

Total Solutions for Human Better-Being

We strive to become a company that provides the best solutions so that people can live healthier and more beautiful lives.

Daebong LS Co., Ltd.



Tremellan-MC Extract (Tremella fuciformis Polysaccharide)



Antioxidant & Moisturizing
& Wrinkle improvement

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Key point

Tremellan-MC Extract

Tremellan-MC Extract is a polysaccharide isolated from Tremella fuciformis Mycelium. It contains lots of flavonoids, polyphenols, polysaccharides, and amino acids. It has great combination with skin that helps to keep your skin healthy and anti-aging. It is also known as a natural moisturizer due to its character of absorbing moisture.

Differentiating points of Tremellan-MC Extract

Antioxidant
ROS inhibition

Anti-aging effect
Enhancing
Collagen synthesis

Moisturizing
Deep inside
moisturizing

IFSCC 2019 Poster
Patent application
(under review)
No 10-2019-0138381

Introduction

■ Tremella fuciformis(Snow fungus)?

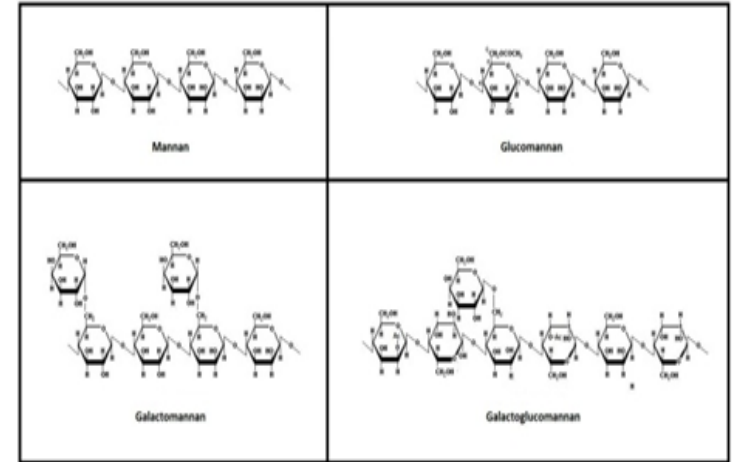
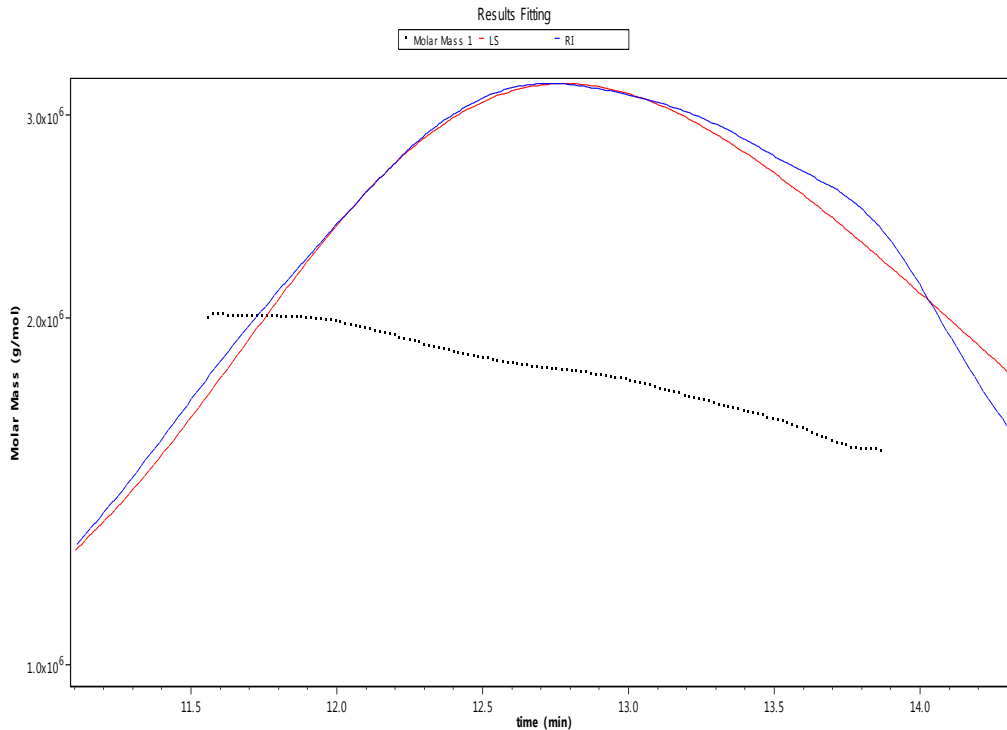


A precious mushroom that has been loved by Chinese queens since ancient times

Tremella fuciformis is one of the kinds of mushrooms which was used by beautiful ancient women in China as a nourishing for the skin and hair care that helps to keep the skin/hair moist and shine.

Introduction

Tremella Fuciformis Polysaccharide?



Tremellan-MC Extract

Average molecular weight

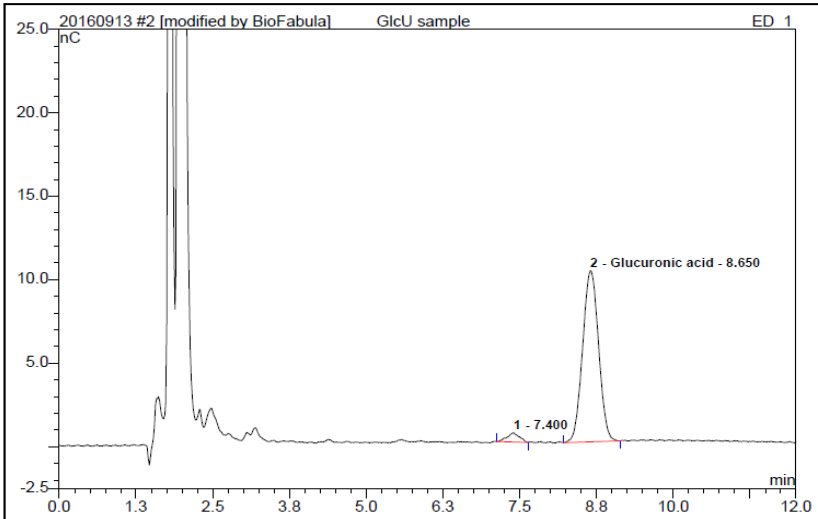
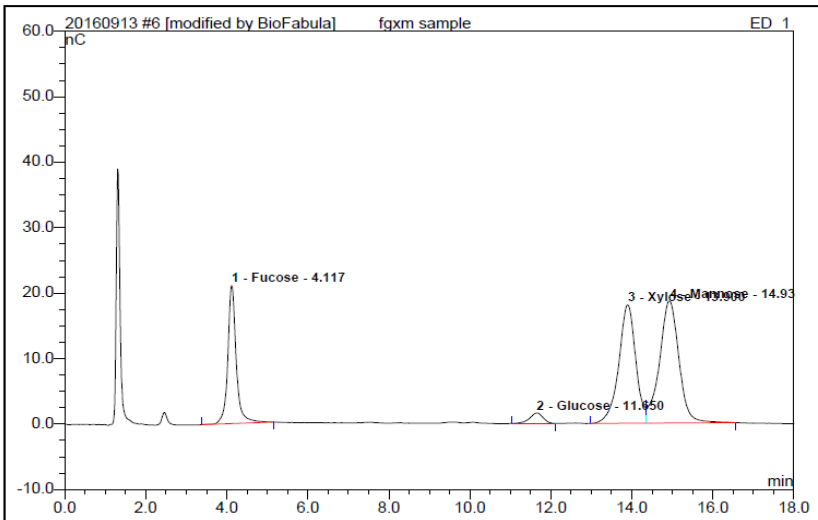
: $1.79 \times 10^6 (\pm 0.721\%)$

Source: internal

- Tremella Fuciformis Polysaccharide is composed of sugars such as α -mannose and β -glycoronic acid. It can attract moisture up to 500 times its own weight and is effective for moisturizing the skin.
- Tremella Fuciformis Polysaccharide is the only vegetable moisturizer with a molecular weight of over 1 million.

Introduction

Sugar Composition of Tremella Fuciformis Polysaccharides



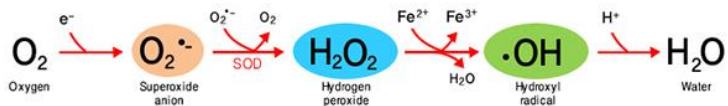
Sugar	Content (g)
Fucose	17.1
Glucose	1.3
Xylose	21.0
Mannose	40.3
Glucuronic acid	17.3
<hr/>	
Total	96.8

Source: internal

Efficacy (In-vitro)

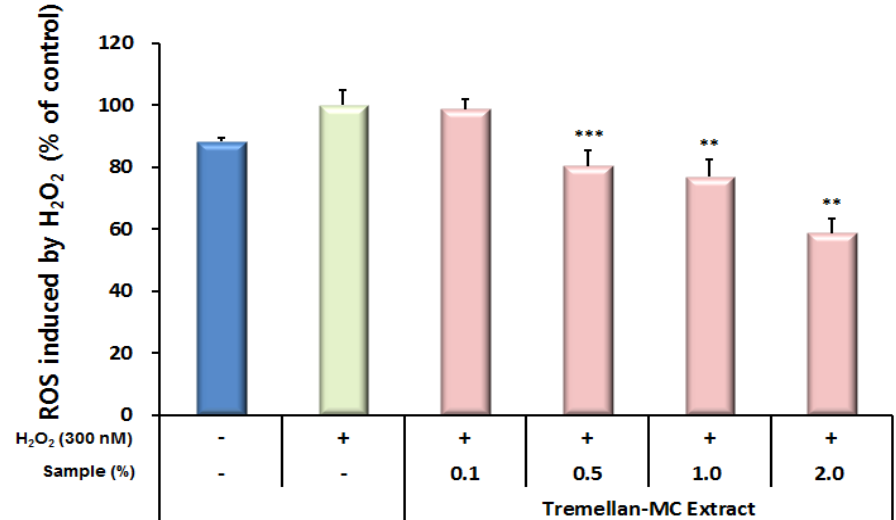
❖ Effect of Anti-Oxidation

Reactive Oxygen Species (ROS)



• Reactive Oxygen Species (ROS)

Oxygen that enters the body during the breathing process, oxidized and became an oxygen species with strong oxidizing power, damage cells and lose function, or it causes deterioration, which causes various diseases and aging.

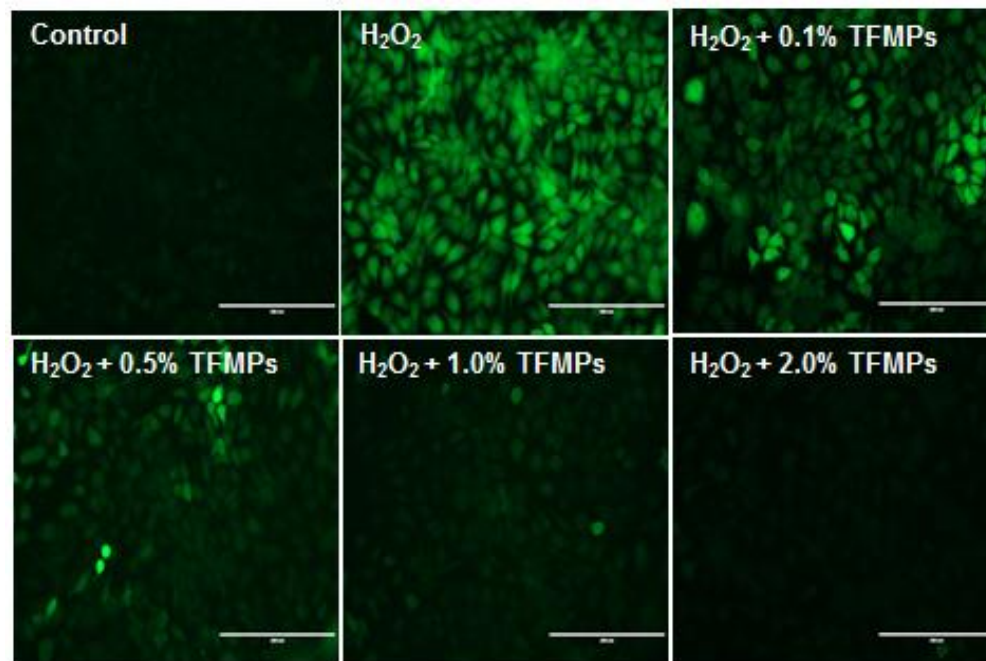
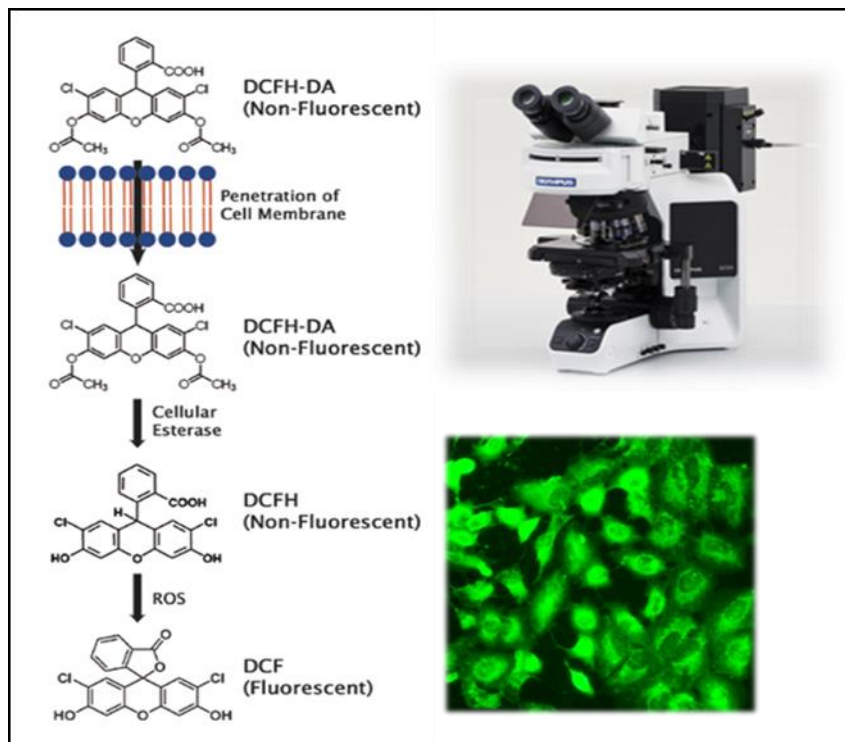


- Confirmed that ROS is expressed by H_2O_2 treatment in HaCaT cells.
- Treatment with tremellan-MC extract at concentrations that do not cause cytotoxicity resulted in a decrease in ROS production in a concentration-dependent manner.

Source: internal data

Efficacy (In-vitro)

❖ Effect of Anti-Oxidation

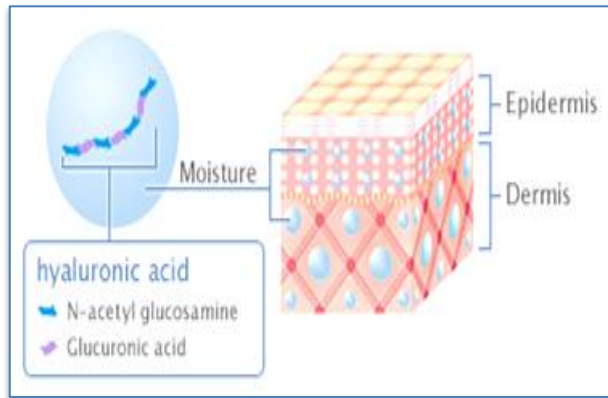


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Source: internal data

Efficacy (In-vitro)

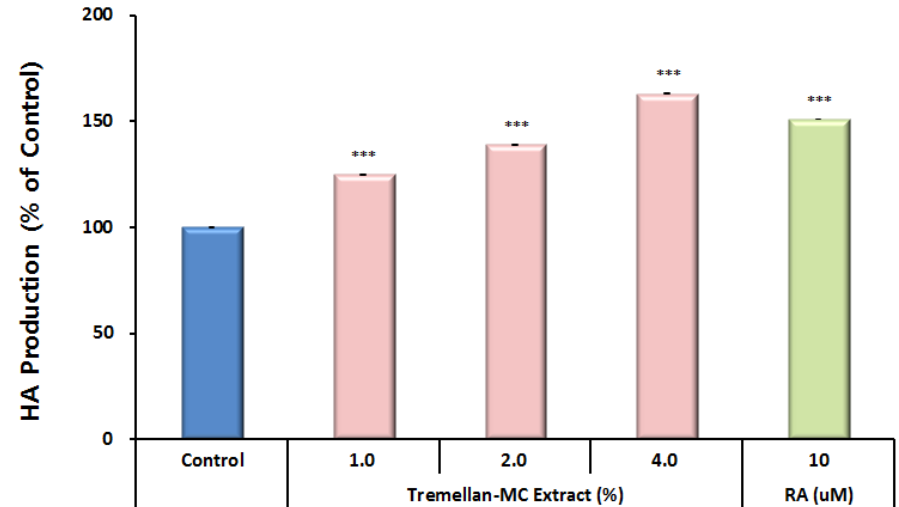
❖ Skin cell moisturizing effect



- **Hyaluronic acid (HA)**

Excellent water contents to maintain moisture balance.

Increasing the content of the stratum corneum improves skin barrier repair ability.

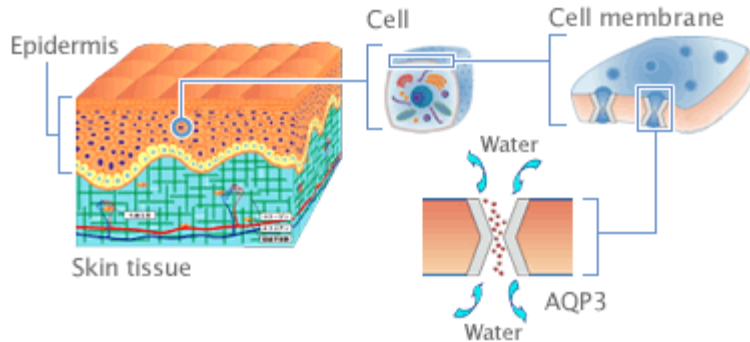


- The tremellan-MC extract was treated at a concentration where cytotoxicity did not occur, resulting in increased HA production.

Source: internal data

Efficacy (In-vitro)

❖ Skin cell moisturizing effect

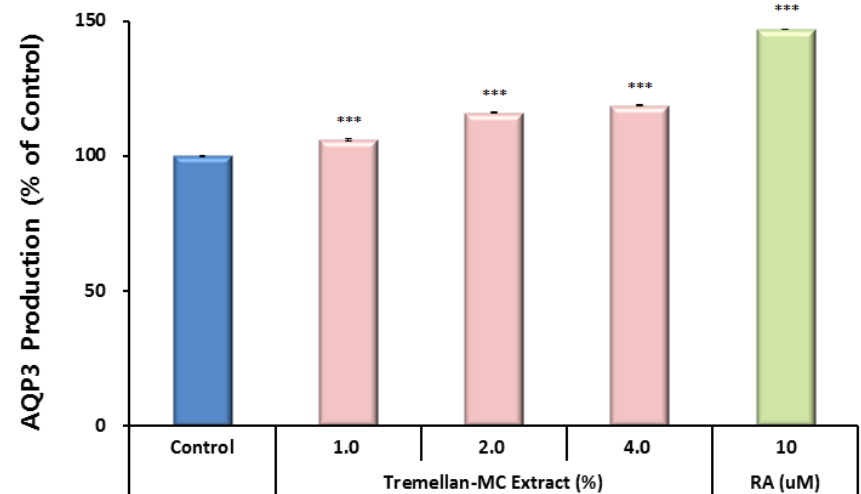


- Aquaporin3 (AQP3)

It is present in the cell membrane of keratinocytes and plays an important role in hydration of the skin.

Involved in maintaining skin homeostasis through the movement of water molecules and glycerol.

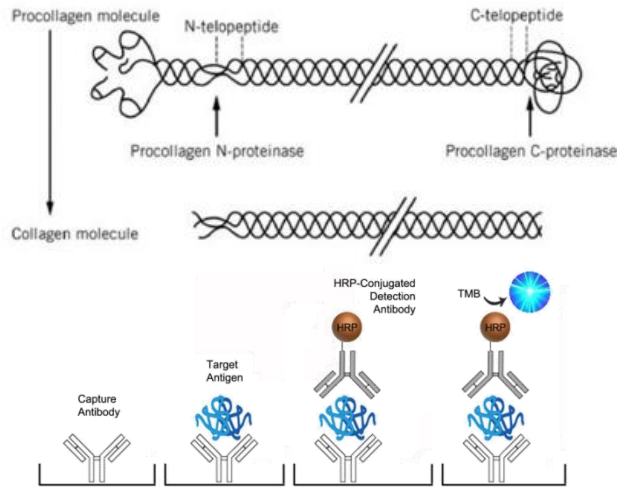
- The tremellan-MC extract was treated at a concentration where cytotoxicity did not occur, resulting in increased AQP3 production.



Source: internal data

Efficacy (In-vitro)

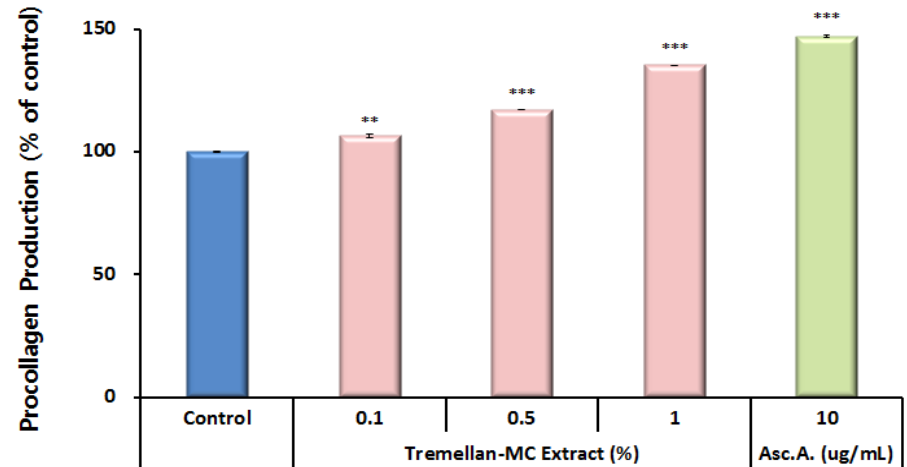
❖ Effect of anti-wrinkle



• Procollagen type I C-peptide (PIP)

Collagen is synthesized as a procollagen in cells, then secreted out of cells and polymerized into collagen fibers.

Human procollagen type I C-terminal peptide (PIP) quantification to check the amount of collagen production.

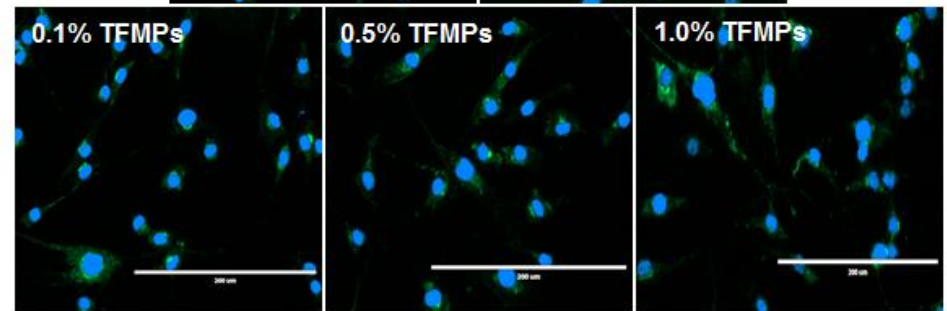
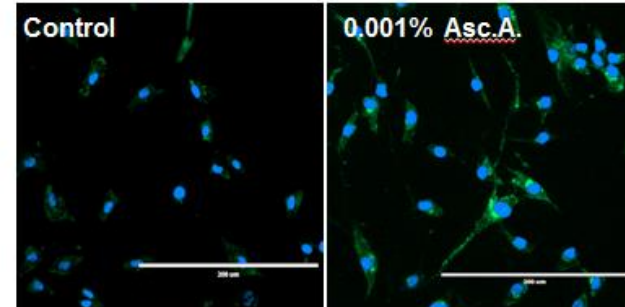
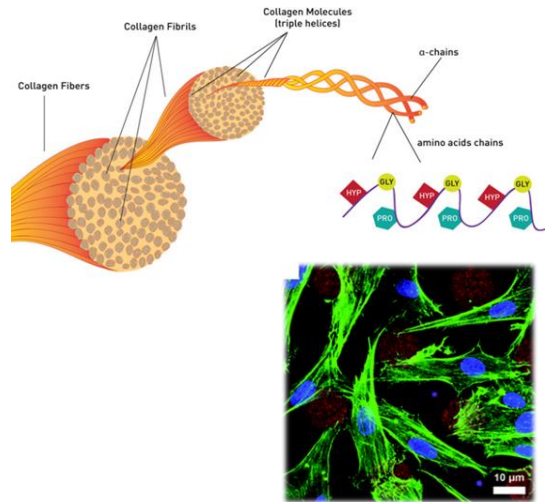


- The tremellan-MC extract was treated at a concentration where cytotoxicity did not occur, resulting in increased PIP production.

Source: internal data

Efficacy (In-vitro)

❖ Effect of anti-wrinkle



- Collagen

Collagen is synthesized in cells and aggregated into long fibrous structural proteins that move out of the cell and support the outer regions of cells or tissues, forming collagen fibers.

- The tremellan-MC extract was treated at a concentration where cytotoxicity did not occur, resulting in increased Collagen fiber.

Source: internal data

General Information

Origin	Korea
INCI name	Tremella Fuciformis Polysaccharide
Product name	Tremellan-MC Extract
IECIC (2014)	银耳 (TREMELLA FUCIFORMIS) 多糖 (TREMELLA FUCIFORMIS POLYSACCHARIDE)
Activity	Anti-oxidation & Mosturizing & Anti-wrinkle

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Thank you!