# Explanation on Culture Supernatant of Immortalized Human Dental Pulp Stem Cells (lms cell)

Azabu Central Clinic

## Immortalized Human Dental Pulp Stem Cell (lms Cell) Culture Supernatant

Culture supernatant is the supernatant fluid made by culturing stem cells collected from humans in a culture medium and then extracting the cellular components.

Culture supernatant is rich in various bioactive substances (growth factors, cytokines, exosomes, etc.) secreted by stem cells, which are said to number as many as 500.

A small amount of bioactive substances are involved in cell generation and energy production, preventing cellular aging and regulating the normal function of each organ of the body, and therefore can be expected to have health and beauty benefits when taken into the body.

Cytokines: Proteins released from cells that exhibit immune, antitumor, antiviral, and cell growth and differentiation regulating actions.

Dental pulp stem cells are more active than other stem cells (e.g., adipose-derived, bone marrow-derived, umbilical cord-derived) and can produce extremely good culture supernatant. Dental pulp cells have a greater ability to proliferate and build bone than bone marrow or fat stem cells, as well as the ability to reduce inflammation, enhance immune function, and repair the nervous system.

#### **Effects of treatment:**

Normalization of turnover, Anti-inflammatory effect, Wound healing effect, Antioxidant effect, Improvement of sagging and wrinkles, Improvement of skin elasticity, Improvement of insomnia, Recovery from fatigue

#### **Treatment Guidelines:**

Once every two weeks to once a month is recommended. The administration time is about 15 to 30 minutes.

Although the effects may vary from person to person, it is recommended to continue the treatment for 3 to 6 months.

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The dosage can be adjusted according to the individual's experience, starting with 1 CC.

#### **Contraindications:**

Pregnant or breastfeeding women

#### **Precautions:**

As a general rule, you will not be able to donate blood after undergoing this treatment.

## **Growth Factors in Culture Supernatant**

#### •EGF: Epidermal Growth Factor

EGF promotes cell growth in the skin (epidermis) and is effective in accelerating skin turnover and wound healing.

#### •IGF: Insulin-like Growth Factor

IGF promotes the production of collagen, elastin, hyaluronic acid, etc.

#### •TGT: Transforming Growth Factor

TGT transforming growth factor has anti-inflammatory effects and improves sensitive skin.

#### •PDGF: Platelet-Derived Growth Factor

PDGF acts as a growth factor for other cells and has effects such as tissue repair and collagen production.

#### •FGF: Fibroblast Growth Factor

FGF works to produce collagen and elastin, which are necessary to maintain skin elasticity, and hyaluronic acid, which is necessary to moisturize the skin.

#### •HGF: Hepatocyte Growth Factor

HGF inhibits the aging of not only the liver but also all types of cells and activates the body's internal network.

## **Handling of Personal Information**

Your progress with the culture supernatant may be used in academic conference presentations, papers, and others, but your privacy will be kept strictly confidential. We will not use your name or personal identifying information in any of our reports. Your privacy, including information about your medical condition and name, will be strictly protected.

### **Treatment Costs**

Treatment with culture supernatant is a self-funded treatment that is not covered by health insurance. Treatment fees will be charged in accordance with the contents and details of the actual treatments.