Medicos Biotech

Biology

For healthier & beautiful life

Platform Technology

First in Korea to produce spider silk protein through bacteria fermentation

Business Model

Application of spider silk protein to medical device

Application of spider silk protein to cosmetics

Application of spider silk protein to pharmaceuticals

CEO

Won Min Yoo

- DM Plastic Surgery ('08~Present)
- Professor of the Department of Plastic Surgery of Severance Hospital ('96~08)

Regular member of The Korean Society of Plastic and Reconstructive Surgeons

Regular member of the Korean Society for Aesthetic Plastic Surgery

Regular member of Korean Cleft Palate-Craniofacial Association

Medicosbiotech focuses on applying spider silk protein to medical devices and cosmetics.
The unique biomaterial is produced through recombinant protein technology, using bacteria fermentation.
The protein itself shows high mechanical strength as well as outstanding biological properties, making it an attractive material for many industries.
We focus on using the protein in developing medical devices as well as cosmetic products all based upon scientific research.

INCI Name	• sr-(Escherichia Coli Methinoyl Hexapeptide-40 Spider Polypeptide-3) Ferment Extract
Efficacy	• Increase expression of collagen synthesis related gene to provide anti-aging effect • Increase expression of moisture related gene to allow self-hydration
Marketing Point	• Anti-aging (Anti-wrinkle, Antioxidant) • Moisture protection • Biocompatible, Biodegradable, Hypoallergenic
Recommended Dosage	• 0.005% ~ 0.025%
Formulation	• Clear liquid with slight viscosity
Ingredient	• sr-(Escherichia Coli Methinoyl Hexapeptide-40 Spider Polypeptide-3) Ferment Extract, Urea
Available Concentration	• 1% (SP:DER:MA-silk-1) • 0.1% (SP:DER:MA-silk-0.1) • 100ppm (SP:DER:MA-silk-0.01)

SP:DER:MA-silk-0.01 is dissalved in 0.5M urea, while others in 4M urea solution

All products may contain preservatives (1,2-hexanediol) upon request

Medicosbiotech Inc.

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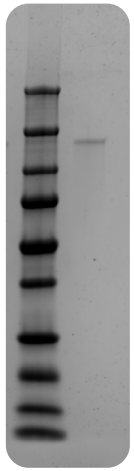
SP:DER:MA

SPIDER SILK PROTEIN

Medicosbiotech Inc.

SP:DER:MA-silk

- SP:DER:MA-silk, composed of repetition of glycine and alanine amino acids, shows biocompatible, biodegradable properties as well as excellent mechanical properties (toughness, elasticity)
- SP:DER:MA-silk activates growth factors for effective cell growth, which results in outstanding skin recovery
- It creates a semi-permeable film for moisture protection
- Also, hypoallergenic material suitable for various skin types



INCI Name

sr-(Escherichia Coli Methinoyl Hexapeptide-40 Spider Polypeptide-3) Ferment Extract

Protein Size

146.7 kDa

*Smaller sized SP:DER:MA available upon request

Related IP

KR 10-1765255-0000
10-2020-0029994
10-2018-0146288
10-2020-0169583

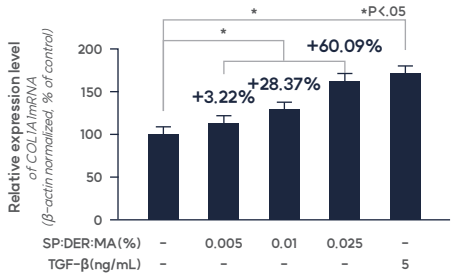
Also available in US, EU, JP, CN, SG, AU

US	10351890	**EU**	2330186
JP	5858936	**CN**	102906107B

In-vitro test results

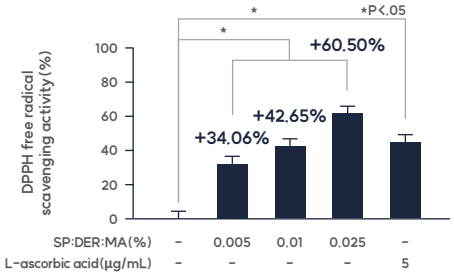
Collagen Synthesis

COL1A1 synthesis increased in silk-treatment group



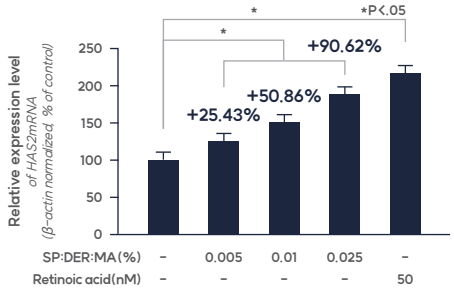
Antioxidant

DPPH free radical scavenging activity increased in silk-treatment group



Hyaluronic Acid Production

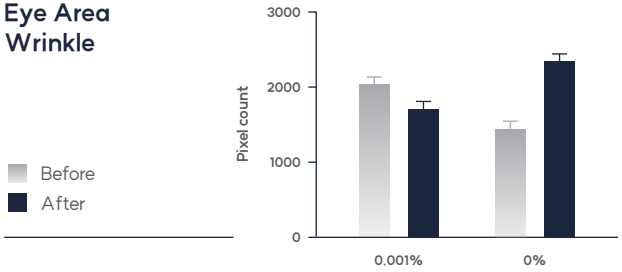
HAS2 synthesis increased in silk-treatment group



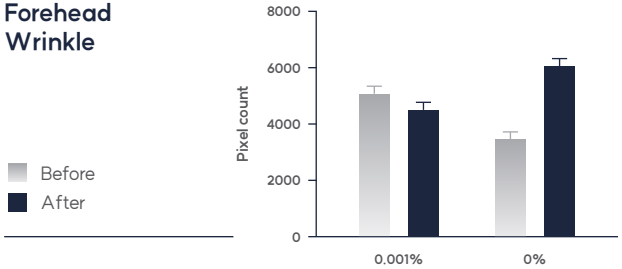
※ All tests were performed by Korea Institute of Dermatological Sciences

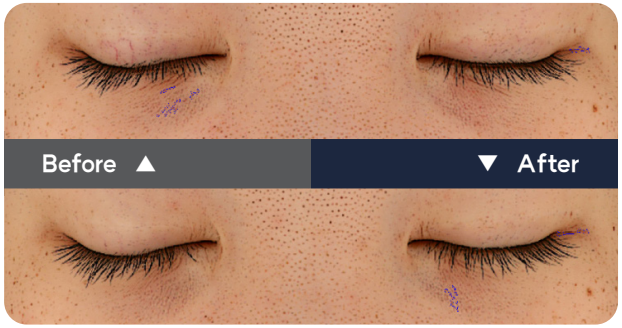
Clinical test results

Eye Area Wrinkle

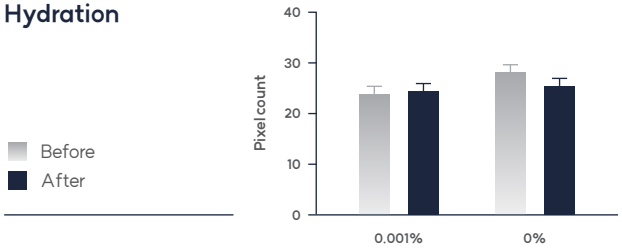


Forehead Wrinkle





Hydration



※ In-house clinical testing