



CURESTEM

"Human Cord Blood Conditioned Media"



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Brand Story | Brand name

CURESTEM

Curestem as a [Cure+Stem Cell], heals and cures damaged skin.

CURESTEM

Cure + Stem(cell)

Cure ; substance or procedure that ends a medical condition

; a change in lifestyle that helps end a person's sufferings ; the state of being healed, or cured

Brand Story | Brand definition

**Professional use · Human cord blood cell conditioned media based
· Skin regeneration, Anti-inflammatory skin booster**



“CURESTEM” is a restorative cosmetic brand for clinics and skincare professionals developed by Kangstem Biotech’s unique source technology of utilizing human cord blood cell and Dongwha Pharmaceutical’s 122 years of know-how.

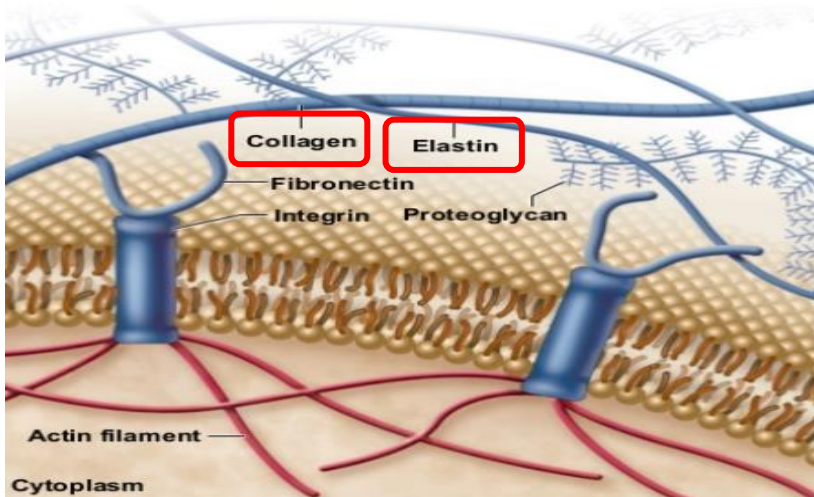
The CURESTEM Cell Healer series is a skin booster with maximized skin regeneration, wound healing, and anti-inflammatory effects containing

“Human cord blood cell conditioned media”, USC1994™ developed by the top stem cell experts of the best R&D cluster in Korea through comprehensive research on human cord blood cell conditioned media.

Profile | Brand definition

**Collagen synthesis and tighten elastin for weakened, damaged, aged skin
skin booster needed to restore and repair**

■ ECM (Extra Cellular Matrix) of dermis

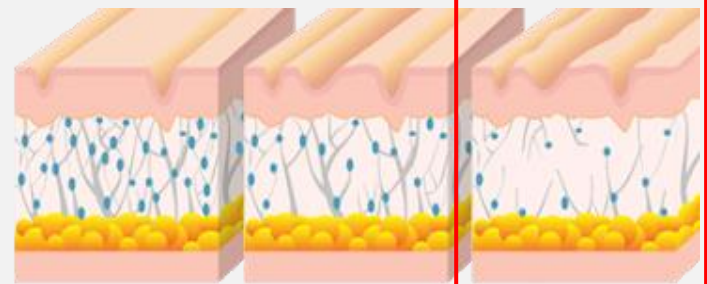


Collagen 70% , Elastin 5%, Hyaluronic acid 20%, ETC 5%

■ Weakened, aged skin



Damaged ECM of dermis

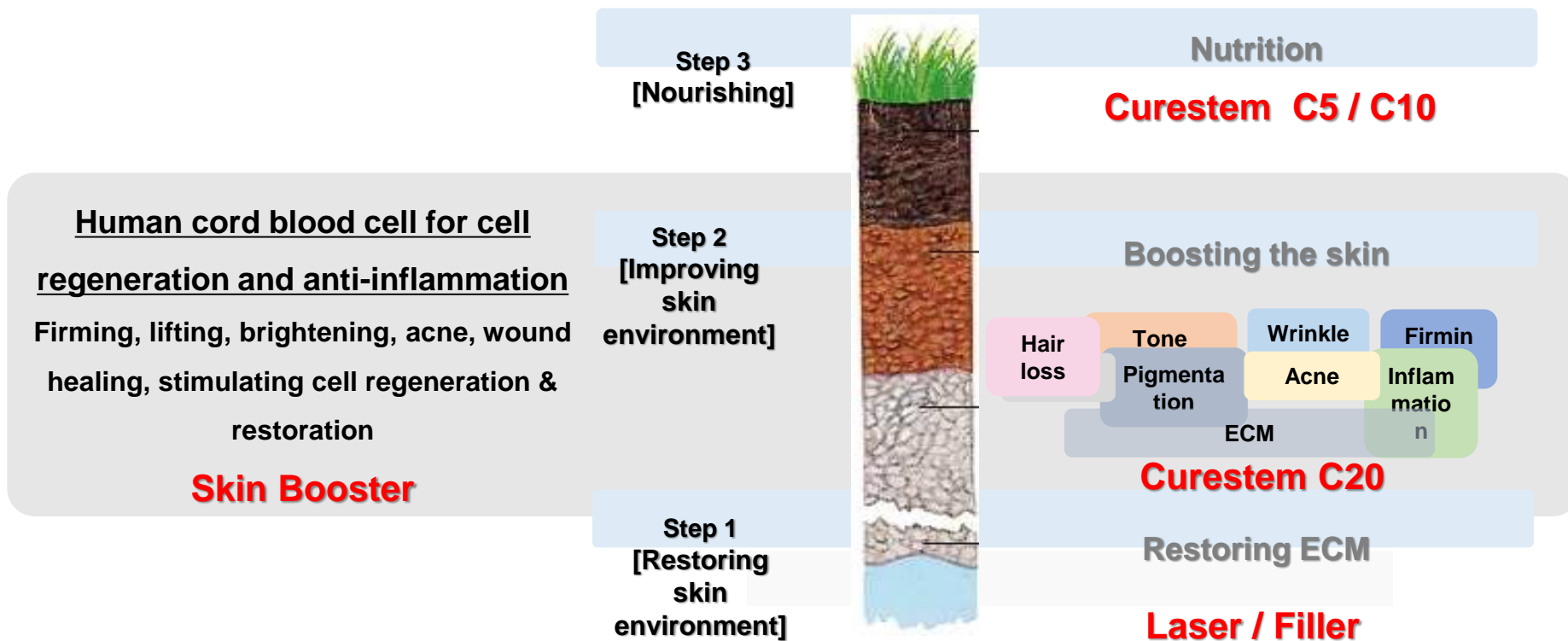


Young / Adult / Aged

Need to be restored

Profile | Brand definition

Restoring & repairing **Medicosmetic, Curestem**



Core Technology | **Human cord blood cell conditioned media, USC1994™**

Korea #1, Global best, USC1994™ with source technology · efficacy · patent

01 Since 1994, USC™ has been developed by Seoul National University R&D

※ Global 1st technology of living environment simulation & isolation technology, and mass production



40 week miracle
Origin of human
life energy



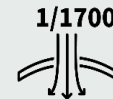
3 patents
Optimal stem cell CM



120 days of
manufacturing
process

02 USC1994™ Effects & Efficacy

89 protein complex including GDF11 are absorbed in the form of exosome, the optimal transporter for skin providing powerful **skin regeneration** effect



1/1700
1/1700 pore size
Exosome absorption

USC1994™

Patent
10-1810385
ICID
registration



30yrs
30 year R&D
core result

03 Proven efficacy at SCI Journals, Patent

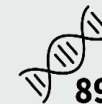
INCI name: Human Cord Blood Cell Conditioned Media
SCI journal: Biochemistry & Biophysics Reports (2018)
Biochemical & Biophysical Research Communications (2017)



90%
Collagen & elastin
regeneration



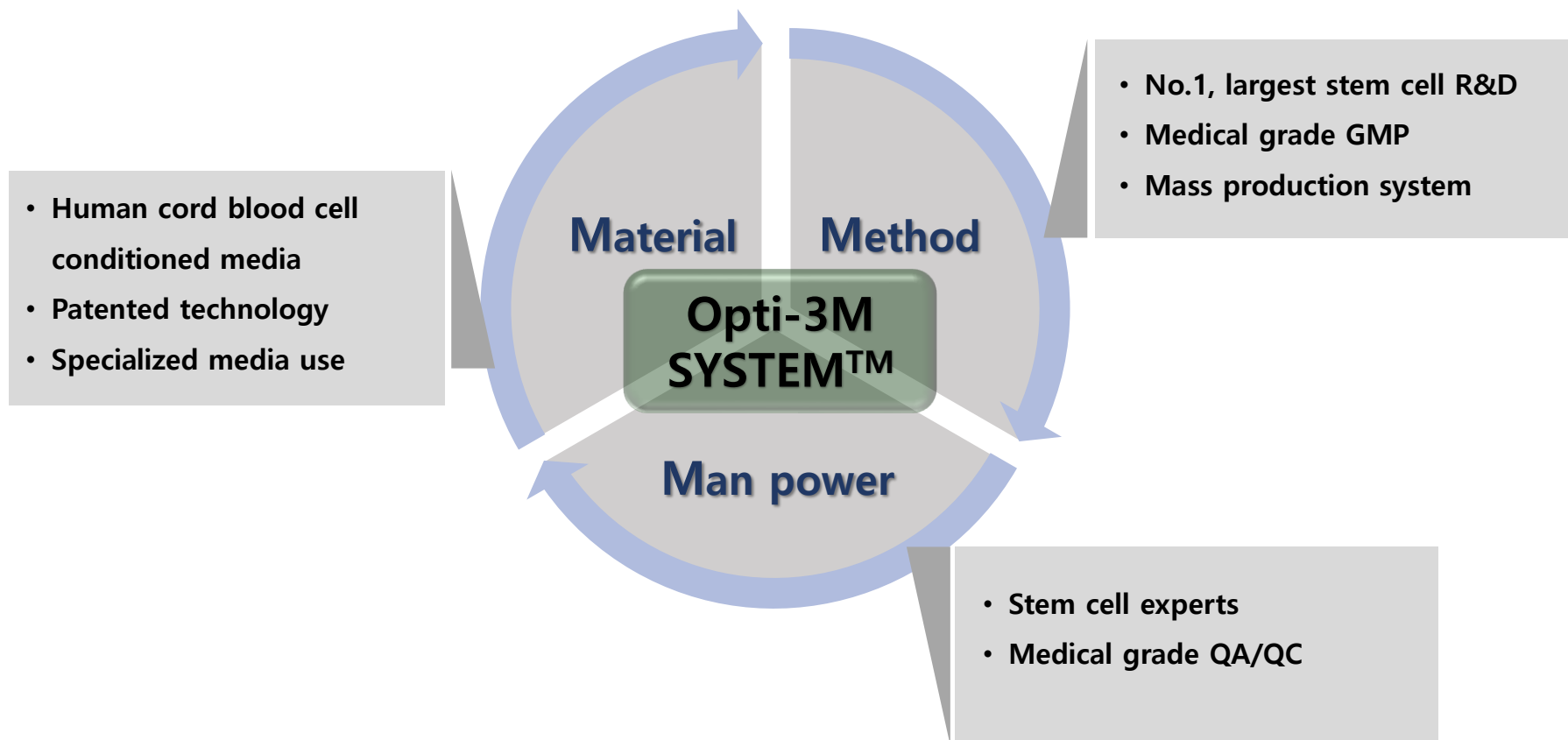
GDF11 60 times more
contained



89
89 protein complex
Active ingredients

Core Technology | Opti-3M SYSTEM™ , USC1994™

For optimal production **[superior raw material • cutting edge technology • stem cell experts]**
Opti-3M SYSTEM™



Core Technology | EXOSOME

Optimal skin carrier, EXOSOME 's high skin penetration & transfer of active ingredients
 USC1994™ contains the largest number of exosomes with the size of 1/1700 of pores → **Powerful skin regeneration**

Compared with adipose and bone marrow stem cell culture

The smallest uniform exosome contained

Compared with exosome quantity in adipose and bone marrow stem cell culture

2 times more of GF contained

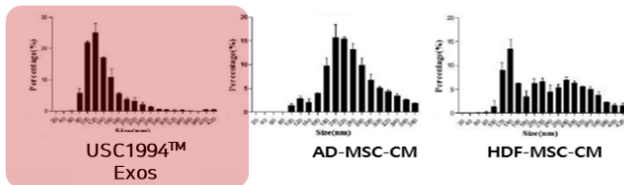
As a result of measuring cell mobility on the wound

Fast wound healing

Exosome particles were measured by NanoSight analysis.

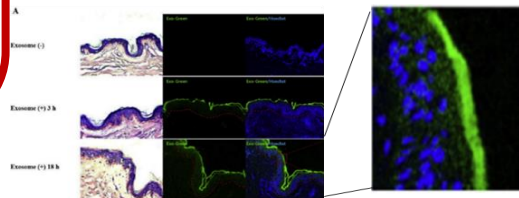
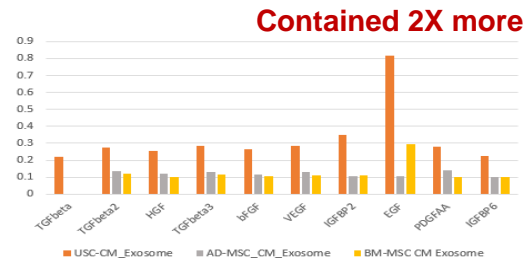
	Exosome particles/ml
USC1994™ Exos	$1.23 \times 10^{11} \pm 2.42 \times 10^9$
AD-MSC-CM Exos	$1.09 \times 10^{11} \pm 3.19 \times 10^9$
HDF-CM Exos	$7.03 \times 10^{10} \pm 6.98 \times 10^9$

Distribution of Exosome

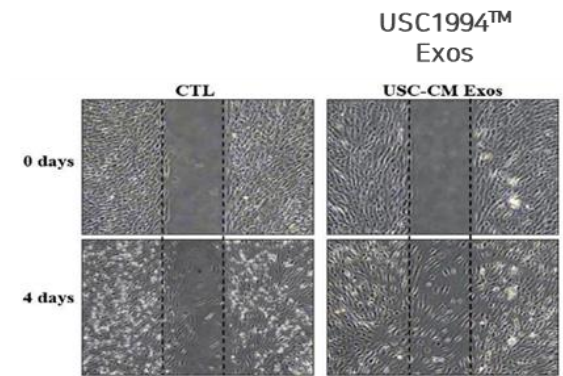


USC1994™ EXOSOMES

Compared to exosomes (AD-MSC-CM Exos) isolated from adipocyte conditioned media & exosomes (HDF-CM Exos) isolated from fibroblast conditioned media
USC1994™ EXOSOMES are the smallest, & most evenly distributed



High skin penetration (absorption rate)



Wound healing

※Source :

- 1)[Paper] Exosomes derived from human cord blood mesenchymal stem cells stimulates rejuvenation of human skin // Biochemical and Biophysical Research Communications 493 (2017) 1102e1108
- 2) [Patent] Stem cell-derived exosomes containing a high amount of growth factors (No. 10-2019-0027136)

Core Technology | Enhancing skin immunity

Skin trouble caused by reduced immunity is recovered with over 26 anti-inflammatory ingredients

GDF-11	Adiponectin/ Acrap30	Angiogenin	CalbindinD	Collagen1α1	Collagen IVα1	EGF	HB-EGF	Endostatin	FGF acidic
FGF basic	FGF-13 1B	Fibroblast Activation Protein	Fibronectin	Galectin-3	Galectin-1	GM-CSF	HGF	HGF R/cMET	IGFBP-1
IGFBP-2	IGFBP-3	IGFBP-6	IGFBP-rp1/IGFBP-7	M-CSF	MCSF R/CD115	β-NGF	NT-3	NT-4	PDGF-AA
PDGF-BB	PDGF-CC	PDGF-DD	SLPI	Thrombospondin-2	VEGF-A	VEGF-C	VEGF-D	VEGF R1	VEGF R2/KDF
VEGF R3	Vitamin D Binding Protein	BMP-2	BMP-4	BMP-7	BMP-9	BMP-10	GDF-15	IL-2Rα/CD25	IL-2
IL-3	IL-7	IL-10	IL-11	IL-12/23 p40	IL-12 p70	IL-6	IL-8	IL-13	IL-15
IL-16	IL-17A	IL-17C	IL-18	IL-19	IL-21	IL-22	IL-23	IL-27	IL-28B/IFN-γ
IL-33	IL-36β/IL-1F8	Lumican	MIF	Angiopoiein-1	Tie2	L-selectin	PIGF	MCAM/CD146	Gas6
Growth Hormone	LIF	SCF	TIMP-2	FGF7(KGF)	TGF β1	IL-5	IL-28B/IFN-γ2	TIMP-1	

 : Anti-inflammatory (immunity balance) active ingredients

SCI journals for inhibitory effects of human cord blood stem cell conditioned media

Anti-inflammatory substance secretion **Inhibiting inflammatory substances**



Core Technology | Hair loss prevention activation

28 active ingredients for hair loss prevention to induce healthy scalp environment & scalp environment

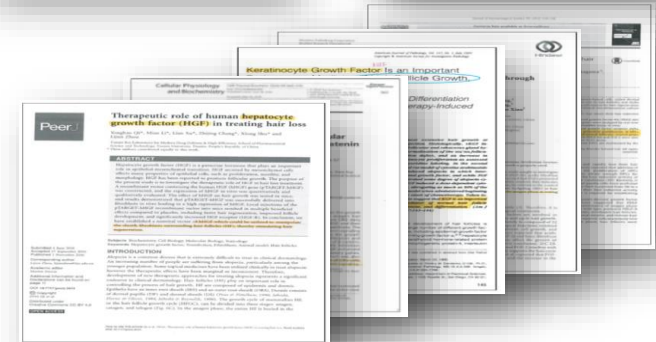
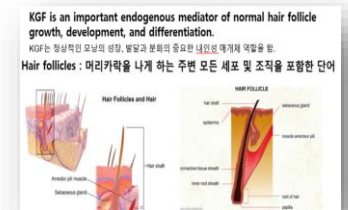
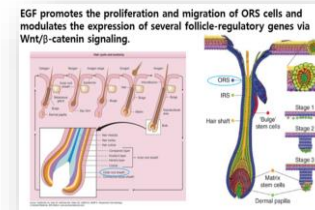
GDF-11	Adiponectin/ Acpr30	Angiogenin	CalbindinD	Collagen1α1	Collagen IVα1	EGF	HB-EGF	Endostatin	FGF acidic
FGF basic	FGF-13 1B	Fibroblast Activation Protein	Fibronectin	Galectin-3	Galectin-1	GM-CSF	HGF	HGF R/cMET	IGFBP-1
IGFBP-2	IGFBP-3	IGFBP-6	IGFBP-rp1/IGFBP-7	M-CSF	MCSF R/CD115	β-NGF	NT-3	NT-4	PDGF-AA
PDGF-BB	PDGF-CC	PDGF-DD	SLPI	Thrombospondin-2	VEGF-A	VEGF-C	VEGF-D	VEGF R1	VEGF R2/KDF
VEGF R3	Vitamin D Binding Protein	BMP-2	BMP-4	BMP-7	BMP-9	BMP-10	GDF-15	IL-2Rα/CD25	IL-2
IL-3	IL-7	IL-10	IL-11	IL-12/23 p40	IL-12 p70	IL-6	IL-8	IL-13	IL-15
IL-16	IL-17A	IL-17C	IL-18	IL-19	IL-21	IL-22	IL-23	IL-27	IL-28B/IFN-γ3
IL-33	IL-36β/IL-1F8	Lumican	MIF	Angiopoiein-1	Tie2	L-selectin	PIGF	MCAM/CD146	Gas6
Growth Hormone	LIF	SCF	TIMP-2	FGF7(KGF)	TGF β1	IL-5	IL-28B/IFN-γ2	TIMP-1	

 : anti-hair loss related active ingredients

SCI Journals for USC-CM for hair loss prevention

Dermal papilla proliferation

Hair follicle growth, development

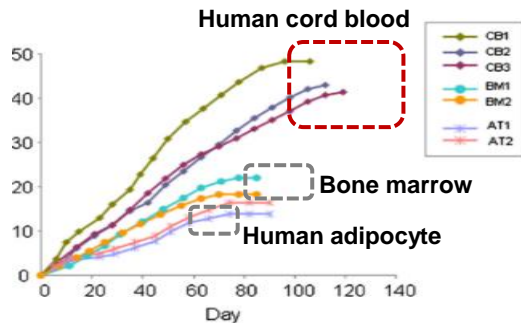


Core Technology | USC1994™ Features

Excellent effect on cell/tissue proliferation, anti-inflammation compared to human adipocyte/ bone marrow stem cell conditioned media

Cell proliferation

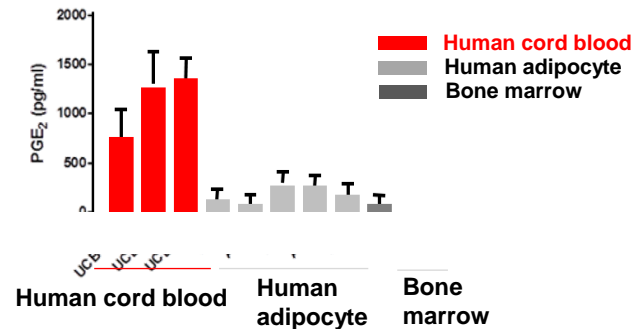
Delayed aging by continuous cell proliferation



Anti-inflammation

High expression of PGE2 involved in inflammation suppression

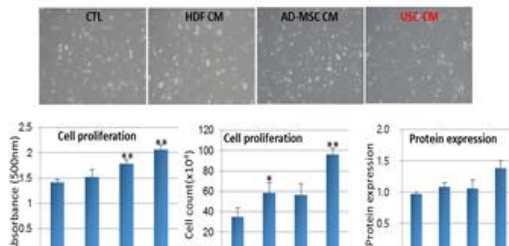
*Inhibitory level of inflammatory substance



Skin cell proliferation

Induction of rapid skin cell proliferation

*Applied to skin cells

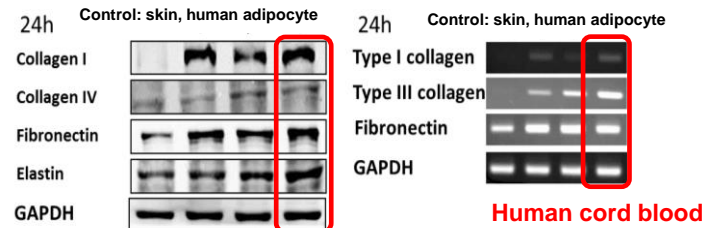


Control / adipose / skin / USC Control / adipose / skin / USC Control / adipose / skin / USC

Skin tissue regeneration

Protein synthesis stimulation

*Skin composition (expression of Collagen, Fibronectin, Elastin)



Human cord blood

※ DermaScience R&D results

Core Technology | USC1994™ Features

GDF11 60 time-higher expression of skin regeneration compared to human adipocyte/ bone marrow stem cell conditioned media

GDF11 concentration is increased by 0.2ug/ml
Compared to untreated fibroblast regeneration

Collagen I, III, elastin compared to untreated

Compared to human adipocyte bone marrow

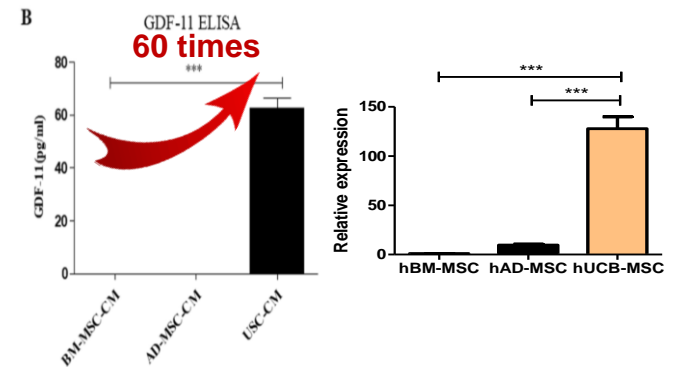
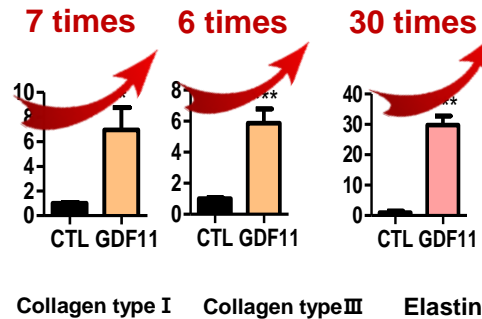
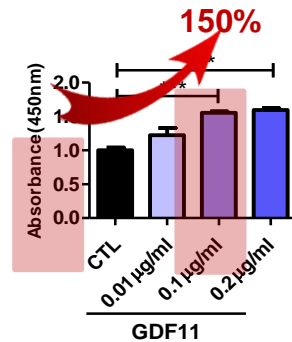
Compared to human adipocyte bone marrow

150% increased skin regeneration

30 times more proliferation of skin composition substances

60 times more of GDF11 expression

120 times more of GDF11 expression



* GDF11(Growth differentiation factor 11)?

'Key rejuvenation' growth factor stimulates collagen, elastin synthesis of fibroblast. Thus, that will help skin regeneration and skin lifting.

※ Reference :

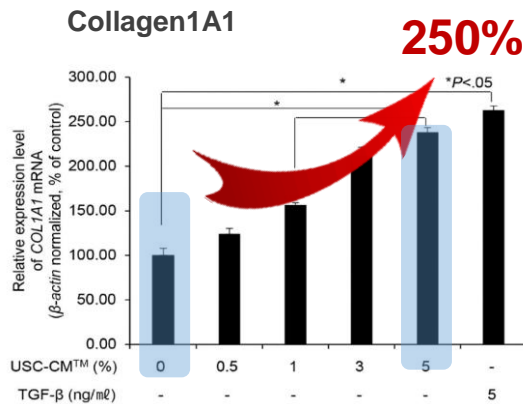
- 1) [SCI]Conditioned media from human cord blood-derived mesenchymal stem cells stimulate rejuvenation function in human skin // Biochemistry and Biophysics Reports 16 (2018) 96-1
- 2) [Patent] Composition comprising GDF11 and uses thereof (10-1810385)

Core Technology | USC1994™ Features

The higher the concentration, the more collagen I&III effects increased

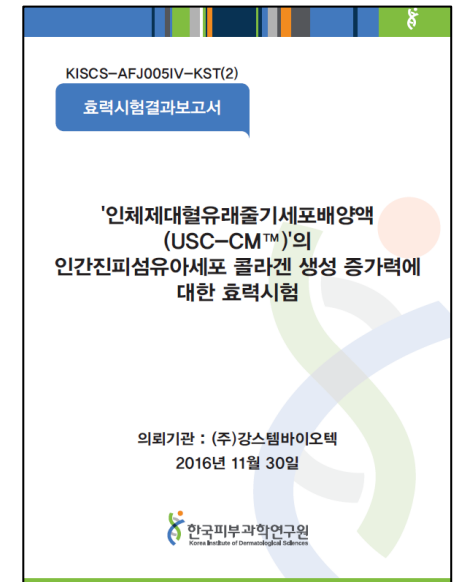
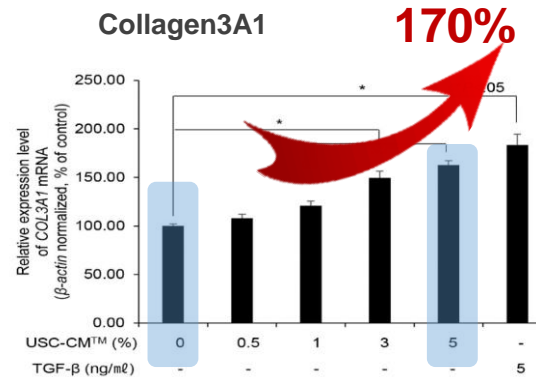
USC1994-CM 5% applied & the control

Collagen synthesis
abt **250% increased**



USC1994-CM 5% applied, & the control

Collagen III synthesis
abt **170% increased**



※ Reference : Efficacy test on human dermal fibroblast collagen production of human cord blood-derived conditioned media KISCS-AFJ005IV-KST(2) (Korean Institute of Dermatological Science)

* Remark: USC-CMTM= old title of USC1994TM

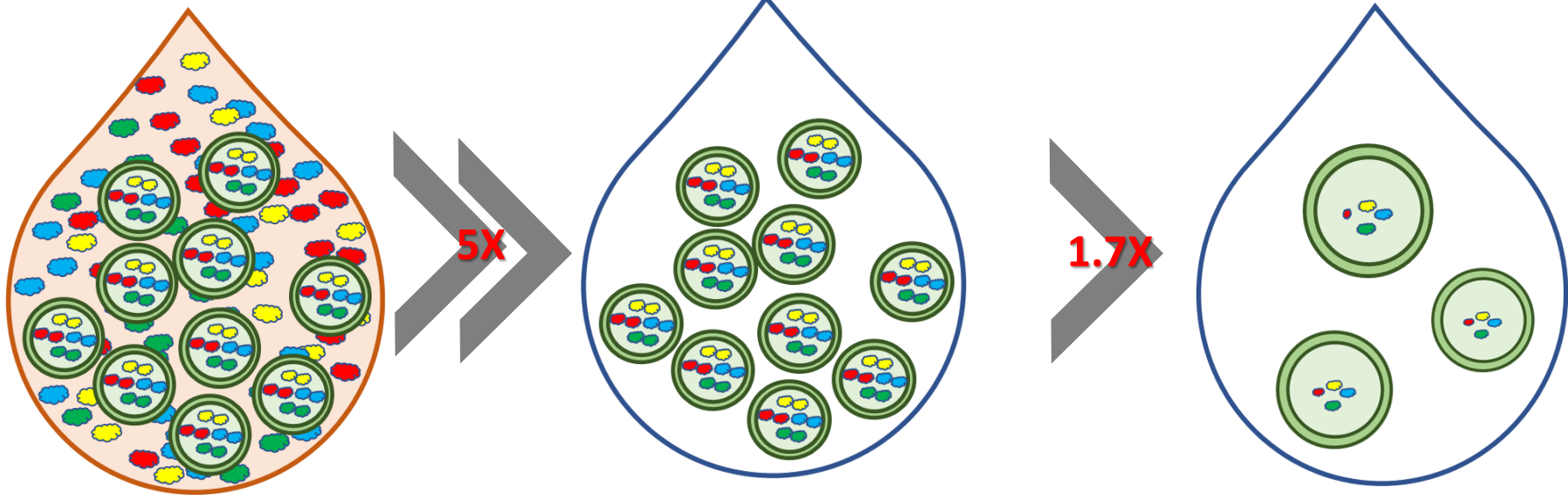
Core Technology | USC1994™ Features

5 times more of exosomes for cell regeneration & immunity control

[Human cord blood cell CM]

[Human cord blood cell exosome]

[Adipocyte/bone marrow stem cell exosome]



✓ Active ingredients 2X, efficacy 5X

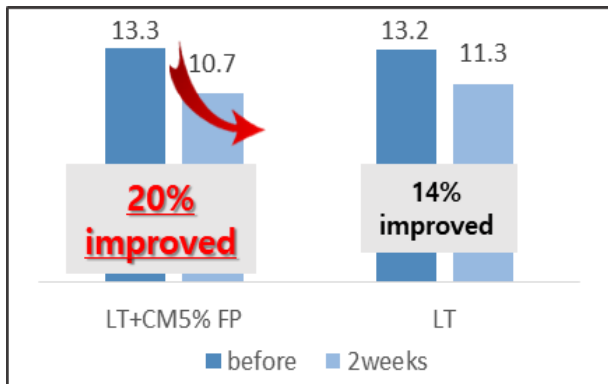
✓ Nano size (1/1700 of pore)
✓ Growth factors 2X

Kim YJ, 2017, BBRC

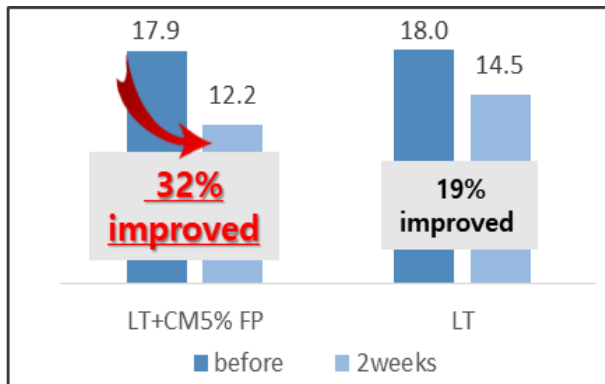
Exosomes derived from human umbilical cord mesenchymal stem cells stimulate rejuvenation of human skin

Core Technology | USC1994™ Features

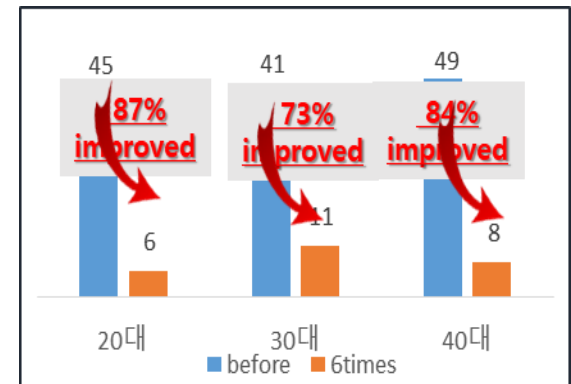
Laser toning+ USC1994® is proven **powerful skin booster**



Hot flush: about **1.5X** more improved



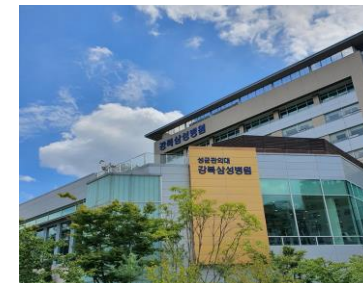
Moisture loss: about **2X** more improved



Sensitivity avg. **82%** improved

- **Powerful skin booster**
- **Laser toning + USC1994®** proves skin boosting effects.
- Regarding skin sensitivity index, **82% skin improvement** evaluated by applicants in 20s to 40s.

[Institution] Kim Won Suk and researchers at Dermatology, **Kangbuk Samsung Hospital**
 [Period] Oct 2019 ~ May 2020
 [Product] freeze dried powder: USC1994-CM 50,000ppm
 [Method] Laser toning as sole treatment vs laser toning+ 5% USC1994-CM application



Core Technology | Patent

Acquired patents to verify the efficacy of USC1994™ products and strengthen their competitiveness



Patent No.	Title
10-1810385	Composition comprising GDF11 and uses thereof
10-0950195	Method for Isolation of human cord Blood derived-Pluripotent Stem Cell Expressing ZNF281
10-1158664	Method for Robust Expansion of human cord Blood derived-Pluripotent Stem Cell Expressing ZNF281
10-1627907	Method for Robust Expansion of human cord Blood derived-Pluripotent Stem Cell Expressing ZNF281
10-0030707	Method for producing a high concentration GF containing freeze dried human cord blood-derived stem cells

skin regeneration effect of human cord blood cell CM containing GDF11
mass cultivation method and isolation of cord blood stem cells

Core Technology | Global Patent

Securing original patent of human cord blood cell CM for competitive technology

■ Global Patent

: 17 patent for Europe, US, Japan, Russia, and more



Core Technology | Manufacturing facility

Global top cosmetics manufacturer to produce only products with excellent quality and proven safety.



The only cosmetics manufacturer to **build freeze-drying equipment in cGMP** (Curestem production line)

<p>Ministry of Food & Drug Safety Drug World Technology Administration Complex, 127, Cheongryongri-ro, Cheongrye, Gangbuk-gu, Chungju-si, Chungcheongbuk-do, 28170, Korea</p> <p>Certificate of Cosmetic Good Manufacturing Practice</p> <table border="1"> <tr> <td>Representative</td> <td>KIM JUN BAE</td> <td>Name of Manufacturer</td> <td>SHINSEGAE INTERCOS KOREA INC.</td> </tr> <tr> <td>Address(Plant)</td> <td colspan="3">40-38, Godeangseongri-ro, Daejeon, Gyeonggi-do, Republic of Korea</td> </tr> <tr> <td>Application Category</td> <td colspan="3">Approval Date</td> </tr> <tr> <td>Whole process (Production of cosmetic products)</td> <td colspan="3">2017. 08. 17.</td> </tr> </table> <p>It is hereby certified that the above manufacturing plant in which the products are produced is subject to inspections at suitable intervals and the manufacturer conforms to KCGMP/Korea Cosmetic Good Manufacturing Practices.</p> <p>Issued date : 2018. 01. 26, 19-A1-019 Certified by: <i>[Signature]</i> Minister Ministry of Food and Drug Safety</p>		Representative	KIM JUN BAE	Name of Manufacturer	SHINSEGAE INTERCOS KOREA INC.	Address(Plant)	40-38, Godeangseongri-ro, Daejeon, Gyeonggi-do, Republic of Korea			Application Category	Approval Date			Whole process (Production of cosmetic products)	2017. 08. 17.			<p>Certificate No. 1010203</p> <p>To the organization of Shinsegae Intercos Korea Inc. 40-38, Godeangseongri-ro, Daejeon, Gyeonggi-do, Korea</p> <p>The above organization is hereby registered as ISO 22716 Cosmetics - Guidelines on Good Manufacturing Practices (GMP) Production Site - 04</p> <p>Production of Cosmetics, Creams, emulsions, lotions for skin, skin care products (e.g. Sun care) and hair</p> <p>The certificate is valid for 10 (Ten) years from 2017/08/17 and remains valid subject to satisfactory surveillance audits and a certificate renewal process. Valid to : 2027/08/16 00:00:00 Page 1/1</p> <p>SGS</p>	<p>Certificate of Registration</p> <p>This is to certify that INTERKOS 02-098, Godeangseongri-ro, Daejeon, Gyeonggi-do, Republic of Korea</p> <p>Has been assessed by International Certification Register Ltd., in respect of their Quality Management System and found to comply with ISO 9001:2008</p> <p>Approved to be fully registered to organizations providing the above said conditions relating to a certificate are observed at all times</p> <p>Certification Scope Development and Manufacture of Cosmetics and Derivatives</p> <p>Certificate Issue Date : 10/01/February 2014 IAF Scheme : 132 Expiration Date : 10/01/February 2017 Certificate No. : QM007014</p> <p>The Issuer of ICR Control has been notified of any changes</p> <p>ICR ISO 9001 REGISTERED</p>
Representative	KIM JUN BAE	Name of Manufacturer	SHINSEGAE INTERCOS KOREA INC.																
Address(Plant)	40-38, Godeangseongri-ro, Daejeon, Gyeonggi-do, Republic of Korea																		
Application Category	Approval Date																		
Whole process (Production of cosmetic products)	2017. 08. 17.																		

Shinsegae Intercos Korea from the left cGMP, ISO 22716, 9001:2008

As a joint venture of **Shinsegae intercos** who inherited excellent manufacturing skills from global No.1 Italian cosmetic manufacturer, Intercos. cGMP facilities are equipped with the best production facilities.

Core Technology | Manufacturing

Optimal freeze-drying method to preserve active ingredients of USC1994™ most stable, fresh state

- **- 80°C Freeze-drying**

The active ingredients in the undiluted solution are blown out by freeze-drying to create conditions where microbial propagation is impossible. So, the active ingredients are optimally preserved.

- **USC1994™ Re-activation for effectiveness**

Active ingredients of free-dried USC1994™ will be **reactivated when mixed with liquid ampoule.**

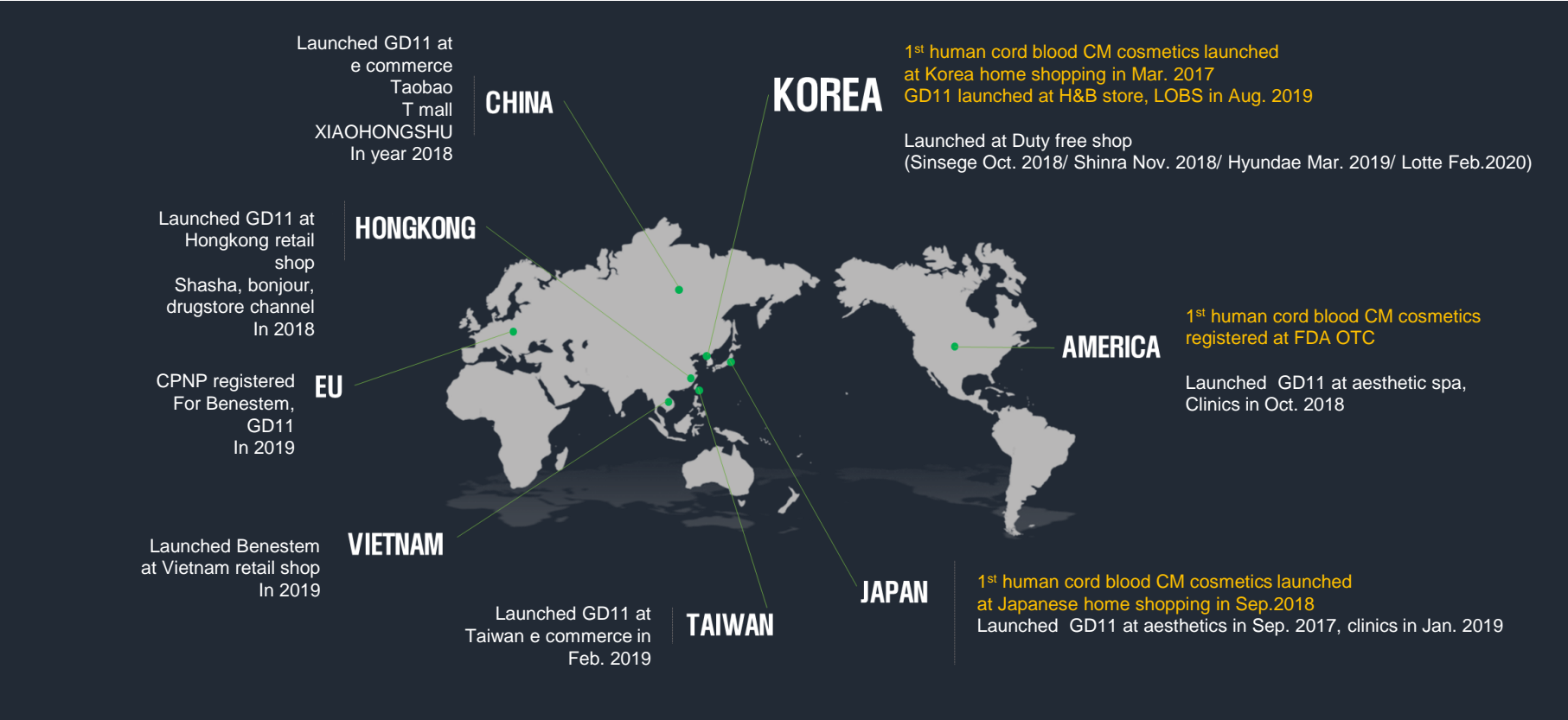


Channels |

Established optimal business strategy for **hospitals & clinics and global distribution structure**

KOREA 168 Hospitals & Clinics (dermatology/plastic surgery)

GLOBAL 8 + countries (hospitals & clinics)



Academic Activities |

Periodic presentation of academic research results and academic exchange activities

31st Korea Laser Skin Hair Assoc. Spring Conference

- Lecture: Effective application of human cord blood cell conditioned media with anti-inflammatory and skin regeneration effect



39th Fall Congress of Korean Soc. of Aesthetic Surgery

- Lecture: Skin Regeneration of Stem Cells



1st Phillipine Aesthetic Medicine Conference

- Lecture: New lifting technology using human cord blood cell culture



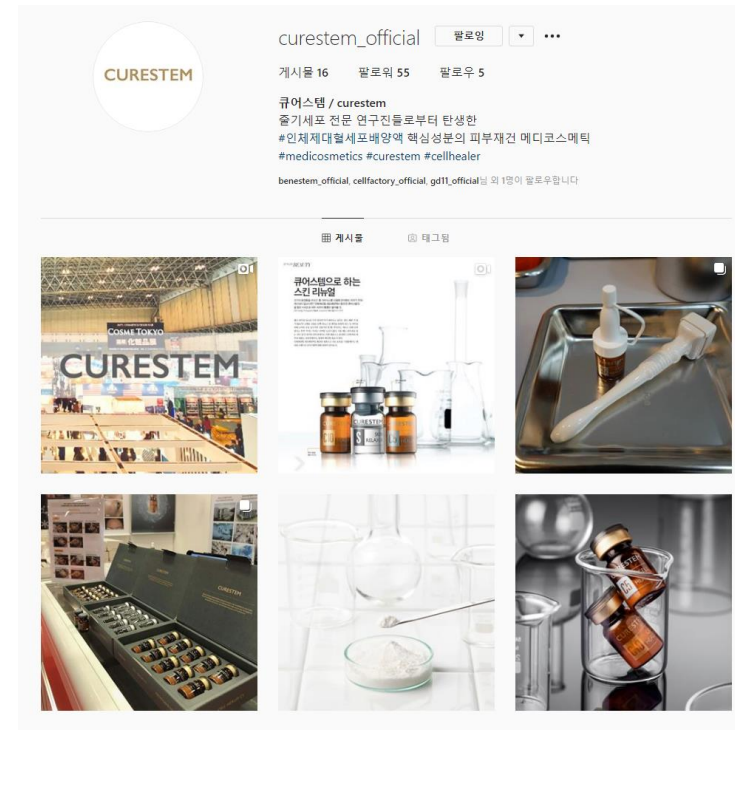
34th Fall Congress of Korean Soc. of Laser Skin Hair

- Lecture: Effective utilization of human cord blood stem cell conditioned media, exosomes easily penetrate skin barrier



Media | Magazine & Online PR

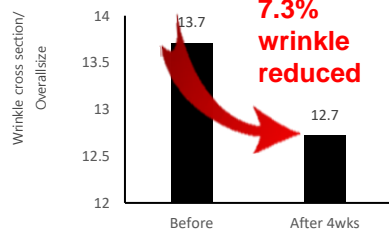
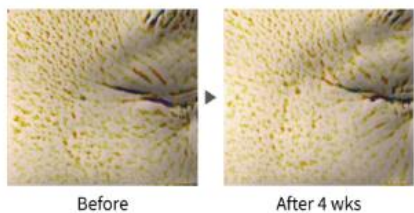
Hospital & clinic specialty brand with a dermatologist as representative



Data result | Clinical data

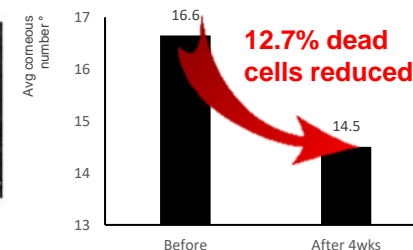
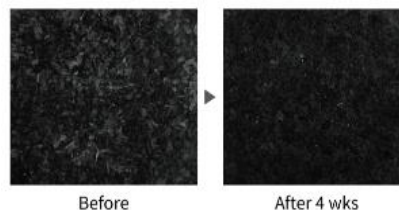
USC1994™ products proves to improve fine lines, elasticity, skin texture, skin tone, & pigmentation

Eye wrinkles



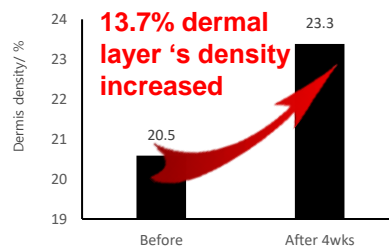
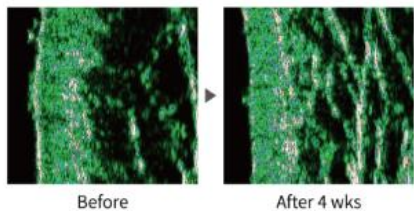
* The lower the analysis value, the narrower the length and width of the wrinkles

Dead skin cells



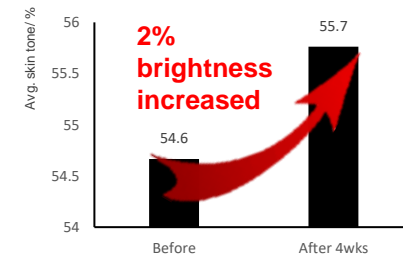
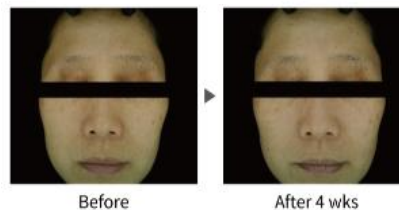
* The lower the analysis value, the less skin angular mass, smoother skin texture and better skin turnover

Dermal density



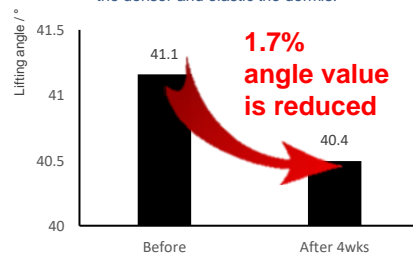
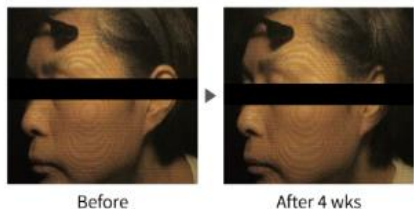
* The higher the analysis value, the denser and elastic the dermis.

Skin tone



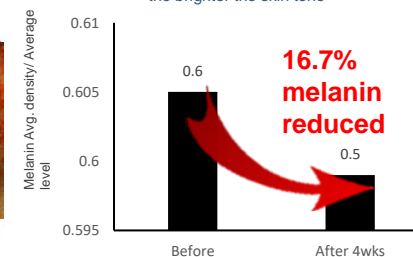
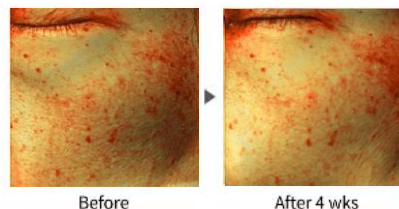
* The higher the analysis value, the brighter the skin tone

Face lifting



* The sagging skin area is filled and the angle value becomes smaller, so the curvature caused by sagging skin is reduced all over the face.

Freckles & pigmentation



* Lower assay results in lower melanin concentration

Research achievements | Clinical Trials

Verifying the efficacy of USC1994™ with national university hospitals & clinics

Completed process

■ Atopic Dermatitis Improvement Effect Verification Study

[Institution] Chongnam National University Hospital

[Study period] 2017.11~ 2018.7

[Product testing] **USC1994-CM** 10,000ppm topical moisturizer

[Study Objectives]

Evaluation of skin moisturizing and safety for patient with atopic dermatitis

[Subject]

Adult patient with mild atopic dermatitis aged 19 years or older (54 people)



[Study Result]

- ✓ Significant improvement for 6 symptoms of atopic dermatitis (① erythema ② edema / papules ③ scratch ④ exudate / skin ⑤ saturation ⑥ topical pruritus)
- ✓ No adverse effects on the safety aspects of the product

Processing

■ Study to verify effect on sensitive skin

[Institution] Sungkyunkwan University Gangbuk Samsung Hospital

[Study period] 2019. 10~ 2020. 5

[Product testing] **USC1994-CM** 50,000ppm freeze dried powder

[Study Objectives]

Evaluation of subjective symptoms and objective skin function in patients with sensitive skin syndrome



■ Atopic Dermatitis Improvement Effect Verification Study

[Institution] Yonsei University Severance Hospital

[Product testing] **USC1994-PC** 10,000ppm topical moisturizer

[Study period] 2019. 9~ 2020. 4

[Study Objectives] Evaluation of subjective symptoms and objective skin function in patients with mild atopic symptoms



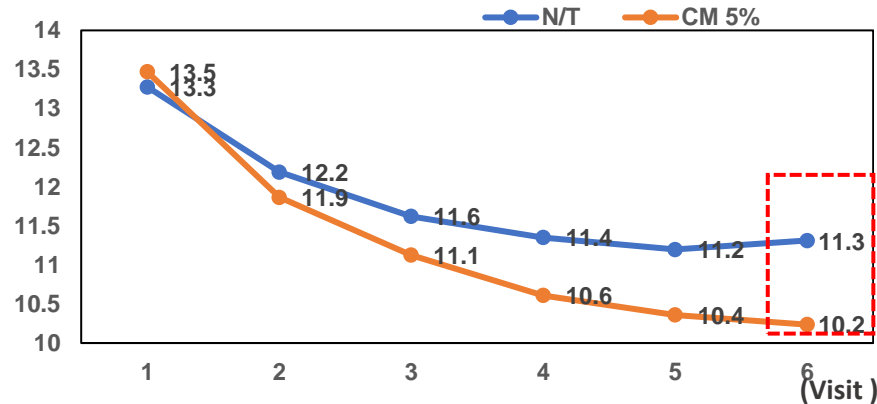
Research achievements | Clinical Trials

USC1994[®]'s proven improvement of sensitive skin

- ✓ Erythema index and water loss were significantly reduced in the treatment site (CM 5%)
- ✓ The skin improvement maintained after 3 time-treatment

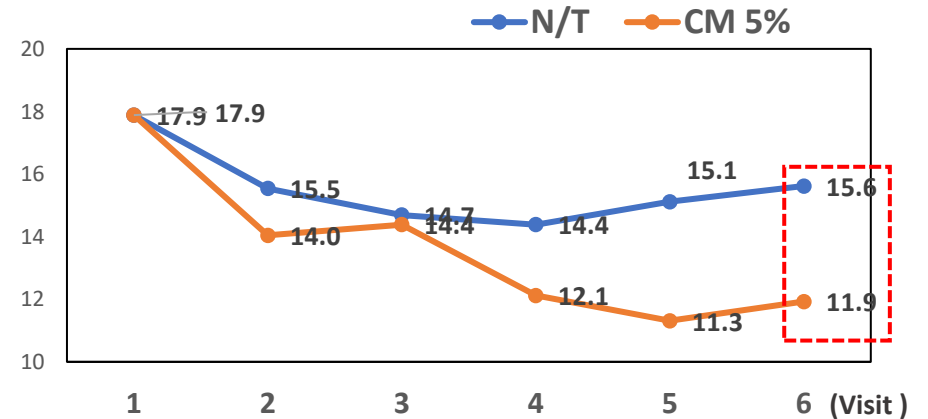
■ Erythema index

24% improved (compared to control, 9%↑)



■ TEWL, water loss

34% improved (compared to control, 21%↑)

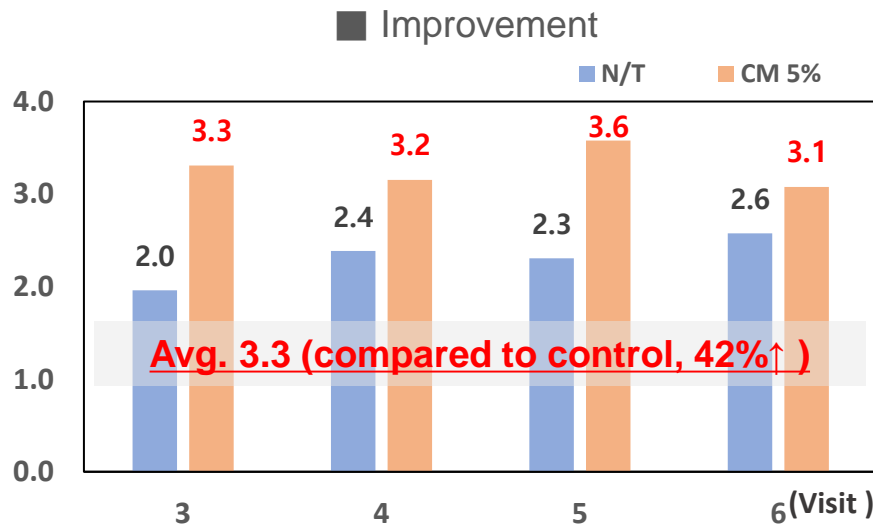


[General Hospital] Kangbuk Samsung Dermatology, Prof. Kim Won Seok research team
 [Study Period] Oct. 2019 ~ May 2020
 [Testing Product] freeze dried powder of USC1994-CM 50,000 ppm
 [Method] Laser toning only + laser toning + freeze dried powder of 5% once per 2 weeks term, 3 times for 12 week-observation

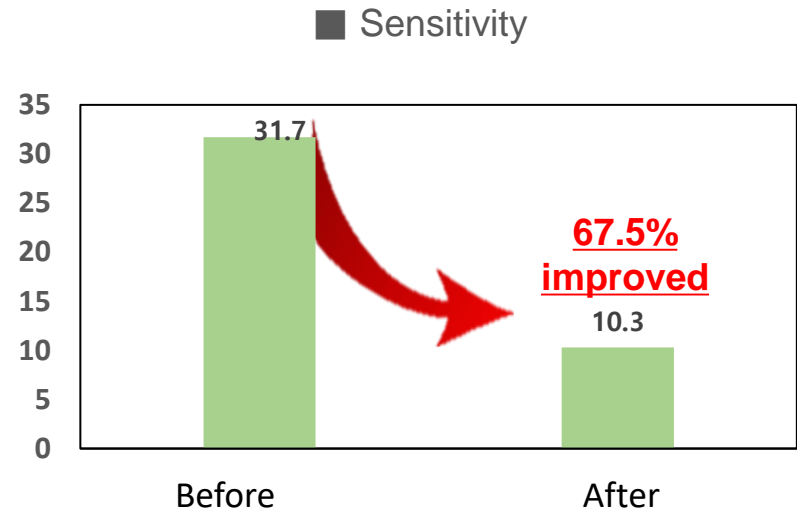
Research achievements | Clinical Trials

USC1994[®]'s proven improvement of sensitive skin

✓ 5% Freeze dried CM applied area has a proven improvement



Improvement
4: excellent' (75-100%), 3: good' (50-75%),
2: fair' (25-50%), 1: poor' (<25%),
0: worse' (than previous condition)



Sensitivity / total 10 questions / 1 ~ 10 points
1: not at all
10: very much sensitive

[General Hospital] Kangbuk Samsung Dermatology, Prof. Kim Won Seok research team
[Study Period] Oct. 2019 ~ May 2020
[Testing Product] freeze dried powder of USC1994-CM 50,000 ppm
[Method] Laser toning only + laser toning + freeze dried powder of 5% once per 2 weeks term, 3 times for 12 week-observation

Product Line |

SKIN PROGRAM



CURESTEM CELL HEALER C5

[50,000ppm of human cord blood cell conditioned media]

■ 2ML x 10 VIALS

improves skin sensitivity, enhances elasticity, and skin regeneration



CURESTEM CELL HEALER C10

[100,000ppm of human cord blood cell conditioned media]

■ 2ML x 10 VIALS

improves skin sensitivity, enhances elasticity, and skin regeneration



CURESTEM SKIN RELAXER

[50,000ppm of panthenol]

■ 5ML x 10 VIALS

Hydrating and soothing ampoule that intensely moisturizes and comforts irritated and dry skin

HOW TO USE

- ① Blend CURESTEM Skin Relaxer(5ml) with CURESTEM Cell Healer C10 or C5 thoroughly and apply to your skin.
 - ② ½ of the mixture is applied and absorbed with the MTS procedure and ½ is applied and absorbed during the soothing phase with the electroporation device.
- ※ It is most effective to use all of the product at once.

SKIN & SCALP PROGRAM



CURESTEM CELL HEALER C20

[200,000ppm of human cord blood cell conditioned media]






■ 2ML x 10 VIALS

- Improves skin sensitivity,
- Enhances elasticity, skin regeneration
- Improves healthy scalp environment for healthy hair

- ① Mix C 20 (2ml) with N/S (2ml) & apply on the affected area
 - ② For skin treatment
 - Apply onto the skin with MTS
 - After laser, apply onto the skin
 - ③ For Scalp (Hair loss) treatment
 - Apply onto the scalp with MTS
- ※ Use immediately after mixing with N/S because no preservative are included.

Competitive Products

**100% human cord blood conditioned media
produced in Korea's only lyophilized GMP facility**

Brand		BENEV	ASCE+	Dr. Cellapy	AAPE	Curestem
Product Image						
Product Name		Exosome Regenerative Complex	Dermal Signal SRLV-S	Cellapy SB Plus	AAPE	Curestem
Raw Material	Mfg.	Exocobio			Prostemics	Kangstem Biotech
	GMP	○			X	○
Lyophilized GMP mfg.		X	X	X	X	○ (SHINSEGAE intercos)
Sales		Benev	Exocobio	GM Holdings	Prostemics	Primoris International
Ingredients (INCI)		Human Adipose Stromal Cell Exosomes	Hydrolyzed human adipose stromal cell culture extract	Human adipocyte conditioned media extract	Human adipocyte conditioned media extract	Human cord blood conditioned media
%		-	CM extract 5%	CM liposome 10%	CM extract 25%	CM 5%, 10%, 20%
Volume/Vial		Powder 20mg x 5ea Diluent 5ml x 5ea	Powder 20mg x 1ea Diluent 5ml x 1ea	Liquid 5ml x 10ea	Powder 270mg x 6ea Solvent 6ml x 6ea	Powder 2ml x 10ea Relaxer 5ml x 10ea
Selling point		Exo-SCRT Exosome	ExoSCRT FDA OTC, Exosome	Baby face injection Anti-aging Moisturizing Skin regeneration	FDA OTC Exosome PCPC registered 19 SCI journals published	100% Human cord blood conditioned media 240 Stem cell SCI journals Published (skin regeneration, inflammation)
Application		Skin			Skin/Hair	Skin/Hair
Procedure		MTS	MTS	MTS	MTS	MTS

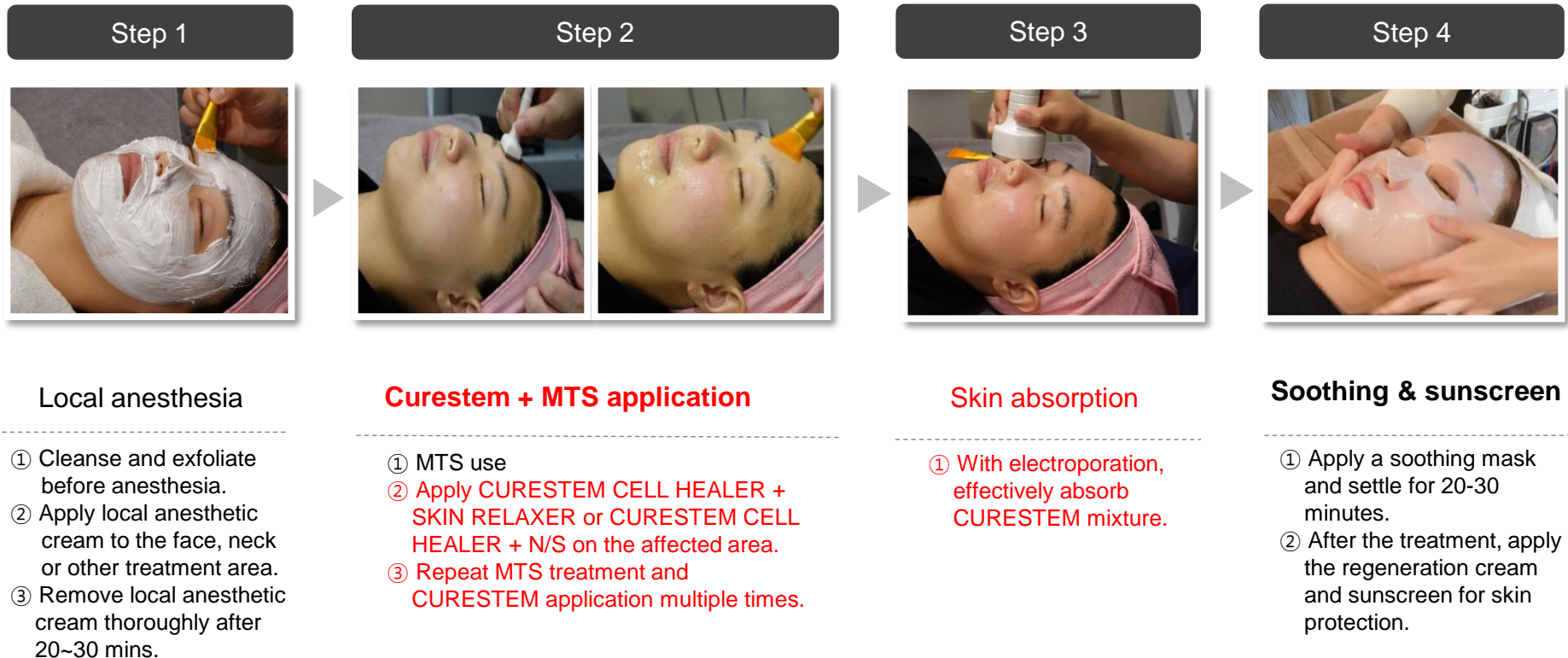
brand
product

CURESTEM

Product image | Curestem C10 / C5

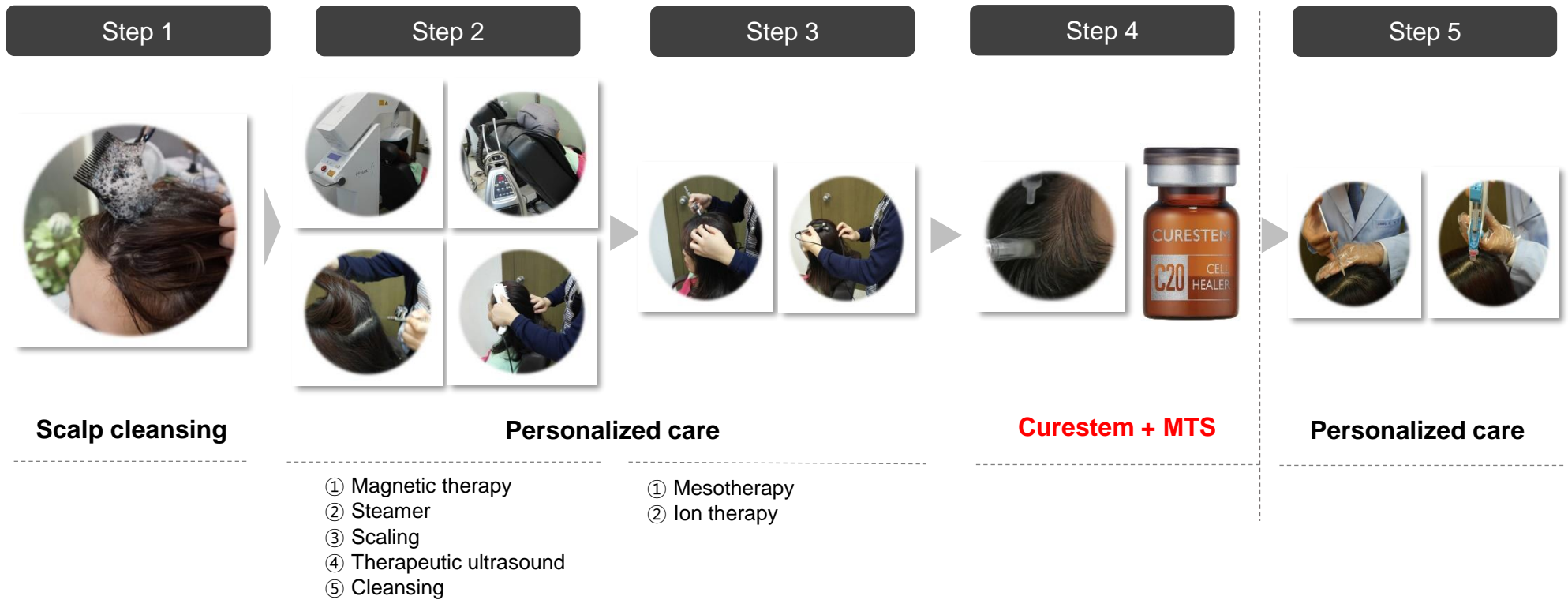


Curestem Skin Program | Pore minimizing, tone-up, reducing fine lines



※ After customized laers (Thermage, Pico, Fractional laser, etc) → **Curestem** → Soothing mask

Curestem Scalp Care Program |



※ Depending on patient's scalp condition, personalized therapy program will be different.

Clinical tests

1) Samsung Hospital in Kangbuk – skin sensitivity improved

■ Acne skin

NT

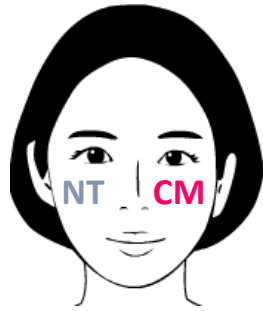
Curestem C20



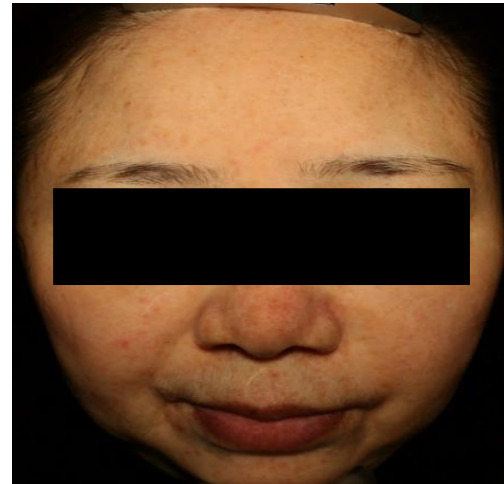
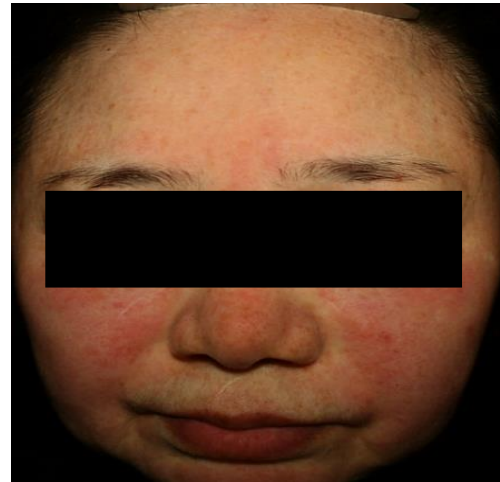
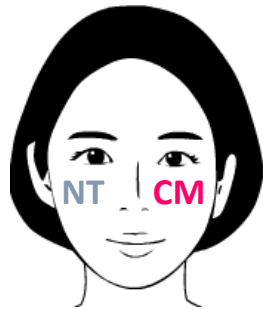
Clinical tests

2) Samsung Hospital in Kangbuk – skin sensitivity improved

■ Redness improvement



Normal camera

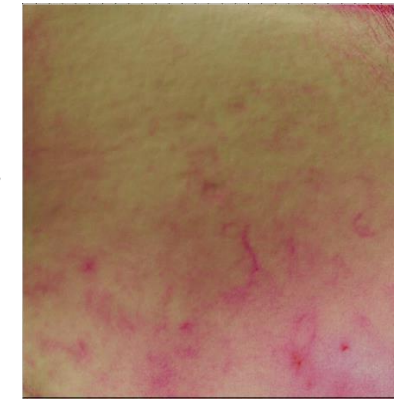
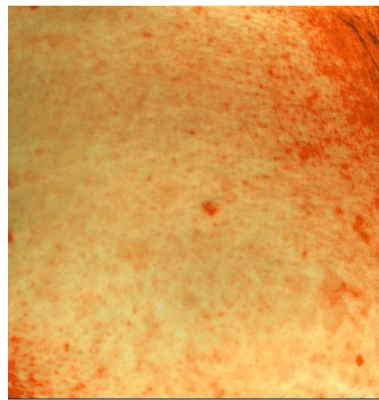
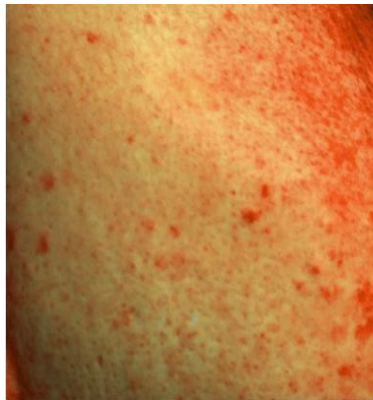
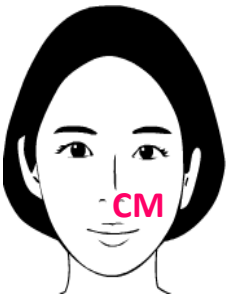
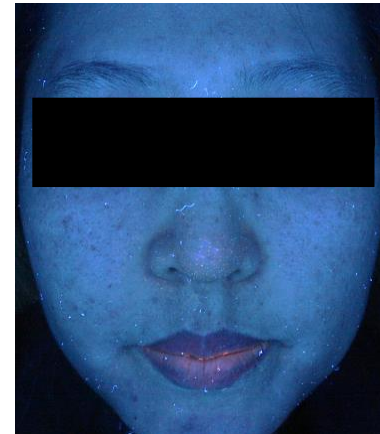
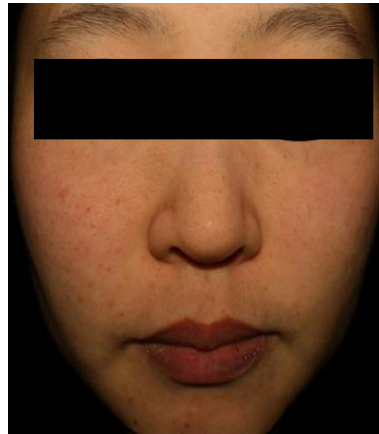
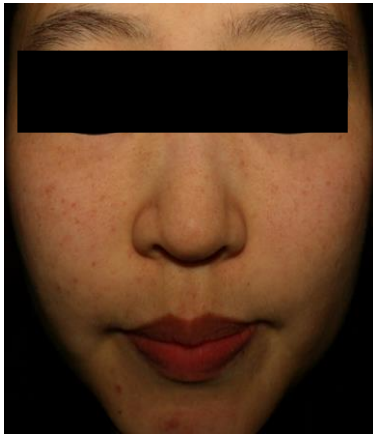
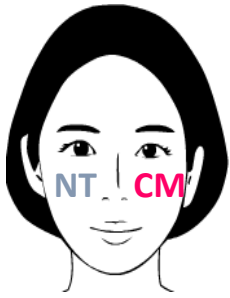


Facial Analyzer

Clinical tests

3) Samsung Hospital in Kangbuk – skin sensitivity improved

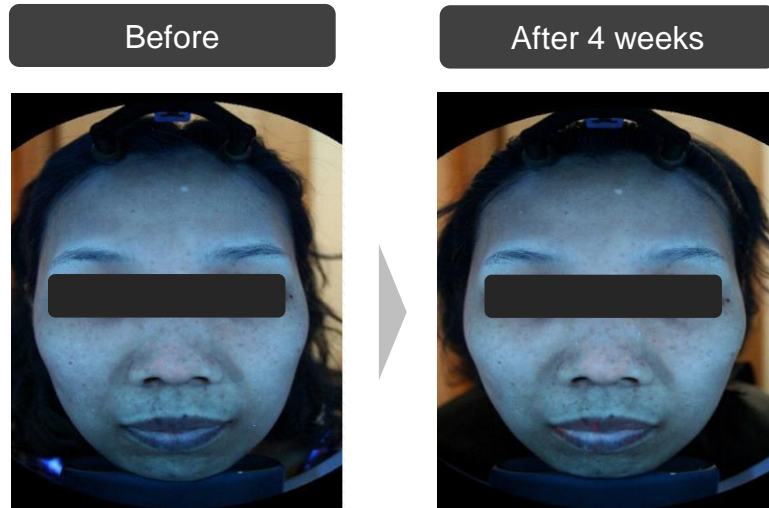
■ Skin roughness, capillary expansion, melanin improvement



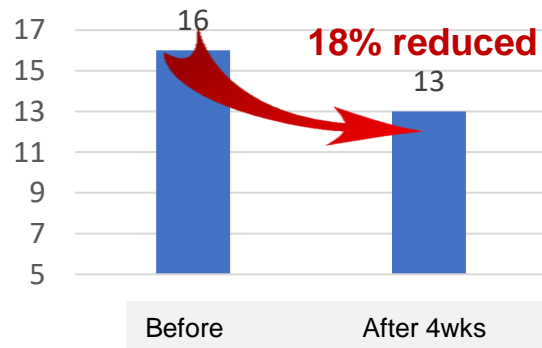
Efficacy Test

① Dermatological test at Korean clinics – pigmentation, pore, redness, wrinkle

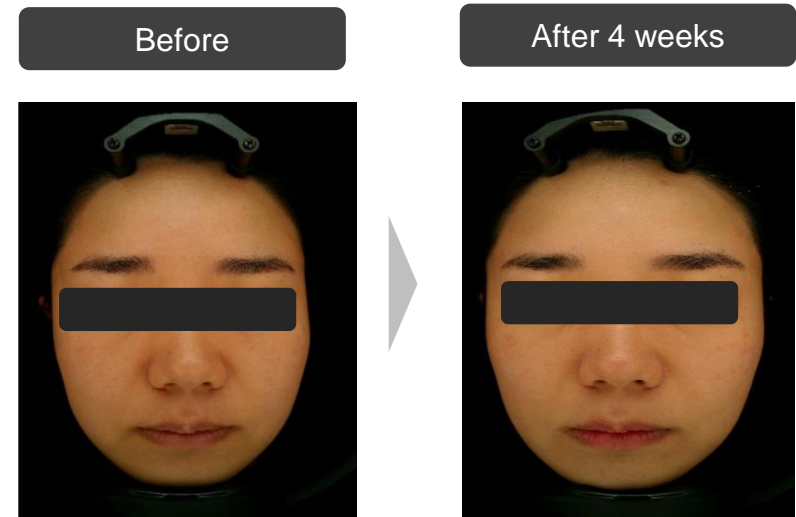
■ **Pigmentation**



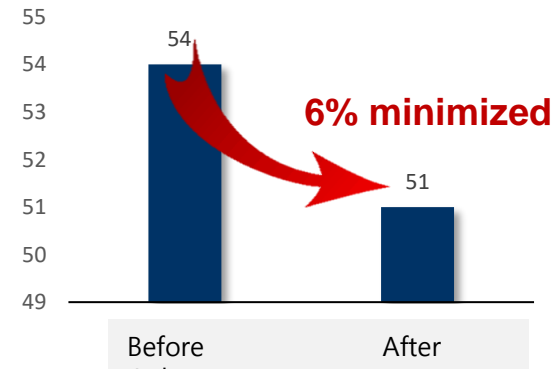
2019.09 / Korea / age 39/ female



■ **Pore**



2019.09 / Korea / age 37 / female



[Period] 2019. 09~2020.10
[Product testing] Curestem C10 2nm/vial+5ml/vial
[Method] MTS / 5~7times use / within 8 weeks

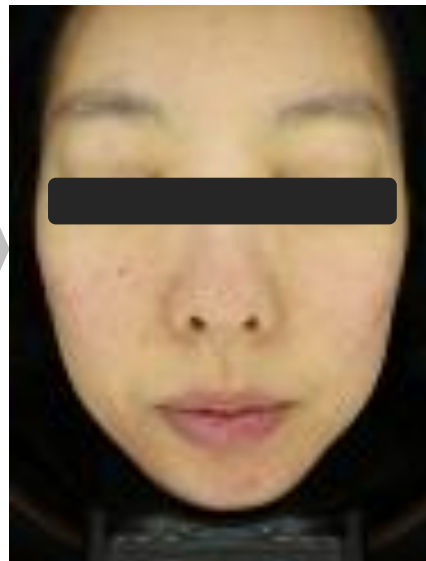
Efficacy Test

① Dermatological test at Korean clinics – pigmentation, pore, redness, wrinkle

■ Pore/wrinkle/pigmentation

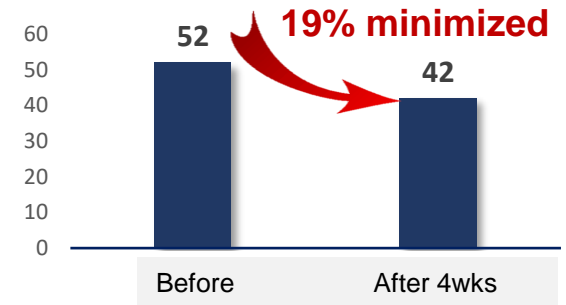
Before

After 5 weeks

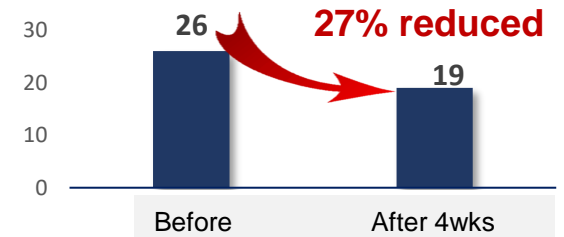


2019.11 / Korea / age 30 / female / NL-normal light

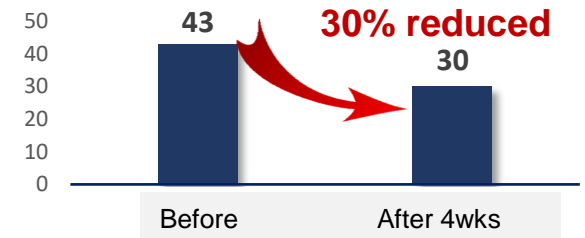
✓ Pore minimizing



✓ Wrinkle reduction



✓ Pigment reduction



[Period] 2019. 11~2020.02
[Product testing] Curestem C10 2nm/vial+5ml/vial
[Method] MTS / 5~7times use / within 8 weeks

Efficacy Test

① Dermatological test at Korean clinics – pigmentation, pore, redness, wrinkle

■ Redness/Black spot (Polarized light)

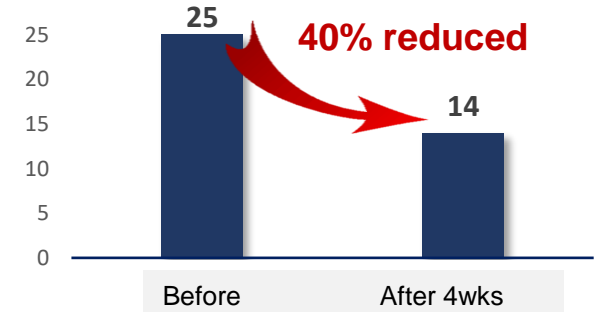
Before

After 5 weeks

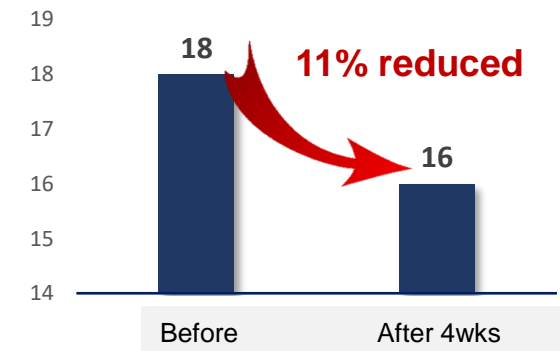


2019.11 / Korea / age 30 / female / PLL

✓ Redness reduction



✓ Black spot reduction



■ Summery

: After 5 time-application, pore, wrinkle, skin tone, gloss **are improved by 26%**

Efficacy Test

① Dermatological test at Korean clinics – pigmentation, pore, redness, wrinkle

■ **Redness (Polarized light)**

Before



After 5 weeks



■ **Sebum (Polarized light)**

Before

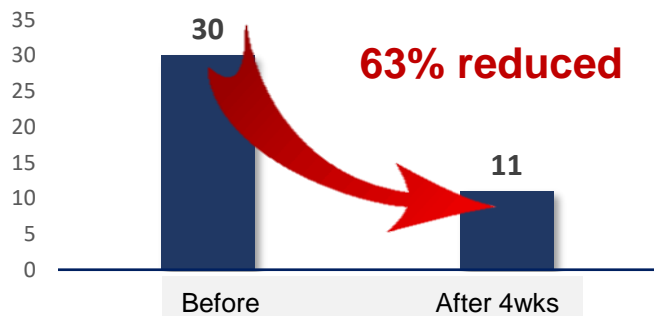


After 5 weeks

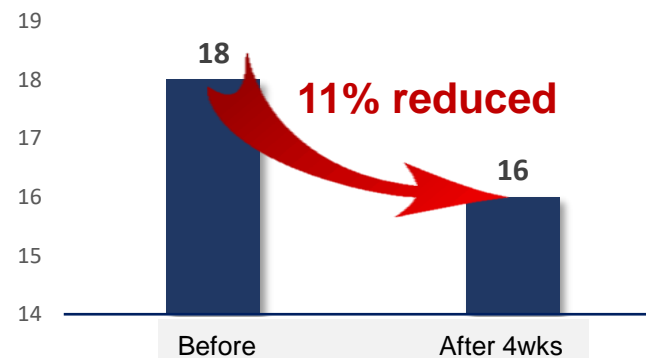


2020.01 / Korea / age 30 / male / PL

✓ **Redness reduction**



✓ **Sebum reduction**



Efficacy Test

② **Dermatological test at US clinics** – pigmentation, pore, redness, wrinkle

■ **Melanin reduction**

Before



After 3 weeks



2019. 05 / USA / Clair Skin Clinic / age 42 / female

■ **Pore minimizing & tightening**

Before



After 3 weeks

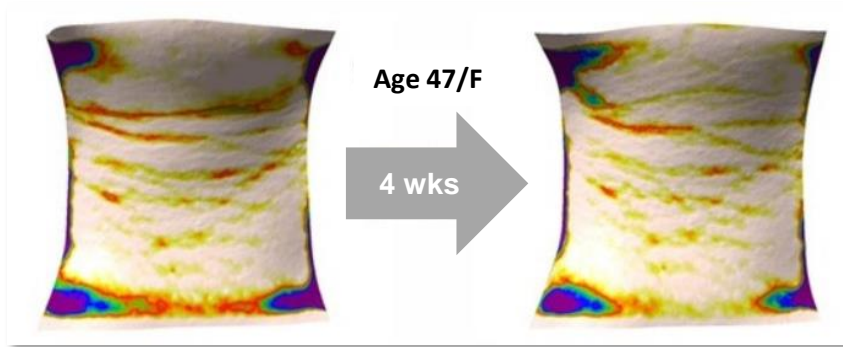


2019. 05 / USA / Clair Skin Clinic / age 42 / female

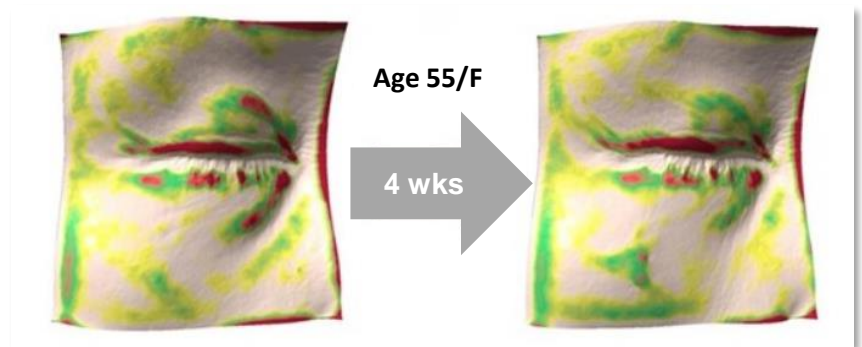
USC-1994™ Clinical Trials

50,000PPM ampoule application for 15 categories

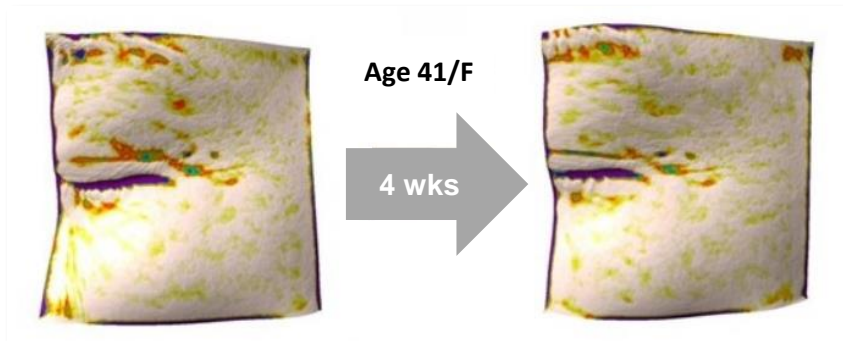
■ Neck wrinkle reduction after 4 weeks



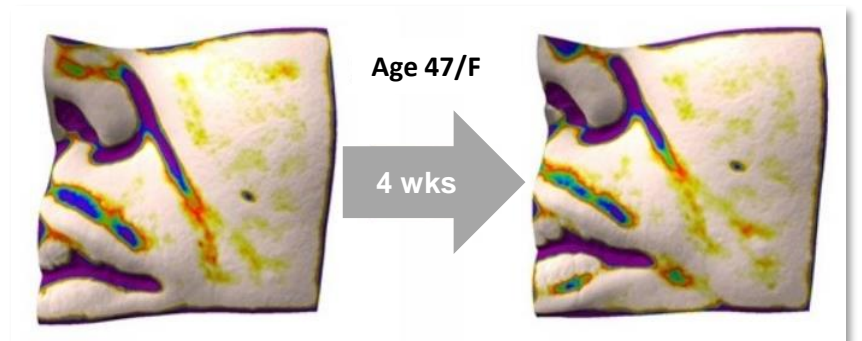
■ Eye bag improved after 4 weeks



■ Eye wrinkle reduction after 4 weeks



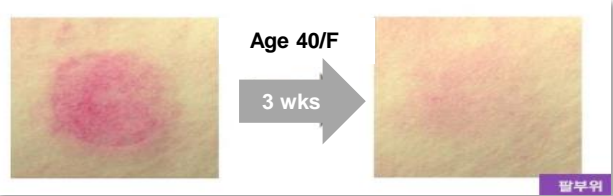
■ Nasolabial fold reduction after 4 weeks



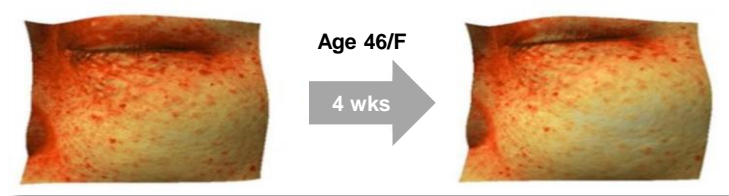
USC-1994™ Clinical Trials

50,000PPM ampoule application for 15 categories

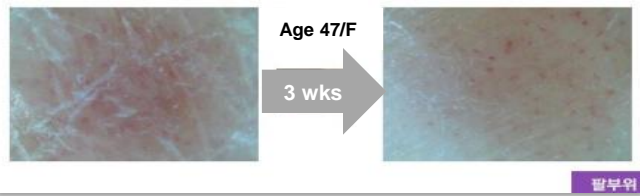
■ **Skin barrier enhancement after 3 weeks**



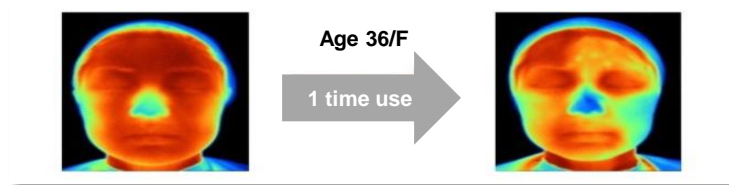
■ **Black spot reduction after 4 weeks**



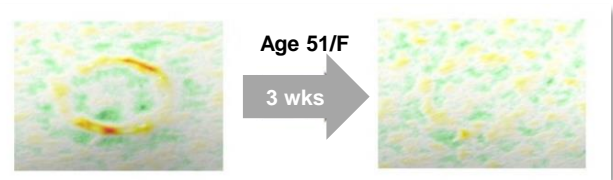
■ **Corneous reduction after 3 weeks**



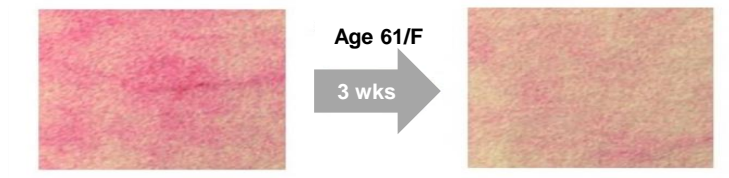
■ **Soothing skin irritation after 1 time use**



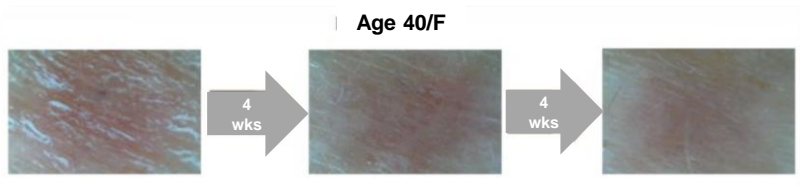
■ **Skin roughness improvement after 3 weeks**



■ **Calming UV burn after 3 weeks**



■ **Corneous reduction after 8 weeks**



■ **Skin elasticity improvement after 1 time use**

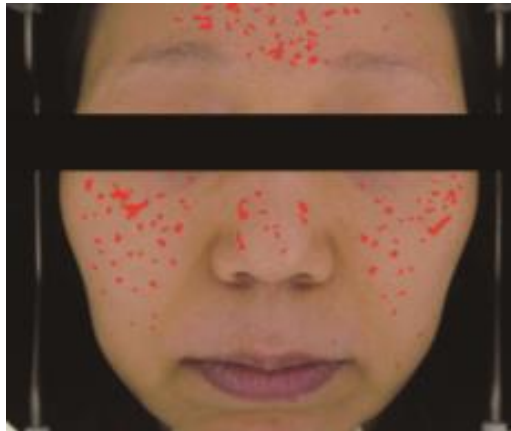


USC-1994™ Clinical Trials

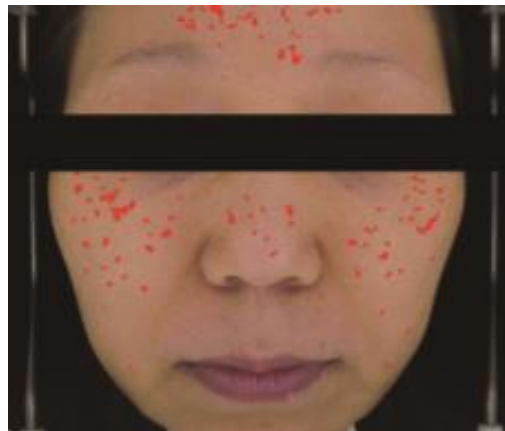
10,000PPM cream application for 15 categories

■ **Melanin reduction**

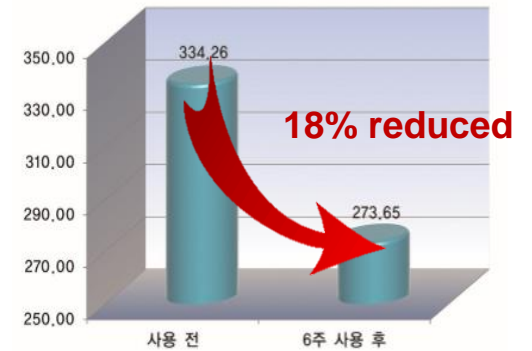
Before



After 6 weeks

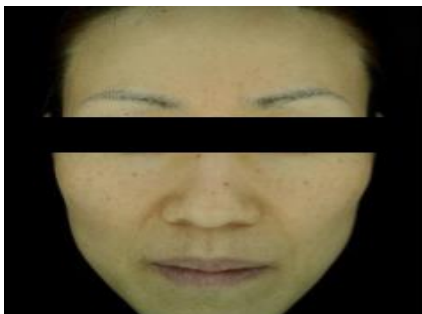


✓ **Melanin area reduced**

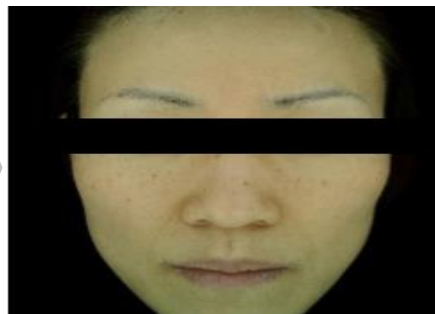


■ **Skin tone improvement**

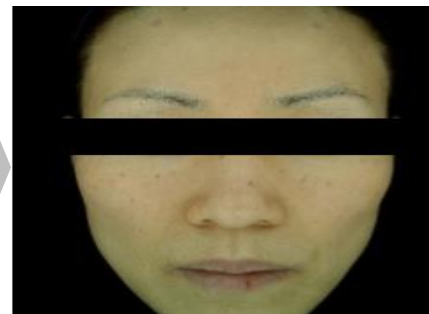
Before



After 4 weeks



After 6 weeks



USC-1994™ SNS

Instagram USC-1994™ product application before & after

■ **Extreme dryness improvement**

Before



[Benestem CBCM cream use]

After



■ **Acne / trouble alleviation**

Before



[GD11 esthe use]

After



■ **Skin brightness**

Before



[GD11 esthe use]

After



■ **Acne / trouble alleviation**

Before



[GD11 cell treatment use]

After 3days



USC-1994™ SNS

Instagram USC-1994™ product application before & after

■ **Acne / trouble alleviation**

Before



After 6 weeks



After 12 weeks



[GD11 Advanced lab energy ampoule use]

■ **Atopic irritation alleviation**

Before



After 6 weeks



[BENESTEM CBCM Cream]

USC-1994™

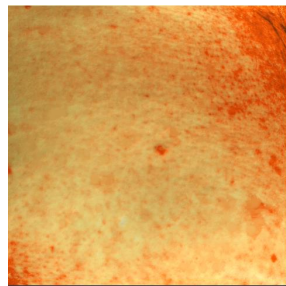
Instagram USC-1994™ product application before & after

Melanin, vasodilation, facial flushing improvement

■ Melanin reduced



Before

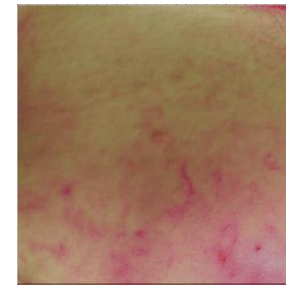


After(6times)

■ Vasodilation improved



Before



After(6times)

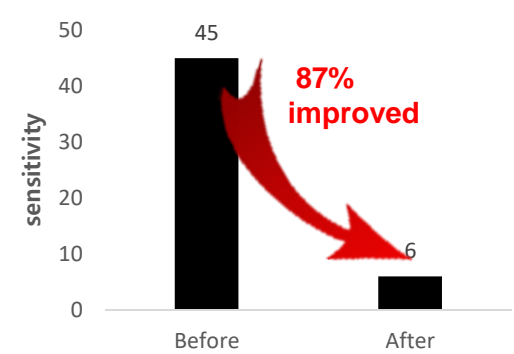
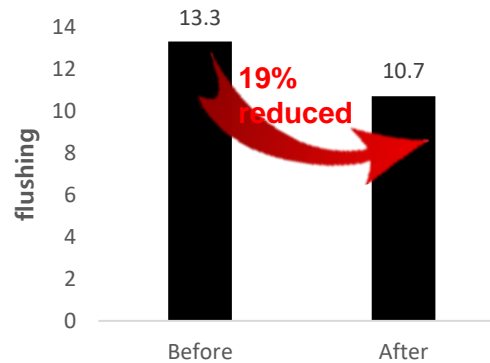
■ Flushing improved



Before



After(2wks)



Clinical Trials of Curestem

The number of hair per unit area increased (Before/After)

- Hair line



- Top of the head



[Male, age 45 / 12 weeks at M** clinic in Korea/ Jun to Oct, 2020]

Clinical Trials of Curestem

The number of hair per unit area increased (Before/After)

- 1 vial (2ml) per week, 2 times



- 1 vial (2ml) per week, 4 times



[Male, age 37/ 2weeks at a clinic in Singapore/ Dec 9th, 2019 to Jan 8th, 2020]

Clinical Trials of Curestem

The number of hair per unit area increased
The hair got thicker (Before/After)

- 1 vial (2ml) per week, 2 times



- 1 vial (2ml) per week, 4 times

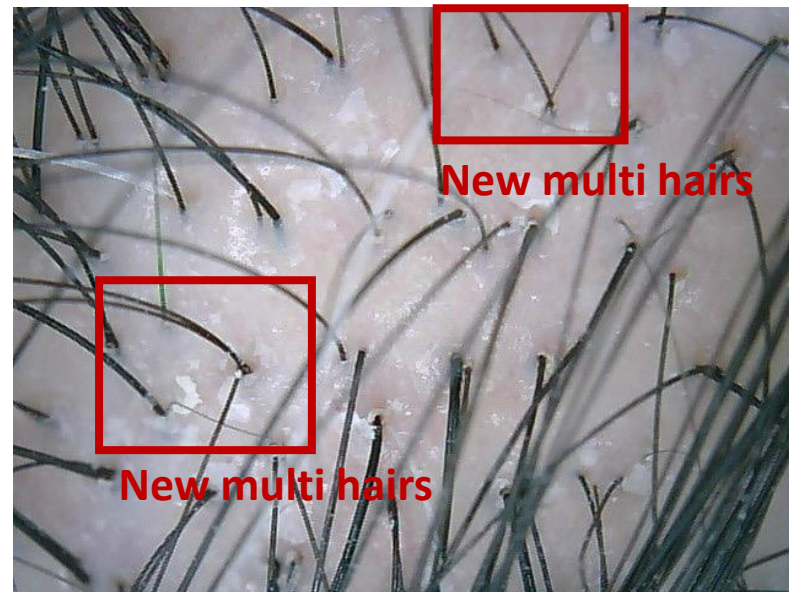
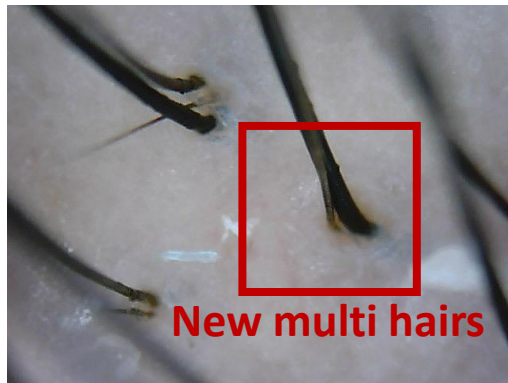


[Male, age 37/ 2weeks at a clinic in Singapore/ Dec 9th, 2019 to Jan 8th, 2020]

Clinical Trials of Curestem

Multiple hairs grow from 1 single follicle (Before/After)

- 1 vial (2ml) per week, 4 times



Clinical Trials of Curestem

The number of hair per unit area increased (Before/After)

- 1 vial (2ml) per week, 3 times

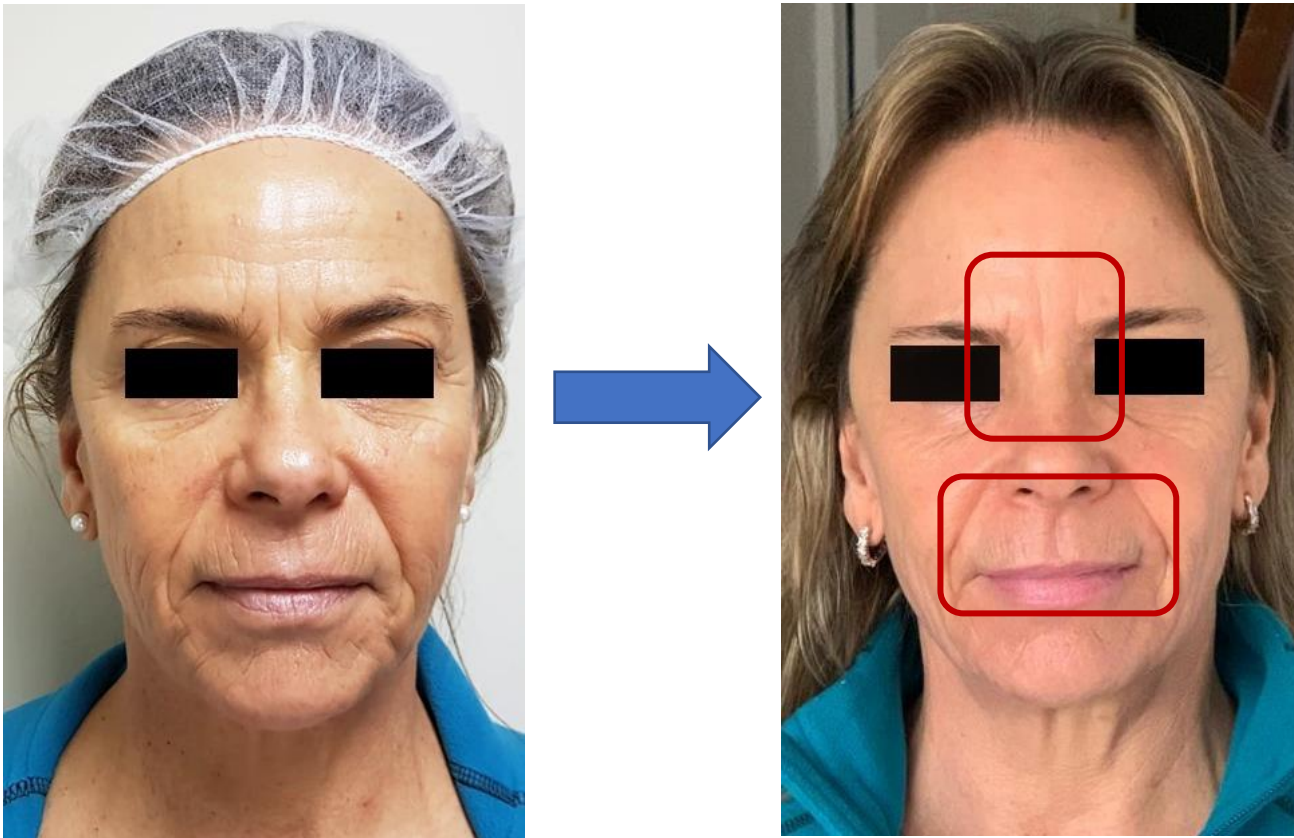


[Male, age 30s/ 4 weeks at N** clinic in Korea/ May to June, 2020]

Clinical Trials of Curestem

Fine lines, wrinkles reduced, smoother skin (Before/After)

- After ResurFX laser + IPL+ Curestem 20 with MTS, once a month (twice)



[Female, age 57/ 2 months at P** clinic in Chile/ March to Apr., 2020]

brand

photo & video

CURESTEM

■ 연출 이미지 | 큐어스텝 C20



■ **SCI Journal List of stem cell conditioned media**

	No.	Title	Year	Published	Key contents
Human Cord Blood Conditioned Media	1	Conditioned Media from Human Cord Blood-Derived Mesenchymal Stem Cells Inhibits Melanogenesis by Promoting Proteasomal Degradation of MITF	2015	PLoS One.	Human cord blood derived mesenchymal stem cell conditioned media thru ERK signaling, can effectively inhibit melanin synthesis .
	2	Exosomes derived from human cord blood mesenchymal stem cells stimulates rejuvenation of human skin .	2017	Biochem Biophys Res Commun.	Skin regeneration effect of human cord blood mesenchymal stem cell exosome
	3	The effect of human cord blood-derived mesenchymal stem cell media containing serum on recovery after laser treatment : A double-blinded, randomized, split-face controlled study.	2020	J Cosmet Dermatol.	Skin recovery of human cord blood mesenchymal stem cell media application after laser
	4	Soluble PTX3 of Human cord Blood-Derived Mesenchymal Stem Cells Attenuate Hyperoxic Lung Injury by Activating Macrophage Polarization in Neonatal Rat Model	2020	Stem Cells Int.	UCB-MSCs under inflammatory conditions were confirmed to suppress inflammation while enhancing anti-inflammation Furthermore, PTX3 is a potential marker for the screening of highly efficient stem cells .
	5	Up-Regulation of Superoxide Dismutase 2 in 3D Spheroid Formation Promotes Therapeutic Potency of Human cord Blood-Derived Mesenchymal Stem Cells	2020	Antioxidants (Basel).	SOD2, an increased antioxidant of UCB-MSCs reduces oxidative stress, apoptosis, and increases cartilage regeneration .
	6	Decorin Secreted by Human cord Blood-Derived Mesenchymal Stem Cells Induces Macrophage Polarization via CD44 to Repair Hyperoxic Lung Injury	2019	Int J Mol Sci.	The efficacy of stem cell-mediated therapy in inflammatory diseases and tissue damage could be determined by the paracrine factors secreted from MSCs.
	7	Gene Expression of Molecules Regulating Apoptotic Pathways in Glioblastoma Multiforme Treated with human cord Stem Cell Conditioned Medium.	2019	Malays J Med Sci.	The UCMSC-CM was able to regulate the expression of molecules involved in GBM cell apoptotic pathways .
	8	Effect of growth differentiation factor-15 secreted by human cord blood- derived mesenchymal stem cells on amyloid beta levels in in vitro and in vivo models of Alzheimer's disease	2018	Biochem Biophys Res Commun.	The functional effects of MSCs in the treatment of various diseases are most likely due to secreted paracrine factors
	9	Human cord mesenchymal stem cell conditioned medium attenuates renal fibrosis by reducing inflammation and epithelial-to-mesenchymal transition via the TLR4/NF-κB signaling pathway in vivo and in vitro.	2018	Stem Cell Res Ther.	UCB-CM can attenuate renal fibrosis by reducing inflammation and mesenchymal metastasis in the epithelium
	10	Exosomes from human cord blood accelerate cutaneous wound healing through miR-21-3p-mediated promotion of angiogenesis and fibroblast function.	2018	Theranostics.	Angiogenesis of UCB exosomes, skin wound healing through the promotion of miR-21-3p of fibroblast function

■ **SCI Journal List of stem cell conditioned media**

	No.	Title	Year	Published	Key contents
GDF11	1	GDF11 promotes osteogenesis as opposed to MSTN, and follistatin, a MSTN/GDF11 inhibitor, increases muscle mass but weakens bone.	2020	Proc Natl Acad Sci USA.	GDF11 promotes bone formation in contrast to GDF11 inhibitors increase muscle mass.
	2	Growth differentiation factor 11 attenuates liver fibrosis via expansion of liver progenitor cells.	2019	Gut.	GDF11 attenuates liver fibrosis through expansion of hepatic progenitor cells
	3	Growth Differentiation Factor 11 Promotes Neurovascular Recovery After Stroke in Mice.	2018	Front Cell Neurosci.	Growth Differentiation Factor 11 promotes Neurovascular Recovery
Skin	1	Interleukin-6 from Adipose-Derived Stem Cells Promotes Tissue Repair by the Increase of Cell Proliferation and Hair Follicles in Ischemia/Reperfusion-Treated Skin Flaps.	2019	Mediators Inflamm.	Promotes tissue regeneration through ischemia and increases hair follicles in ischemia perfusion
	2	Interleukin-18 exacerbates skin inflammation and affects microabscesses and scale formation in a mouse model of imiquimod-induced psoriasis.	2019	Chin Med J (Engl).	IL-18 Regulates Dermatitis in IMQ-Induced Mouse Models
	3	Itch in dermatomyositis: the role of increased skin interleukin-31.	2018	Br J Dermatol.	Increased IL-31 improves dermatitis itching
	4	Neutralization of IL-17C Reduces Skin Inflammation in Mouse Models of Psoriasis and Atopic Dermatitis.	2018	J Invest Dermatol.	Neutralization of IL-17C Reduces Skin Inflammation in Mouse Models of Psoriasis and Atopic Dermatitis.
	5	Staphylococcus aureus Epicutaneous Exposure Drives Skin Inflammation via IL-36-Mediated T Cell Responses.	2017	Cell Host Microbe.	IL-36 on regulation of skin inflammation
	6	Establishing a Role for Interleukin-17 in Atopic Dermatitis-Related Skin Inflammation.	2017	J Cutan Med Surg.	IL-17 role on dermatitis
	7	Impaired Tight Junctions in Atopic Dermatitis Skin and in a Skin-Equivalent Model Treated with Interleukin-17	2016	PLoS One.	IL-17on skin tissue cohesion in patients with atopic dermatitis
	8	Nociceptive sensory neurons drive interleukin-23-mediated psoriasiform skin inflammation.	2014	Nature.	Pain sensory neurons regulate IL-23 mediated psoriasis skin inflammation
Hair	1	Platelet-derived growth factor (PDGF) signaling modulates adult hair follicle dermal stem cell maintenance and self-renewal	2017	nature partner journals	PDGF regulates adult hair through hair follicle skin stem cell maintenance and self-renewal
	2	Therapeutic role of human hepatocyte growth factor (HGF) in treating hair loss	2016	PeerJ	HGF effects as of hair loss treatment
	3	Epidermal Growth Factor (EGF) Promotes Proliferation and Migration of Follicular Outer Root Sheath Cells via Wnt/ β -Catenin Signaling	2016	Cell Physiol Biochem	EGF promotes hair follicle proliferation and movement through Wnt / β -Catenin Signaling.
	4	Fibroblast Growth Factors (FGF) Stimulate Hair Growth through β -Catenin and Shh Expression in C57BL/6 Mice	2015	Hindawi	FGF promotes hair growth through expression of Catenin and Shh
	5	Treatment of MSCs with Wnt1a-conditioned medium activates DP cells and promotes hair follicle regrowth	2014	scientific reports	Treat MSC to promote DP cell activation and hair follicle regrowth