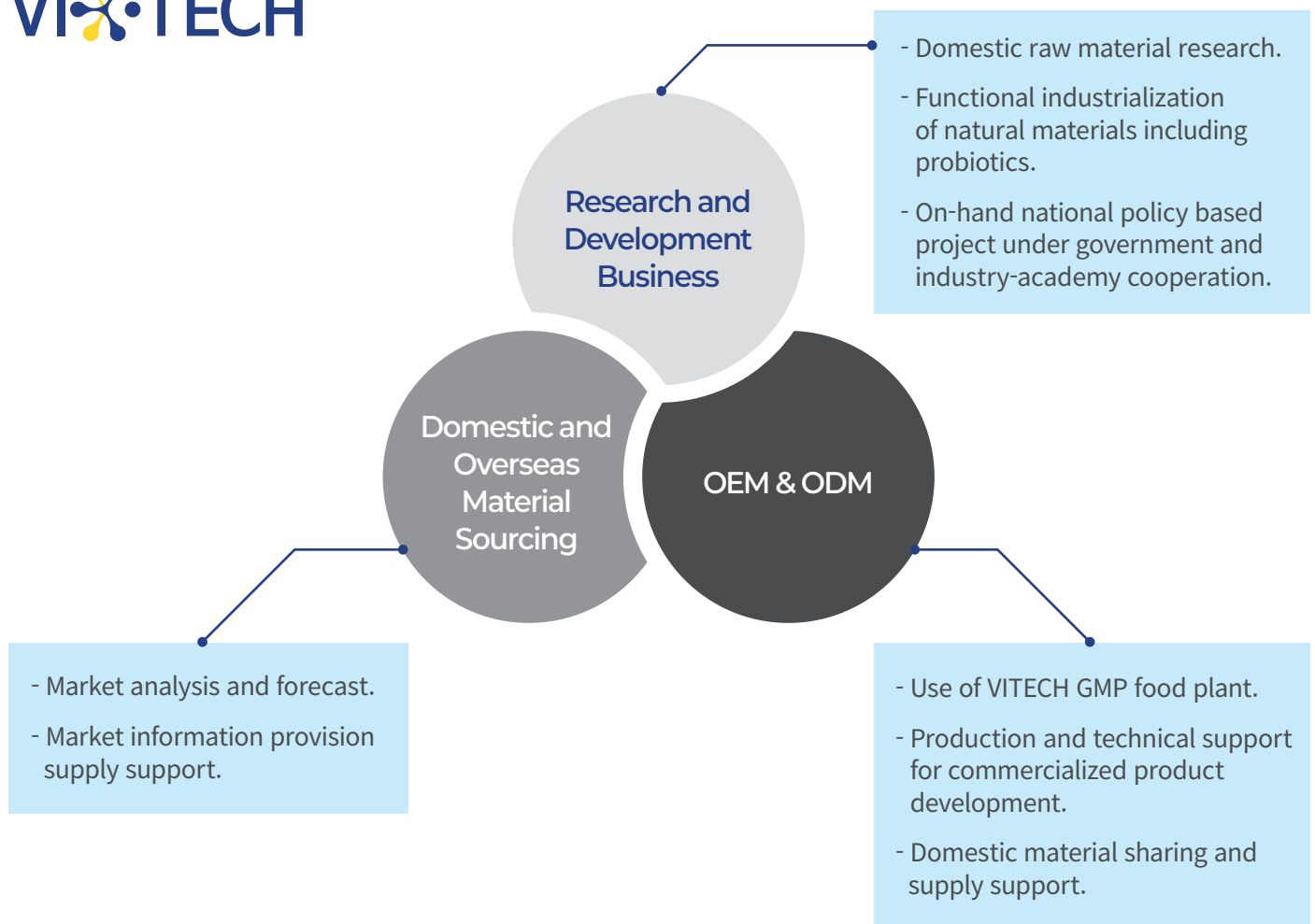
Formulation	Day	Year
Cultivation (Probiotics)	8 Ton	416 Ton(3.5 Ton of Probiotics in Powder)
Liquid (FGK, Royal Jelly)	2 Ton	FGK: 104 Ton / Royal Jelly: 6.2 Ton
Powder (Freeze Dry)	600 kg	3.1 Ton
Mixture	800 kg	124 Ton(Packaging unit: 5 kg)

Production Facilities



Activities at Research Institute

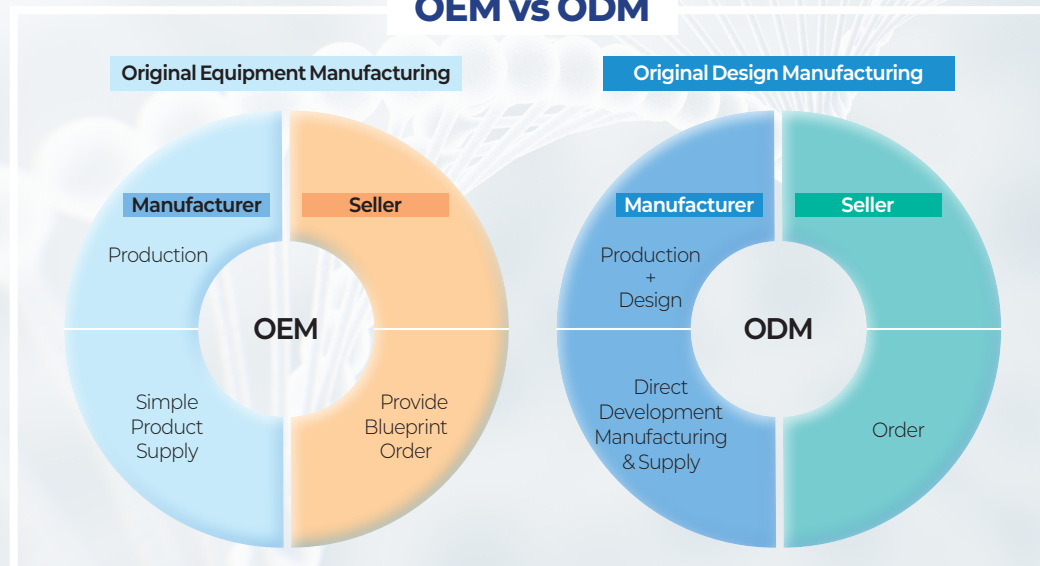
- Developing high value added raw substances for new materials and functional products through intensive research and development activities
- Offering best quality products fit to customer needs taking advantage of own technologies and know-how
- Providing total service solutions for customer business growth by driving future trends



Business areas

Domestic and Overseas Material Sourcing, Research and Development

OEM vs ODM



CDMO

CONTRACT
DEVELOPMENT AND
MANUFACTURING
ORGANIZATION



Special Products

Customer-Tailored Probiotics Development

Develop custom probiotics from natural ingredients selected by your company. Your company can cultivate and select beneficial probiotics tailored to your needs. These probiotics can then be incorporated into your company's products.



Production Dosage Form

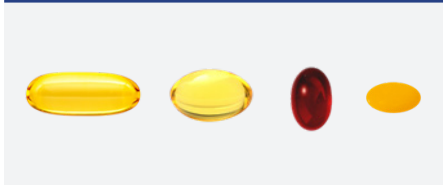
Round Tablet (S, M, L)



Rectangle Tablet (S, M, L)



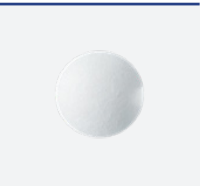
Soft Capsule / Chewable / Vegetable Soft Capsules



Etc Tablet



Melting



Hard Capsule



Oval Tablet (S, M, L)



Powder



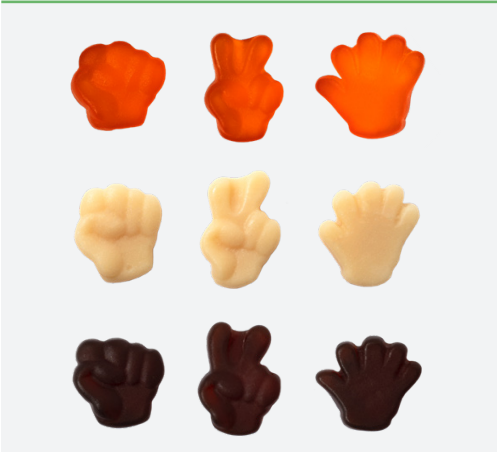
Granular Powder



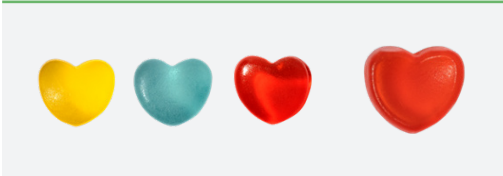
Assembly Powder



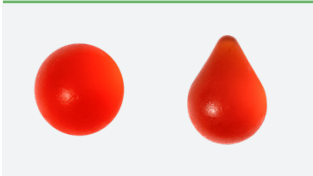
Gummy Type 1



Gummy Type 2



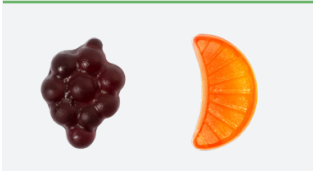
Gummy Type 3



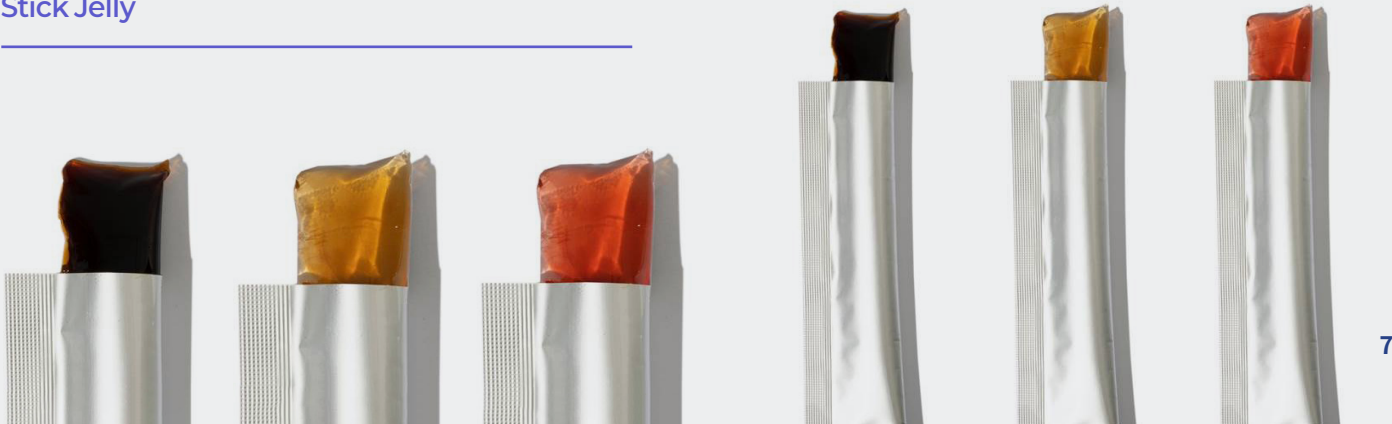
Gummy Type 4



Gummy Type 5



Stick Jelly



Classification of Microorganism

Including probiotics, there are three other ingredients that help form a microbiome in our gut. Prebiotics, postbiotics, parabiotics. Each has different mechanisms to affect microbiomes.

“Live microorganisms that, when administered in adequate amounts, confer a health benefit on the host”

Probiotics

“Non-viable microbial cells (either intact or broken) or crude cell extracts which when administered (either orally or topically) in adequate amounts, confer a benefit on the human or animal consumer”

Postbiotics

Prebiotics

“A substrate that is selectively utilized by host microorganisms conferring a health benefit.”

Parabiotics

“Inactivated (non-viable) microbial cells, which, when administered in sufficient amounts, confer benefits to consumers.”

Parabiotics® ?

What is Parabiotics? = Heat Killed Bacteria

The Parabiotics means (either digested or broken) cells showing no vitality or a sort of unprocessed cell extracts, which has been arousing people’s interest for its useful effects like long shelf life, safety, adjustable immunity, modification capability of biological reaction, reduction of cholesterol, and anti-inflammation effect.

◦ Benefits of parabiotics

Heat Killed Bacteria (Para-biotics = Ghost-biotics)

- Easy to preserve and circulate
- Safe intake allowed with no side effect
- Working right away not settling in intestines
- Immune cells stimulated providing food

Parabiotics can be

Single strain / Multi strains / Most Stable Natural Resource for Customizing

Probiotics

Possessing 19 KFDA-authorized* Functional strains and 300 additional strains.

We hold 29 patented strains.

Genus	Species	Origin
Lactobacillus	<i>L.acidophilus</i> , <i>L.gasseri</i> , <i>L.delbrueckii</i> ssp., <i>bulgaricus</i> , <i>L.helvericus</i>	Kiwi, Herbal Medicines, Coconut,
Lacticaseibacillus	<i>L.casei</i> , <i>L.paracasei</i> , <i>L.rhamnosus</i>	Sanghuangporus sanghuang,
Limosilactobacillus	<i>L.fermentum</i> , <i>L.reuteri</i>	Green Tea,
Lactiplantibacillus	<i>L.plantarum</i>	Kimchi, White Kimchi,
Ligilactobacillus	<i>L.salivarius</i>	Fermented Soybean Paste,
Lactococcus	<i>Lc.lactis</i>	Aloe, Infant Feces, Cheese,
Enterococcus	<i>E.faecium</i> , <i>E.faecalis</i>	Mushroom, Vaginal Mucosa,
Streptococcus	<i>S.thermophilus</i>	Paste, Meat Processed Food,
Bifidobacterium	<i>B.bifidum</i> , <i>B.breve</i> , <i>B.longum</i> , <i>B.animalis</i> ssp. <i>lactis</i>	Milk, Breast Milk, Pagoda Tree Fruit (Sophora Japonica), etc.

*Probiotics OEM&ODM Production

*** Authorized Functional Ingredients:** An ingredient that has been approved by the Minister of Food and Drug Safety for its efficacy as a health functional food and notified through the Health Functional Food Code.

*** Individually Recognized Functional Ingredients:** An ingredient whose efficacy has been recognized by the minister of Food and Drug Safety, despite not being listed in the Health Functional Food Code.

“Why Vitech’s probiotics are special: Proprietary development and patented cryoprotectant”

- Point 1. No side effects, such as allergies, thanks to the use of enzymatically hydrolyzed wheat bran
- Point 2. Improved shelf life due to high resistance to moisture absorption
- Point 3. Improved survival rate by preventing damage to probiotic cell membranes
- Point 4. Acts as a prebiotic in its own right



VITECH's Flagship Strains

Lactococcus lactis VI-01

General Information and Efficacy

Lactococcus lactis is a well-known food-grade lactic acid bacterium traditionally used in cheese and fermented dairy products. It is characterized by rapid and controlled lactic acid production and has not been associated with pathogenicity or toxin production. Its long history of use in food fermentation has firmly established its safety.

References

1. FAO/WHO. Guidelines for the Evaluation of Probiotics in Food. 2002.
2. EFSA BIOHAZ Panel. Qualified Presumption of Safety (QPS) list. EFSA Journal.
3. Leroy F., De Vuyst L. Lactic acid bacteria as functional starter cultures for the food fermentation industry. Trends in Food Science & Technology, 2004.

Short Fact

Manufacture	Vitech (Korea)
Brand name	Normal
Strain	<i>Lactococcus lactis</i> VI-01
Deposit No.	KCTC14351BP
CFU	500 billion CFU/g
Condition	Facultative anaerobe



Lactiplantibacillus plantarum VI-07



General Information and Efficacy

Lactiplantibacillus plantarum is a lactic acid bacterium widely found in plant-based fermented foods and food fermentation environments. It shows high environmental adaptability and genetic stability, with no association with pathogenicity or toxin production. Its safety as a food-grade microorganism has been established through long-term use and scientific evaluation.

References

1. Zheng J. et al. A taxonomic note on the genus *Lactobacillus*: Description of 23 novel genera. International Journal of Systematic and Evolutionary Microbiology, 2020.
2. EFSA BIOHAZ Panel. Qualified Presumption of Safety (QPS) list. EFSA Journal.
3. Leroy F., De Vuyst L. Lactic acid bacteria as functional starter cultures for the food fermentation industry. Trends in Food Science & Technology, 2004.

Short Fact

Manufacture	Vitech (Korea)
Brand name	Normal
Strain	<i>Lactiplantibacillus plantarum</i> VI-07 (VITSM01)
Deposit No.	KCTC16596BP
CFU	500 billion CFU/g
Condition	Facultative anaerobe



Lactiplantibacillus plantarum VI-08

General Information and Efficacy

Lactiplantibacillus plantarum is a lactic acid bacterium widely found in plant-based fermented foods and food fermentation environments. It shows high environmental adaptability and genetic stability, with no association with pathogenicity or toxin production. Its safety as a food-grade microorganism has been established through long-term use and scientific evaluation.

References

1. Zheng J. et al. A taxonomic note on the genus *Lactobacillus*: Description of 23 novel genera. *International Journal of Systematic and Evolutionary Microbiology*, 2020.
2. EFSA BIOHAZ Panel. Qualified Presumption of Safety (QPS) list. *EFSA Journal*.
3. Leroy F., De Vuyst L. Lactic acid bacteria as functional starter cultures for the food fermentation industry. *Trends in Food Science & Technology*, 2004.

Short Fact

Manufacture	Vitech (Korea)
Brand name	Normal
Strain	<i>Lactiplantibacillus plantarum</i> VI-08 (VINRC03)
Deposit No.	KCTC14532BP
CFU	500 billion CFU/g
Condition	Facultative anaerobe



7 Types of Mixed Probiotics

General Information and Efficacy

This mixed probiotic formulation consists of seven lactic acid bacteria and bifidobacteria strains, which belong to the most extensively studied and widely used probiotic groups. The included strains exhibit acid and bile tolerance, intestinal adhesion, and metabolic activity, which are key characteristics for gastrointestinal survival. Multi-strain formulations combining lactic acid bacteria and bifidobacteria are commonly applied in probiotic product development to support overall gut function.

References

1. Hill C. et al. Expert consensus document: The International Scientific Association for Probiotics and Prebiotics consensus statement on the scope and appropriate use of the term probiotic. *Nat Rev Gastroenterol Hepatol*, 2014.
2. Sanders M.E. et al. Probiotics and prebiotics in intestinal health and disease. *Gut*, 2019.
3. Marco M.L. et al. Health benefits of fermented foods: microbiota and beyond. *Curr Opin Biotechnol*, 2017.

Short Fact

Manufacture	Vitech (Korea)
Product Name	7 Types of Mixed Probiotics
Specification	400 billion CFU/g
Composition	<i>Lactococcus</i> sp. 1 strain + <i>Lactobacillus</i> sp. 5 strains + <i>Bifidobacterium</i> sp. 1 strain

Strain	Origin	Deposit No
<i>Lactococcus lactis</i> VI-01	Kiwi	KCTC14351BP
<i>Lacticaseibacillus paracasei</i> VI-02	Kiwi	KCTC14352BP
<i>Limosilactobacillus fermentum</i> VI-06	<i>Sanghuangporus sanghuang</i>	KCTC14499BP
<i>Lactiplantibacillus plantarum</i> VI-07	Green tea	KCTC16596BP
<i>Lacticaseibacillus rhamnosus</i> VI-13	Infant feces	KCTC14604BP
<i>Lacticaseibacillus casei</i> VI-14	Cheese	KCTC14756BP
<i>Bifidobacterium breve</i> VI-17	Breast milk	KCTC14603BP

LCL-10[®]

Helps Improve Symptoms of Female Menopause

Animal testing completed

Lactococcus lactis LCL-10[®] derived from *Inonotus Obliquus*

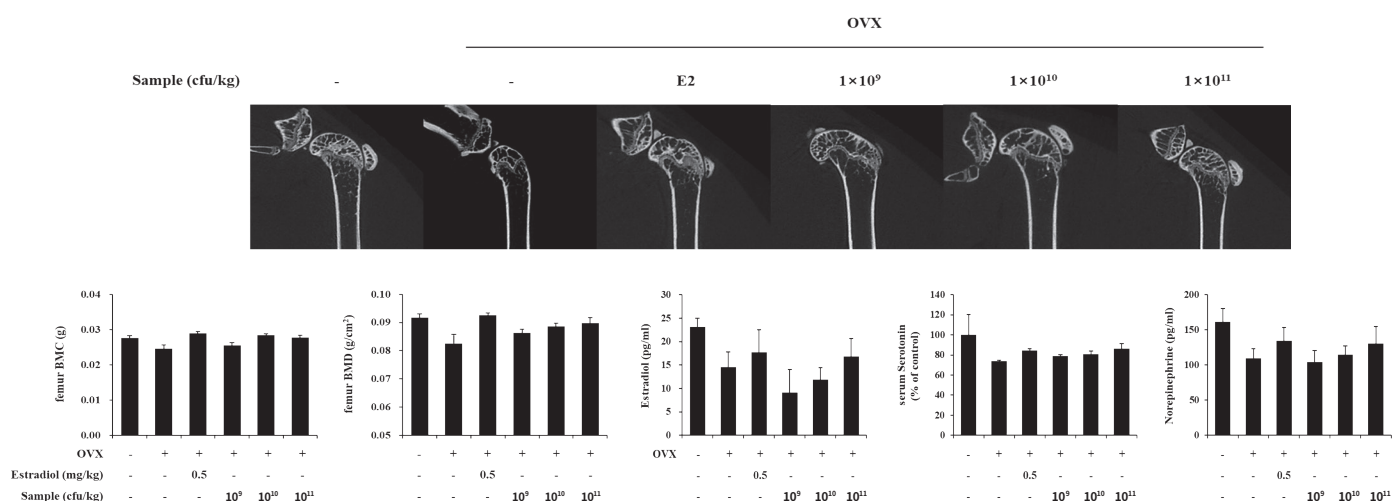
Study Results

Preclinical evaluation using a female menopause animal model

Current Topics in Nutraceutical Research 2024 22(4) 1213-1219



Result of Femur Micro-CT measurement



- **Increased bone mineral content (BMC) and bone mineral density (BMD)** in the femur were observed in a **menopause animal model** induced by ovariectomy.
- **Increased secretion of female hormones** that are reduced due to menopause was confirmed.
- **Increased secretion of hormones** related to **depression and sleep disorders** associated with female menopause symptoms.
- No antibiotic resistance, minimal production of D-type lactic acid.
- Negative confirmation of bile salt deconjugation.
- Probiotic safety evaluation conducted according to WHO/FAO and KFDA guidelines.

Thesis

1. CURRENT TOPICS IN NUTRACEUTICAL RESEARCH 2024 22(4) 1213-1219

Patent

KR 10-2775467

COMPOSITION FOR PREVENTING AND IMPROVING WOMAN CLIMACTERIUM SYMPTOMS COMPRISING INONOTUS OBLIQUUS-DERIVED LACTOCOCCUS LACTIS STRAIN

KR 10-2900245

COMPOSITION FOR PREVENTING AND IMPROVING WOMAN CLIMACTERIUM SYMPTOMS COMPRISING LACTIC ACID BACTERIA

Sanghuangporus sanghuang Parabiotics®



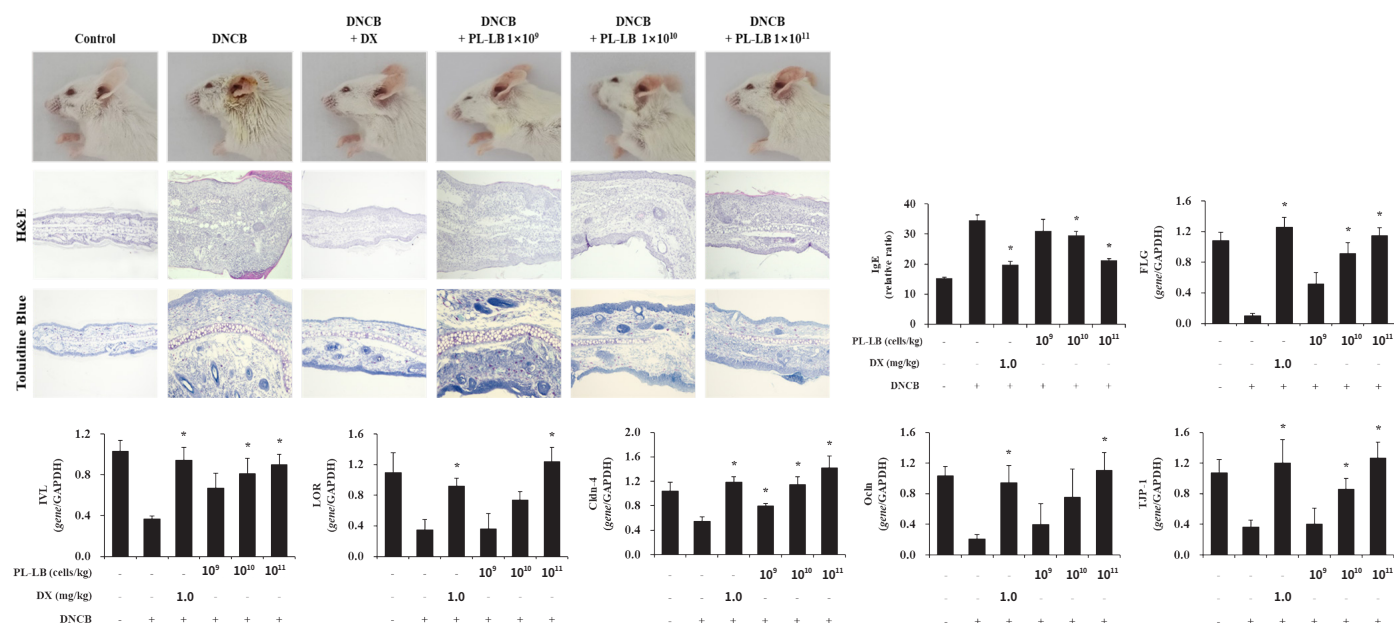
Atopic Dermatitis & Weight Management

Animal testing completed

Study Results

Preclinical evaluation of dermatological hypersensitivity (atopic dermatitis) using an ear edema animal model

Suppression of Ear Thickness



- Oral administration of Sanghuangporus sanghuang parabiotics resulted in a reduction of **skin hypersensitivity reactions** induced by **hypersensitive immune responses**.
- **Reduction in elevated blood IgE levels** caused by hypersensitive immune responses.
- **Decreased skin barrier proteins and moisturizing proteins** due to hypersensitive immune responses lead to the development of itching.
- Consumption of Sanghuangporus sanghuang parabiotics **increases the expression of genes related to skin barrier proteins and moisturizing proteins**, leading to improvement.

Patent

KR 10-2606626

MANUFACTURING METHODS OF HEAT-KILLED STRAIN POWDER ORIENTED FROM PHELLINUS LINTEUS, HEAT-KILLED STRAIN POWDER AND USES THEREOF

KR 10-2704609

COMPOSITION FOR ANTI-OBESITY COMPRISING HEAT-KILLED STRAIN POWDER ORIENTED FROM PHELLINUS LINTEUS



Fermented Gold Kiwi (Kiwibiotics®)



Clinical trial completed

Authorized as the Individually Recognized Functional Ingredients (Recognition Number: 2025-22)

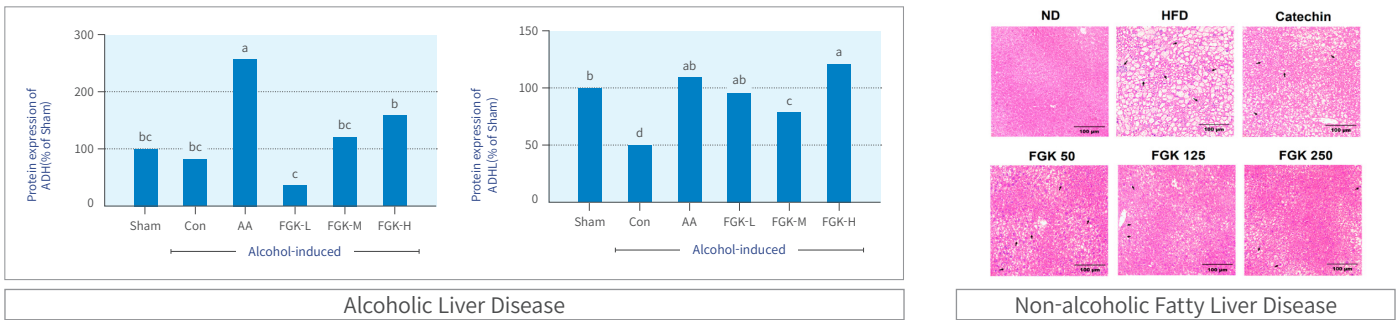
- Function : May help to maintain healthy stomach by protecting gastric mucosa

o Benefits of Gold Kiwi

 Tenderizing effect	 Low GI (Glycemic Index)	 Various by-products including amino acids	 Smooth bowel movements due to abundant fiber
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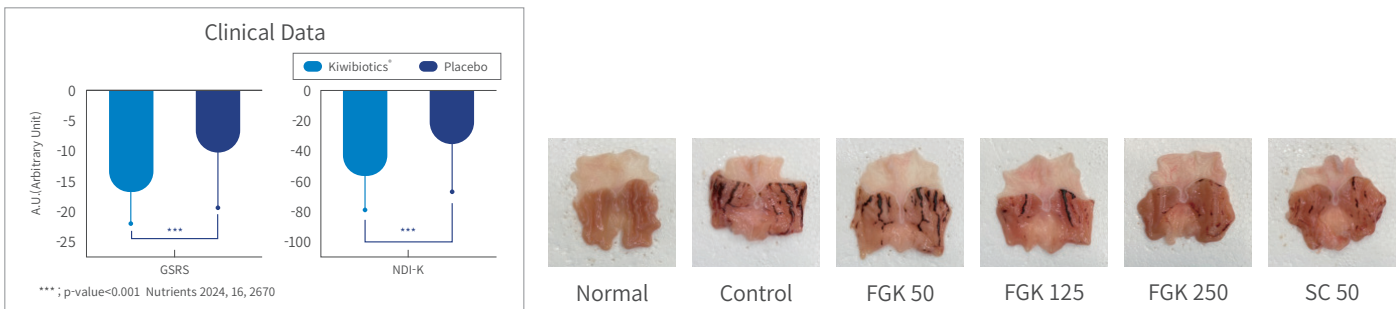
o Liver Health

Effects of fermented gold kiwi(FGK) on the liver index of alcohol-induced mice.



o Gastric Health

The primary efficacy indicators for a human clinical trial on fermented gold kiwi for stomach health- GSRS upper abdominal symptom score and the NDI-K score.





○ Thesis

1. Applied Science 2022, 12, 5271
2. Applied Science 2023, 13(3), 1877
3. Nutrients 2024, 16, 2670
4. Nutrients 2024, 16, 3778
5. Applied Science 2024, 14, 11503
6. Prev. Nutr. Food Sci. 2026;31(1):pnf.2025.229.

○ Patent

KR 10-2315134	FERMENTED KIWI POWDER FOR IMPROVING BOWEL FUNCTION AND METHOD OF PREPARING THE SAME
KR 10-2474865	MANUFACTURING METHODS OF FERMENTATION KIWI POWDER USING STRAIN-DERIVED FROM KIWI AND FERMENTATION KIWI POWDER MANUFACTURED BY THEREOF
KR 10-2520354/JP7511277	COMPOSITION FOR IMPROVING STOMACH FUNCTION COMPRISING FERMENTED KIWI
KR 10-2536627	COMPOSITION FOR PREVENTING OR IMPROVING ALCOHOLIC LIVER INJURY COMPRISING FERMENTED KIWI

○ Finished Product



Omega 7 (Palmitoleic acid)



Clinical trial completed

Authorized as the Individually Recognized Functional Ingredients (Recognition Number: 2024-18)

Function - May help to moisturize (dry) skin

- May help to maintain good skin health by protecting against damage from UV exposure

Registered in the US INCI
(International Nomenclature
of Cosmetic Ingredients)

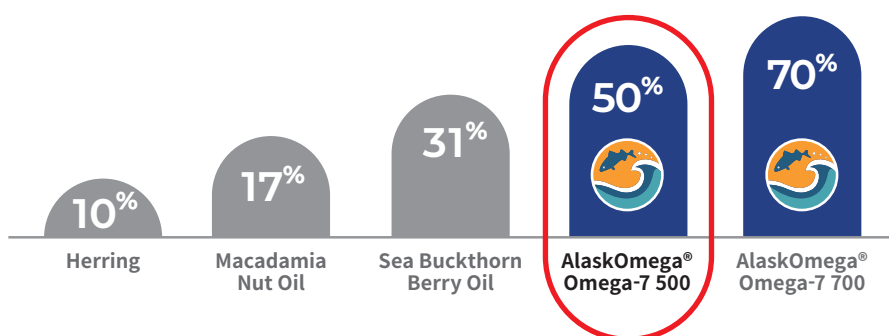
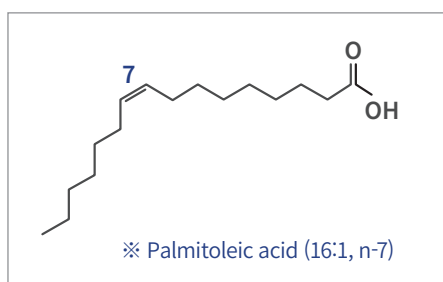
Registration number 38876

Listed as a US GRAS
(Generally Recognized as Safe)
ingredient

GRN 000819

What is Omega 7?

An unsaturated fatty acid containing 16 carbon atoms, with a double bond present at the seventh carbon position from the omega end.



Diverse Functions of 7-MEGA™

Skin moisturizing



- Increasing the skin moisturizing of 7-MEGA™ supplemented group confirmed as a result of measuring the skin moisture content and transepidermal moisture loss.
- In vivo test conducted by the Ministry of Food and Drug Safety of Korea completed.

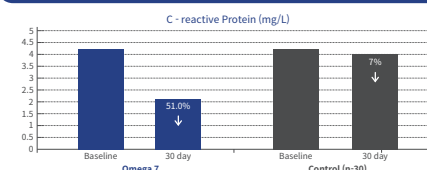
Insulin Sensitiveness Increase

	Baseline	After 9 month	P.
Palmitoleic (16:1, n-7)	4.79±0.12	5.42±0.13	
2 h glucose (mmol/l)	7.05±0.17	6.62±0.18	0.004
Fasting insulin (pmol/l)	56±3	52±3	0.007
2 h insulin (pmol/l)	493±40	432±48	0.001

- Better organic effect verified from the in-vivo experiment result with the 7-MEGA™ digested group in comparison with the non-digestion group in terms of blood sugar level, insulin concentration level and insulin reducing speed measured on 2 hours after meal.

→ Higher insulin sensitiveness with higher 7-MEGA™ content in blood.

Inflammation Cure



What is CRP(C-reactive protein)?

CRP is an acute phase reactant produced in liver within several hours and secreted to circulating blood once the inflammation is developed. The increase of CRP means the presence of inflammation, and the decrease means the activation of anti-inflammation vitality.

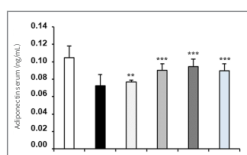
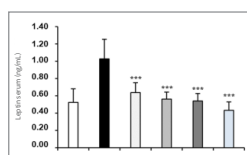
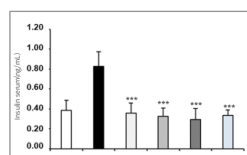
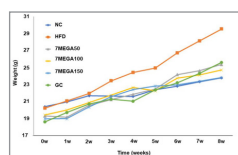
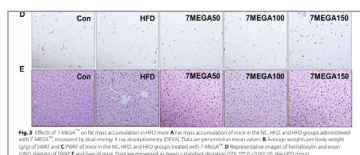


◦ Effect of Omega 7 in weight control

Animal test (Clinical test is ongoing)

NC	HFD	MG50	MG100	MG150	GC200
					
Fat 3.12±0.45g (12.44±1.49%)	Fat 13.56±1.97g (36.90±3.78%)	Fat 8.59±1.90g (28.27±3.51%)	Fat 8.36±2.22g (26.71±4.74%)	Fat 6.01±1.23g (23.59±1.56%)	Fat 9.17±3.12g (28.25±4.70%)

Fat mass accumulation of mice in the NC, HFD, and HFD groups administered with 7-MEGA™, measured by dual-energy X-ray absorptiometry (DEXA). Data are presented as mean values.



	Baseline	After 9 month	P.
Palmitoleic (16:1, n-7)	4.79±0.12	5.42±0.13	
Age (years)	45±1	46±1	
Body weight (kg)	84.4±1.7	81.9±1.6	<0.0001
Body mass index (kg·m ⁻²)	29.0±0.5	28.2±0.5	<0.0001
Body fat (%)	32.3±0.7	31.2±0.9	0.007
Waist circumference (cm)	96.7±1.4	93.6±1.3	<0.0001
Total body fat _{MRT} (kg)	25.5±1.0	23.8±1.0	0.0002
Visceral fat _{MRT} (kg)	3.02±0.18	2.61±0.17	<0.0001
Liver fat _{MRT} (%)	6.17±0.69	3.86±0.43	<0.0001

- Weight, body mass index, body fat & etc. reduced overall.

The effect of 7-MEGA™ on body weight regulation was evaluated in HFD-fed obese mice. The mice received 50, 100, or 150 mg/kg/day orally for 8 weeks, with a normal diet group used as the negative control (NC).

◦ Thesis

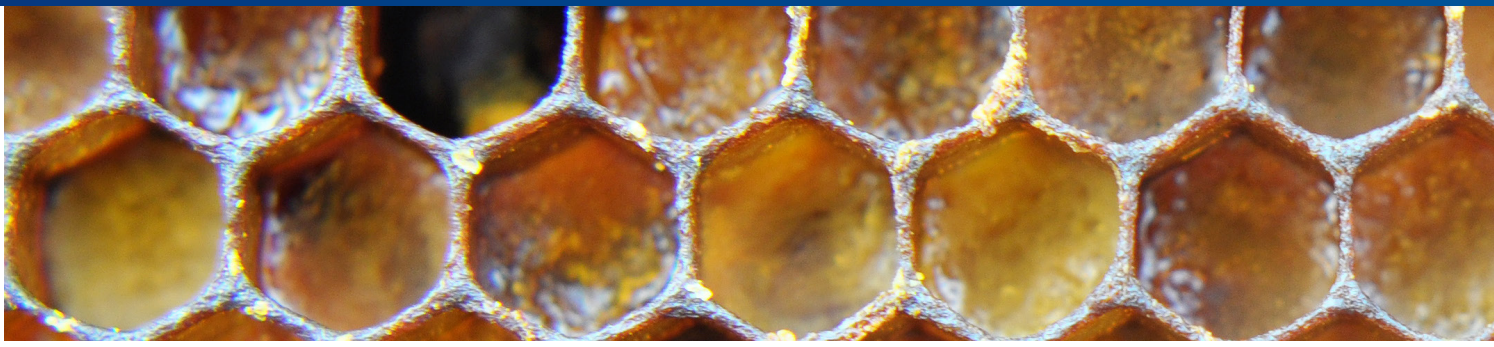
1. Toxicological Research, 34(2), 103-110, 2018
2. Applied Biological Chemistry, 61(4), 433-439, 2018
3. Toxicological Research 35(4), 353-359, 2019
4. MOLECULAR nutrition & Food Research, 2019 June ; 63(12)
5. Heliyon 9 (2023) e16711 2023
6. Nutrients 2024, 16, 212.
7. Lipids in Health and Disease 2024, 23:192
8. Mol Nutr Food Res. 2019 June ; 63(12): e1900120

◦ Patent

KR 10 - 1701326	POWDER COMPOSITION CONTAINING MEDIUM CHAIN TRIGLYCERIDE AND METHOD FOR PREPARING THEREOF
KR 10-2006126	COMPOSITION FOR IMPROVING OF SKIN CONDITIONS, COMPRISING THE SUBSTANCES OBTAINED FROM THE REFINED FISH OIL AS THE EFFECTIVE COMPONENT
KR 10-2087634	COMPOSITION FOR ANTI-OBESITY
KR 10-2286969	COMPOSITION FOR IMPROVING SKIN CONDITIONS COMPRISING OMEGA-7 DERIVED FROM REFINED FISH OIL AND RED GINSENG
KR 10-2464175	PURIFIED FISH OIL POWDER COMPOSITION CONTAINING OMEGA-7 FATTY ACID AND METHOD FOR PREPARING THE SAME

◦ Finished Product





Enzyme Treated Royal Jelly (Enzy-R™)

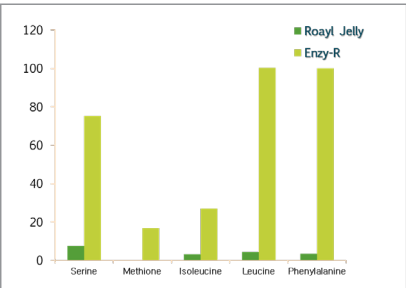


Animal testing completed

Key Features of Enzy-R™

1. Removal of allergenic 47-55kDa proteins
2. Increased 10-HDA content and free amino acids
3. Over 4.5% active components for improved digestibility and absorption
4. Enhanced water solubility and fluidity due to enzyme processing

Major Free Amino Acid Differences



Comparison of freeze-dried Royal Jelly and Enzy-Royal Jelly

Free amino acids increased more than twofold, overall content rose 3–30 times, and enzyme-treated royal jelly powder showed over 20–30% improved immunity.

Allergy Protein Decomposition Experiment

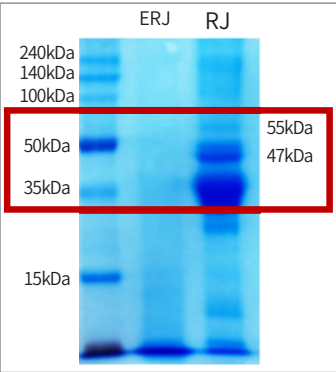


Figure 1

Decomposition of diverse molecular weight protein through enzyme treatment process, and almost no presence of 47~55kDa protein causing allergy reaction comparing with common royal jelly confirmed.

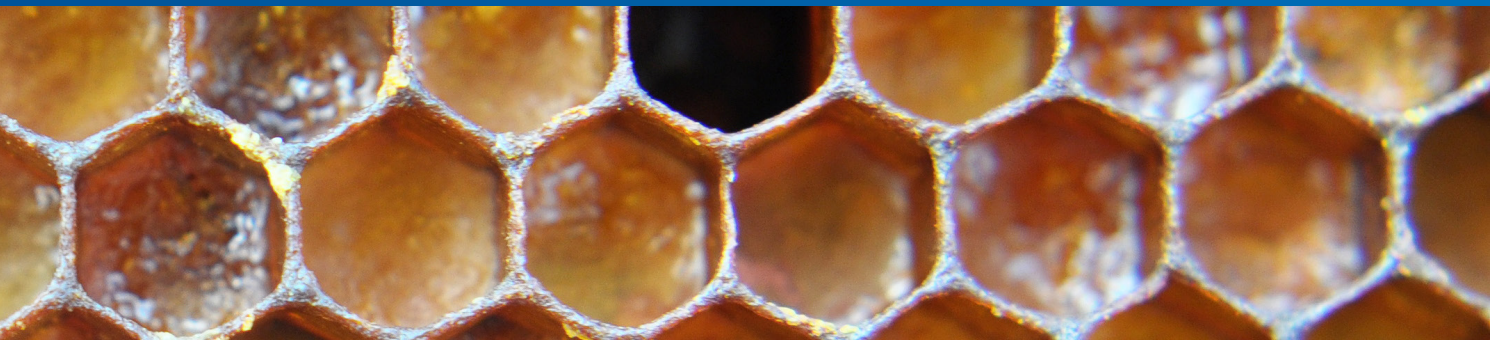
Water Solubility Improvement Experiment



Figure 2

When mixed with purified water at 25°C, it is visually confirmed that Enzy-R™(ERJ) mixes well compare to general royal jelly.

Figure 1. The removal of two allergen proteins by enzyme treatment. ERJ: enzyme treated royal jelly, RJ: non-enzyme treated royal jelly.
Figure 2. The water solubility was increased by enzyme treatment. ERJ: enzyme treated royal jelly, RJ: non-enzyme treated royal jelly.



Increase of NK Cell (natural killer cell) Vitality, a Critical Indicator for Enhancing Immunity

Macrophage reproductive integrity of Enzy-R™ and the vitality of NK (Natural Killer) cells increased respectively depending on their concentration levels.

Improvement of NK-Cell vitality indicator important for promoting the immunity and macrophage reproduction confirmed depending on the Enzy-R™ concentration level.

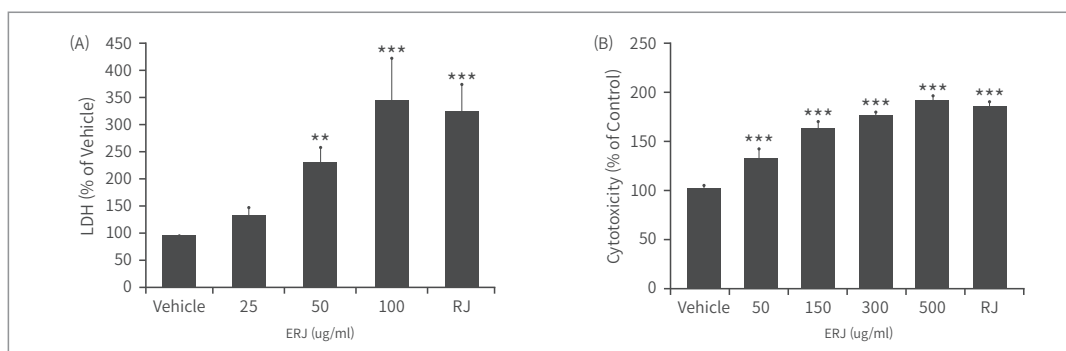


Figure 3

Figure 3. Effect of ERJ on NK cell activity. (A) In vitro NK cell activity. ERJ enzyme-treated royal jelly, RJ non-enzyme-treated royal jelly. Data are expressed as mean $\pm$ SE (n = 3). (B) In vivo NK cell activity. ERJ enzyme-treated royal jelly, RJ non-enzyme-treated royal jelly. Data are expressed as mean $\pm$ SE (n = 10). **p<0.01; ***p<0.001, compared with vehicle

o Thesis

1. Applied Biological Chemistry, 61(2), 227-233, 2018
2. Korean Journal for Food Science of Animal Resources, 38(1), 135-142, 2018
3. J Biomed Transl Res 2020;21(1):001-010

o Patent

KR 10-1900258

PREPARATION METHOD OF ENZYME TREATED ROYAL JELLY AND ENZYME TREATED ROYAL JELLY

KR 10-2173591

PHARMACEUTICAL COMPOSITION FOR ENHANCING IMMUNE FUNCTION COMPRISING ENZYME TREATED ROYAL JELLY AS AN ACTIVE INGREDIENT

KR 10-2380162

A PHARMACEUTICAL COMPOSITION FOR PREVENTING OR TREATING INFLAMMATORY BONE JOINT DISEASES COMPRISING AN ENZYME-TREATED ROYAL JELLY POWDER

o Finished Product



Thyme(*Thymus quinquecostatus*) Extract

Helps Improve Symptoms of Male Menopause

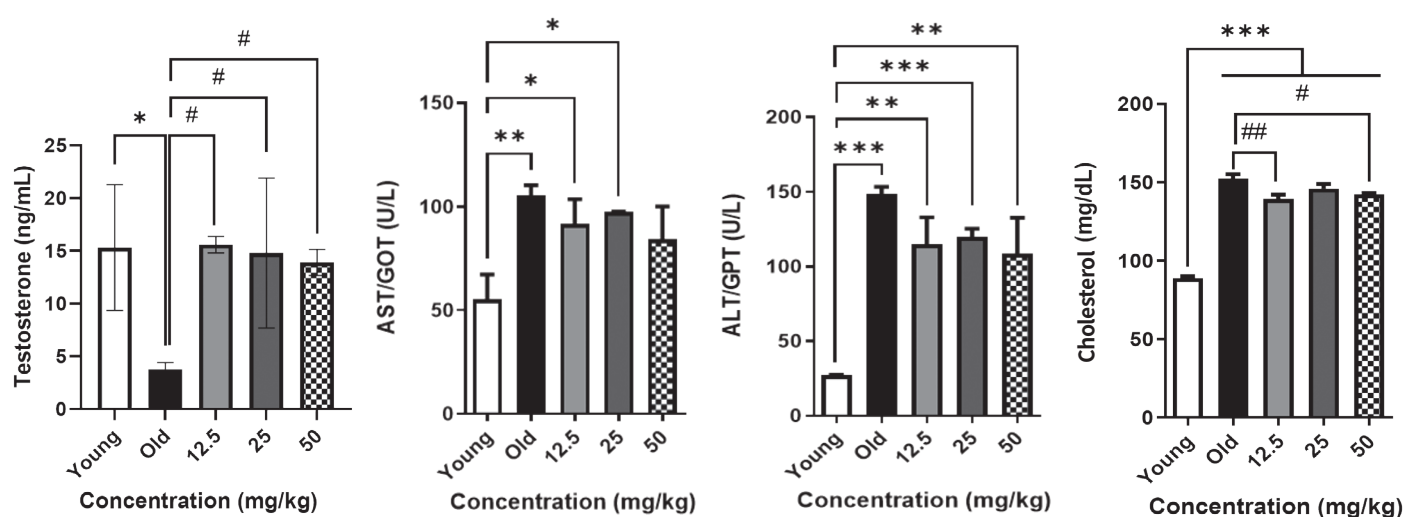
Animal testing completed

Study Results

Efficacy evaluation of male menopause improvement in an aging mouse model

Biomedicine & Pharmacotherapy 175, 2024, 116700

Effect of Thyme Extract on Testosterone, Safety Markers, and Cholesterol in LOH Mouse Serum



- In a study with 50-week-old aging mouse, an **increase in blood testosterone levels** was observed after thyme extract administration.
- **Reduction in liver damage markers (AST, ALT)** and **improvement in metabolic indicators** associated with aging were confirmed.
- Thyme extract administration resulted in **increased synthesis and secretion of testosterone**, which is reduced due to aging, showing **improvements** in menopause symptoms and metabolic markers affected by aging.

Thesis

1. Applied Science 2023 13, 12449
2. Biomedicine & Pharmacotherapy 175 (2024) 116700

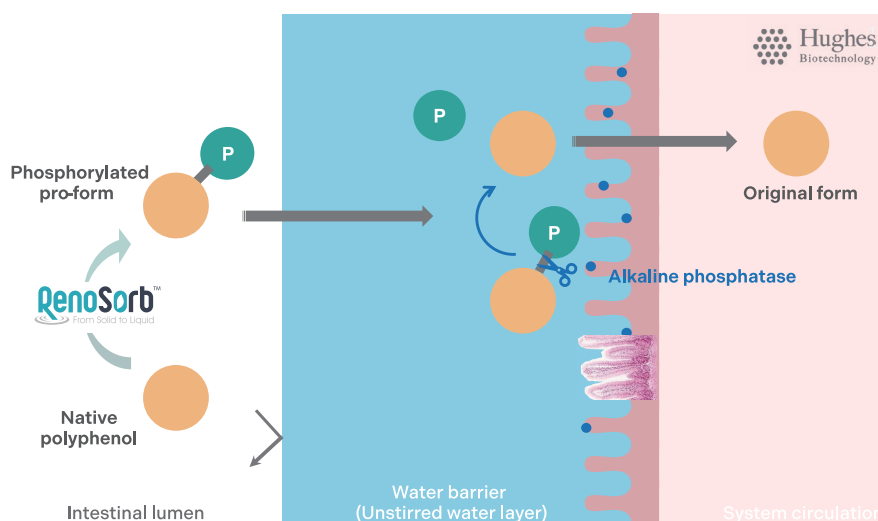
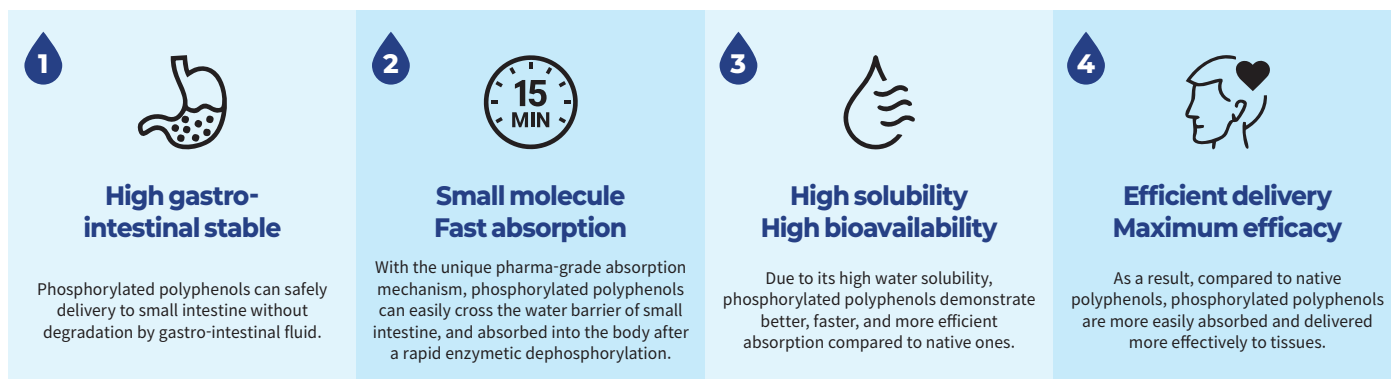
Patent

KR 10-2559381

COMPOSITION PREVENTING OR IMPROVING OF ANDROPAUSE SYNDROME COMPRISING THYMUS QUINQUECOSTATUS CELAK. EXTRACTS

RenoSorb™ *US Patented: Small Serving, High Bioavailability*

RenoSorb™, a proprietary biotransformation process that can phosphorylate polyphenols and turn them into truly water soluble rather than just dispersion. Hughes's pro-polyphenols can easily cross the intestinal biological barrier and be ab"Sorb"ed as their aglycone form easily with maximized efficacy on health benefits.



NDI : 1253

NDI : 1283

RenoCidin™ Fermented Citrus Bioflavonoids   Exercise Boost Circulation Health 	RenoFlavone™ Fermented Soy Extract   Women Health Cardiovascular Health 	RenoSage™ Fermented Chrysanthemum Extract   Brain and Neuro Health Uric Acid Relief 	RenoVital™ Most bioavailable apigenin   NAD⁺ Boost Sleep Support 
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Cardiovascular & Metabolic Health

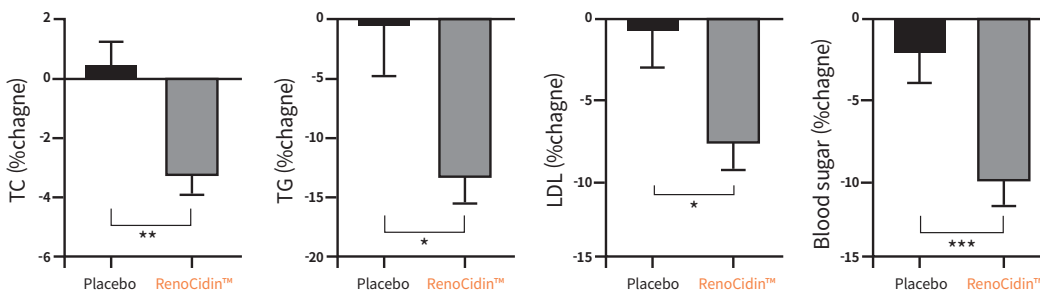
✓ Publication ✓ Clinical trials

Supports metabolic syndrome management and helps regulate blood markers (TG, TC, LDL, Blood sugar).

Suggested Dose: 100 mg

Clinical Study - Metabolic Wellness

- **RenoCidin™** regulates blood markers in borderline high TC individual.



- **Randomized, double-blind, placebo-control Clinical Study.** 32 borderline hyperlipidemia subjects (aged 18-40, TC ~200 mg/dL) were enrolled into placebo or RenoCidin™ groups for an 8-week trial to evaluate the effect of RenoCidin™ on blood lipid and blood glucose regulation.
*p < 0.05; **p < 0.01, ***p < 0.001. Mean ± SEM.

Blood Circulation

✓ Publication ✓ Clinical trials

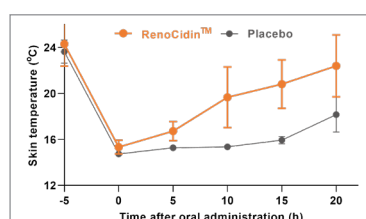
Supports peripheral circulation, vascular endothelial health, and enhances blood vessel elasticity. (TG, TC, LDL, Blood sugar).

Suggested Dose: 50-100 mg



Suggested dose: 50 mg/day
Evaluation of changes in skin temperature before and after the cooling experiment to assess the improvement in blood circulation effectiveness.

- **Cooling Pressure Test:** Ice water at 10°C for 5 min.
- **Experimental Groups:**
[Placebo] 200 mL of drinking water.
[RenoCidin™] 50 mg of RenoCidin™ dissolved in 200 mL of drinking water.
- **Measurement Instrument:** Thermal Imaging Camera.



Condition
25°C, RH 60% with solution
at 25°C, n = 5.
[In-house data]

Women's Health ✓ Clinical trials

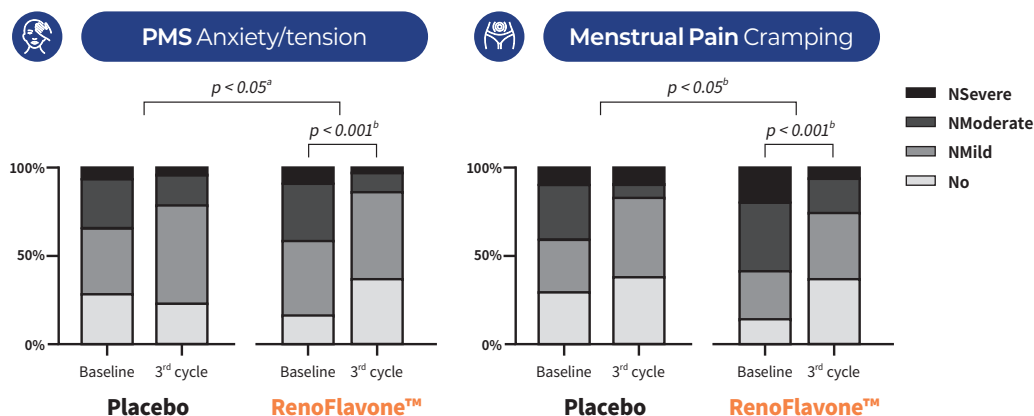
Hormonal imbalance, pre- and post-menopausal discomfort, menopausal syndrome, hot flashes, night sweats, sleep disturbances, blood glucose and blood pressure stabilization, urinary incontinence, dry eyes, vaginal dryness, bone density loss, autonomic nervous system imbalance, GLP-1 secretion, memory decline and cognitive aging, metabolic performance, and breast cancer prevention.

Suggested Dose: 200–400 mg

PMS Relief ✓ Clinical trials

Primary dysmenorrhea and premenstrual syndrome (PMS) discomfort relief.

Suggested Dose: 200 mg

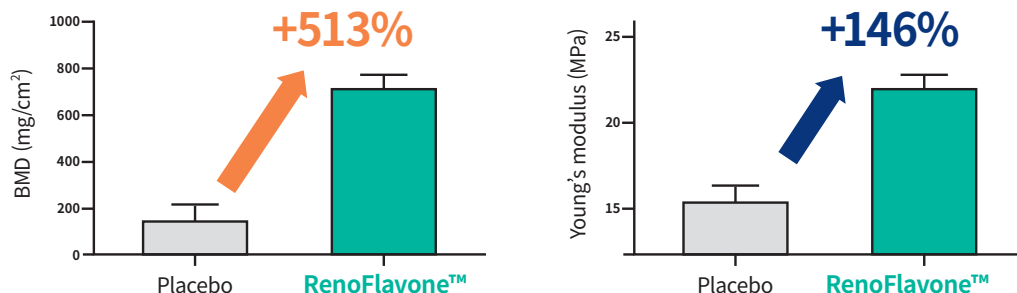


- **Randomized, double-blind, placebo-control Clinical Study.** 120 Asian women (aged 18-40) with primary dysmenorrhea assigned to either a placebo or RenoFlavone™ group, and a 3-month human trial was conducted. Effects of RenoFlavone™ intervention on the PMS and dysmenorrhea feeling. Comparison of baseline vs 3rd cycle values in each group (Wilcoxon test)^a and between groups (Mann-Whitney U test)^b.

Bone Health ✓ Publication ✓ Patents

Increase bone mineral density and bone elasticity.

Suggested Dose: 400 mg



LOCALIZATION



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