

CLINICAL STUDY REPORT

Human Co., Ltd. Skin Clinical Trial Center



Product : [Vegan Comforting Suncream]

Report No : HM-230502-IR-0009-58

Report date : 10th November 2023

Authentication

Title	24-hours Occlusive Single Patch Test For [Vegan Comforting Suncream]
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The Human Co., Ltd. Skin Clinical Trial Center has unequivocally performed "24-hours occlusive single patch test" as requested by [SHIFT4 INC.].

The study was conducted in compliance with the regulations of GCP (Good Clinical Practice) guideline, MFDS (Ministry of Food and Drug Safety), and with Standard Operation Procedure (SOP) of the Human Co., Ltd. Skin Clinical Trial Center, we faithfully carried out the clinical study and report the results as follows:

DATE

10th November 2023

Institute **Human Co., Ltd. Skin Clinical Trial Center**

President

Huijeong Jung (Signature)



Study Director **Human Co., Ltd. Skin Clinical Trial Center**

Dermatologist

Wonkyu Hong (Signature)



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Information of the study request

Title	24-hours Occlusive Single Patch Test For [Vegan Comforting Suncream]
Report No	HM-230502-IR-0009-58
Study period	From 02 nd May 2023 to 04 th May 2023
Report date	10 th November 2023

Institute	Name	Human Co., Ltd. Skin Clinical Trial Center
	Address	1005~1008, 24, Gasan digital 1-ro, Geumcheon-gu, Seoul, Republic of Korea
	President	Huijeong Jung
	Study director	Wonkyu Hong / Dermatologist
	Responsible researcher	Eunseok Lee / Chief Researcher
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	e-mail	leeun6910@naver.com

Sponsor	Name	SHIFT4 INC.
	Address	358-39 9F 903, Hosu-ro, Ilsandong-gu, Goyang-si, Gyeonggi-do, Republic of Korea
	President	Minho Bae
	Monitor	Jonghoon Jeon
	Tel.	+82-70-8691-4689
	e-mail	jhjeon@12grabs.com

Reliability assurance

Title	24-hours Occlusive Single Patch Test For [Vegan Comforting Suncream]
Report No	HM-230502-IR-0009-58
Study period	From 02 nd May 2023 to 04 th May 2023

This study was conducted under the experimental protocol in consulted with the sponsor, in compliance with the regulations of GCP (Good Clinical Practice) guideline, MFDS (Ministry of Food and Drug Safety), and with Standard Operation Procedure (SOP) of the Human Co., Ltd. Skin Clinical Trial Center.

In addition, it is confirmed that this report was reviewed and found that it accurately reflected the results obtained during the study by a quality assurance.

1. Following basic documentations stored? (Select all that apply)

- ☒ Experimental protocol
 ☒ Contract
 ☒ Informed consent Form (ICF)
- ☒ Case Report Form (CRF)
 ☒ Researcher resume
 ☒ Explanation for subject
- ☐ Code Breaking procedure
 ☒ Subject compensation regulation
 ☐ Reports of serious adverse event

2. The number of subjects

Division	The number of subjects
Planned	>30
Enrolled	32
Dropped	0
Completed	32

3. Did the study proceed according to the study protocol?

- ☒ Yes
 ☐ No

4. Did the study proceed according to the Standard Operation Procedure (SOP)?

☒ Yes ☐ No

5. Did all subjects sign and date their handwritten consent to participate in the approved study?

☒ Yes ☐ No

(If receiving consent from a substitute: ☐ Yes ☐ No, reason: _____)

6. Had there been any Adverse Event occurrence, severity, or specific changes to note?

(If yes, attach and submit)

☐ Yes ☒ No

7. Was the following subject's information filled in the Case Report Form (CRF) (Multiple choices)?

☒ Subject initial ☒ Date of birth ☒ Subject gender ☒ Subject age

8. Were the various documents related to the clinical study stored in a separate safe place?

☒ Yes ☐ No

10th November 2023

Study Director Wonkyu Hong (Seal)

Quality Assurance Hong Suk Kim (Seal)

Summary of the results

Title	24-hours Occlusive Single Patch Test For [Vegan Comforting Suncream]		
Institute	Human Co., Ltd. Skin Clinical Trial Center		
Report No	HM-230502-IR-0009-58		
Study period	From 02 nd May 2023 to 04 th May 2023		
Report date	10 th November 2023		
Objective	To evaluate the irritation potential of the [Vegan Comforting Suncream] in human skin.		
Investigational product	No.*	Name of the product	Formulation
	F-8	Vegan Comforting Suncream	Cream
	<i>*Location on the application of the product</i>		
Methods	<p>1. Subjects : 30 or more healthy male and female adults over the age 19 years old who met all inclusion and exclusion criteria.</p> <p>2. Evaluation methods : 24 hours single patch test, as modified by Frosch & Kligman (1979), CTFA guideline (2007) and Draize.</p> <ul style="list-style-type: none"> ➤ Test area: on the upper back ➤ Patch duration: 24 hours occlusive patch ➤ Reading and interpretation: To evaluate the test results, we removed the patch after 24 hours. The skin reactions was assessed at 30 min and 24 hours after removal. We calculated the mean skin reaction rate after each assessment and analyzed the irritation level. 		

Results	1. Subjects			
	: This study was initially conducted with 32 Korean male and female adults who met all the inclusion criteria, exclusion criteria.			
	Since 0 subject has withdrawn during the test period, total 32 subjects included this test result report.			
	Average age of subjects is 53.03 years old, the oldest is 68 and the youngest is 25 years old.			
	2. Results of skin primary irritation test on human			
	No.*	Name of the product	Skin Irritation Index	Irritation Evaluation
	F-8	Vegan Comforting Suncream	0.02	No irritation (Excellent)
	<i>*Location on the application of the product</i>			
Conclusion	As result of primary skin irritation test, the [Vegan Comforting Suncream] by [SHIFT4 INC.] is evaluated as a non-irritating product with [0.02] skin irritation index score.			

1. Objective

This study was performed to evaluate the safety of test product and its ingredients by measuring the irritation index in the human skin.

2. Study period

From 02nd May 2023 to 04th May 2023

3. Investigational product

3.1. Inform of the investigational product

Table 1. Inform of the investigational product

No.*	Name of the investigational product	Formulation	Concentration
F-8	Vegan Comforting Suncream	Cream	As is

**Location on the application of the Investigational product*

3.2. Maintenance and storing of the investigational product

Investigational product information was immediately recorded in the sample ledger after received. Investigational product will be stored for 1 month before gets discarded.

3.3. Safety of the investigational product

The sponsor has agreed to take responsibility for compensation of any adverse event caused by investigational product during the study period. However, medical expenses and hospitalization which are unrelated to this study were excluded from the agreement.

4. Subjects

4.1. Inclusion criteria

- Male and female adults over the age 19 years old
- Subjects who have signed consent form voluntarily after being sufficiently informed regarding the objectives of study and all related contents
- Subjects who are healthy without acute and chronic diseases including skin disorders
- Subjects who can be observed and traced throughout the entire study period

4.2. Exclusion criteria

- Subjects who is pregnant or breast-feeding
- Subject who has psychiatric disease and infectious skin disease
- Subject who has chronic disease such as asthma, diabetes, high blood pressure, etc.
- Subject who has skin lesion on the test site such as moles, pimples, erythema, scalds (burns), hemotelangiosis, and scars
- Subject who has used skin ointment containing steroid on the test site for more than one month
- Subject who has sensitive and hypersensitive skin
- Subject who has irritation history or allergy to adhesive tape
- Subject who has been part of the same clinical trial within the past 3 months
- Subject who is on contraceptive, anti-histamine and anti-inflammatory prescriptions
- Subject who has cosmetics or sunlight allergies
- Employee in this clinical trial center
- Anyone who is considered non-qualified by the investigator

4.3. Number of subjects

This study was conducted in compliance with the "Regulations on Functional Cosmetic Examination [Annex 1] Toxicity Test Method Section 7 (1) Human patch test method" by the MFDS (Ministry of Food and Drug Safety).

The results were calculated by obtaining the valid data from a minimum of 30 subjects.

4.4. Criteria for premature withdrawal and dropout from the study

The subjects who participating in this study can withdraw from the clinical trial any time, and the investigator can eliminate subjects from this test and exclude the data on the subject from the test result evaluation in the event of occurrence of one or more of the following reasons. When a subject is withdrawn, the investigator shall specify the corresponding reason and records other relevant matters to report to the principal investigator.

- (1) Voluntary withdrawal by the subject
- (2) Violation of the protocol
- (3) Occurrence of adverse event or seriously adverse event on the test site of a subject
- (4) Failure to follow up on the subject
- (5) Others

4.5. Maintenance of confidential information and duty of good faith

- (1) Confidentiality of personal information of subjects participating in the clinical trial will be maintained. However, the test data can be used for medical, academic research or marketing purposes within the scope of not disclosing the identity of the subject.
- (2) The subjects maintained confidentiality of information obtained through the clinical trial until the end of the test.
- (3) Subjects participating in the clinical trial filled out the documents related to the clinical trial sincerely and frankly.

5. Materials to conduct the study

- 1) Finn Chamber® on Scanpor® (SmartPractice®, U.S.A.)
- 2) Microman M100 (Gilson, France)
- 3) Micropore tape (3M/ Medical-Surgical Division)
- 4) Marking pen (Skin marker Slim, Sweden)

6. Methodology

This study was conducted in a temperature and humidity controlled area (indoor temperature $22\pm 2^{\circ}\text{C}$, humidity $50\pm 5\%$) within the HUMAN Co., Ltd. Skin Clinical Trial Center.

6.1. Test method and test site

Test site was located on the flat area of the subject's back but avoiding the spine area and area where there is skin discoloration or any lesion. Test was performed in 32 healthy male and female adult subjects over the age of 19. $20\mu\text{l}$ of the coated test products and diluted test products was inserted, and the attached test product was fixed to the test area for 24 hours with adhesive tape as it was cut and attached to 1cm in width and length in Finn chamber. The skin reaction was assessed at 30 minutes and 24 hours after patch removal.

6.2. Evaluation procedure

Table 2. Evaluation procedure

Actions	Day 1	Day 2	Day 3
Admission of the subjects by the investigator	√	-	-
Application of the investigational product and giving the subjects constraints of the study	√	-	-
Remove patch	-	√	-
Observation of test site after 30 min of the patch removal	-	√	-
Observation of test site after 24 hrs of the patch removal	-	-	√

6.3. Determination of irritation

The determination of skin irritation was assessed by the dermatologist at 30 minutes and 24 hours after removal of the skin patch based on Skin Irritation Evaluation Criteria. Skin reaction was assessed according to the Frosch & Kligman and CTFA guidelines, and skin irritation index was calculated. The degree of skin irritation for test substances was categorized by referring to the skin irritation index applied with the Draize method (Table 3, 4, Fig. 1).

Table 3. Skin Irritation Evaluation Criteria

Mark	Grade	Description
-	0	No reaction
+	1	Slight erythema, either spotty or diffuse
++	2	Moderate uniform erythema
+++	3	Intense erythema with edema
++++	4	Intense erythema with edema & vesicles

Fig 1. Skin Irritation Index Formula

Skin Irritation Index

$$= \frac{\left[\left(\frac{\sum_{i=1}^n \text{Evaluation Value}}{n(\text{Number of Test Subjects})} \right) 30\text{min} + \left(\frac{\sum_{i=1}^n \text{Evaluation Value}}{n(\text{Number of Test Subjects})} \right) 24\text{hrs} \right]}{m(\text{Number of times evaluated})}$$

Table 4. Result Determination Table of Skin Patch Test

Primary Irritation Index	Irritation Evaluation
0.00 ~ 0.25	No irritation (Excellent)
0.26 ~ 1.00	Mild irritation (Good)
1.01 ~ 2.50	Medium irritation (Bad)
2.51 ~ 4.00	Strong irritation (Very Bad)

6.4. Evaluation of skin adverse event

Researchers conducted visual assessment for adverse event in test area and checked for severity of symptoms at each visit. Subjects are also instructed to report immediately when they felt any abnormal symptoms during the test period, whether during visit day or not. In the case of skin adverse event report, researchers should notify the principal investigator immediately. The principal investigator would confirm the adverse event, take proper measures, and decide whether to continue participate in the clinical trial.

7. Results

7.1. Subjects

This study was initially conducted with 32 Korean male and female adults who met all the inclusion criteria, exclusion criteria.

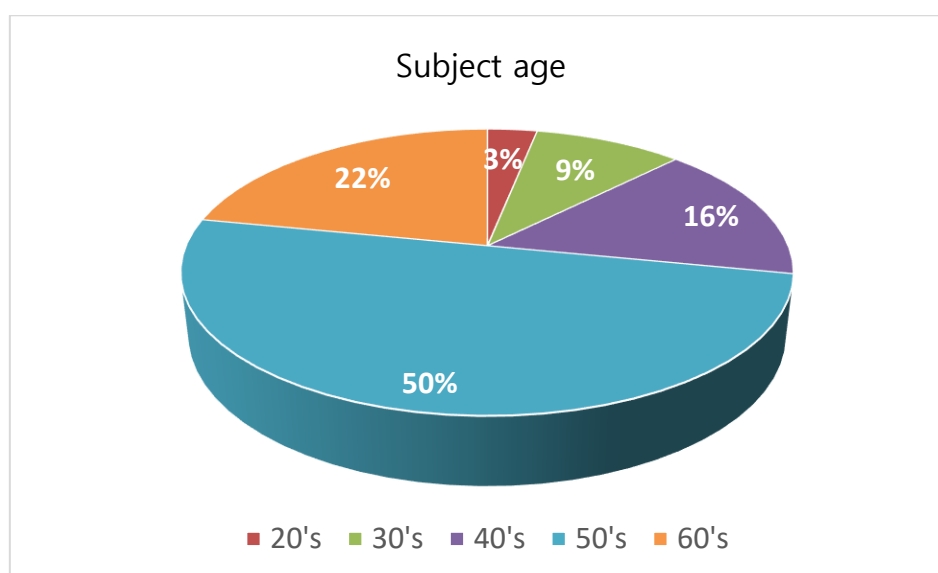
Since 0 subject has withdrawn during the test period, total 32 subjects included this test result report.

Average age of subjects is 53.03 years old, the oldest is 68 years old and the youngest is 25 years old (Table 5, Fig 2).

Table 5. Subject Information

Enrolled		32
Dropped		0
Completed		32
Gender	Female	29
	Male	3
Average age		53.03

Fig 2. Subject age



7.2. Results of skin primary irritation test

Dermatologist performed a visual evaluation at 30 minutes and 24 hours after removal of the patch. As a result, the investigational product [Vegan Comforting Suncream] was classified as non-irritating (Excellent) range for human skin primary irritation (Table 6).

Table 6. Results of skin primary irritation test

No.*	Name of the product	30 min [†]				24 hrs [‡]				Skin Irritation Index	Irritation Evaluation
		1	2	3	4	1	2	3	4		
F-8	Vegan Comforting Suncream	1	-	-	-	-	-	-	-	0.02	No irritation (Excellent)

*Location on the application of the product

[†]30 min after removal of the patch

[‡]24 hours after removal of the patch

7.3. Evaluation result of skin adverse event

As a result of the physical examination by the dermatologist, no specific skin adverse events were observed during the study period.

8. Conclusion

24-hours occlusive single patch test was performed to evaluate the safety of the [Vegan Comforting Suncream] as requested by [SHIFT4 INC.] by measuring the irritation index on the human skin.

The flat area of back skin without pigmented or any lesion was selected as test area in 32 healthy male and female adult subjects who aged over the age of 19. Test product was applied on Finn chamber and fixed to the test area for 24 hours with adhesive tape. The skin reaction was assessed by a dermatologist at 30 minutes and 24 hours after removal of the patch.

As result of primary skin irritation test, the [Vegan Comforting Suncream] by [SHIFT4 INC.] is evaluated as a non-irritating products with [0.02] skin irritation index score.

9. References

- 1) Guidelines for test methods for demonstrating cosmetic mark advertising, Ministry of Food and Drug Safety. 2014.
- 2) Guidelines for cosmetic clinical and efficacy examination, Ministry of Food and Drug Safety. 2012.
- 3) Basketter DA, Chamnerlain M, Griffiths HA, Rowson M, Whittle E, York M. The classification of skin irritants by human patch test. Food Chem Toxicol. 1997;37(8): 845-52.
- 4) CTFA Safety Testing Guideline: The Cosmetic, Toiletry and Fragrance Association, Inc. Washington, D.C. 1981:20005.
- 5) CTFA Safety Testing Guideline: The Cosmetic, Toiletry and Fragrance Association, Inc. Washington, D.C. 1991:20036.
- 6) Devos SA, Van Der Valk PG. Epicutaneous patch testing. Eur J Dermatol. 2002;12(5): 506-13.
- 7) Draize J.H., Woodard G., Calvery H.O. Methods for the study of irritation and toxicity of substances applied topically to the skin and mucous membranes. J. Pharm. Exp. Ther. 1994;82:377-390.
- 8) Draize J.H. Dermal Toxicity Appraisal of the Safety of Chemicals in Foods, Drugs and Cosmetics, Association of Food and Drug Officials of the United States, Austin, Tex, USA. 1959.
- 9) Electrical impedance applied to non-invasive detection of irritation in skin. Contact dermatitis. 1992;27:37-42.
- 10) Fischer T, Maibach H. Finn chamber patch test technique. Contact dermatitis. 1984; 11(3):137-140.
- 11) Frosch P. J. & Kligman A.M. The soap chamber; a new method for assessing the irritancy. J. Invest. Dermatol. 1979;40:11-14.

10. Appendix

Appendix 1. Subjects' information

Control No.	Initial	Age	Gender
01	PCY	58	F
02	KMO	50	F
03	KMJ	59	F
04	SBS	54	F
05	SMY	56	F
06	JKS	57	F
07	KHJ	38	F
08	YMS	66	F
09	JYJ	67	F
10	KYS	62	F
11	JMJ	43	F
12	LJH	57	F
13	PSK	68	F
14	KYG	48	F
15	KJY	48	F
16	NJY	47	F
17	PJE	25	F
18	PSY	61	F
19	KSE	54	F
20	KMS	36	M
21	LJH	39	F
22	KMS	57	F
23	JGS	51	F
24	JEY	53	F
25	LEK	43	F
26	KSH	57	F

27	SJJ	58	F
28	KYS	62	F
29	KBS	50	M
30	KEJ	52	F
31	LSY	59	F
32	KMG	62	M

Appendix 2. Ingredients of the investigational products

[Vegan Comforting Suncream]

Dendropanax Morbiferus Extract(30%), Water, Propanediol, Dibutyl Adipate, Ethylhexyl Triazone, Terephthalylidene Dicamphor Sulfonic Acid, Polymethylsilsesquioxane, Butylene Glycol, Niacinamide, Tromethamine, Polyglyceryl-3 Distearate, Glycerin, Galactomyces Ferment Filtrate, Sodium Hyaluronate, Diethylamino Hydroxybenzoyl Hexyl Benzoate, Diisopropyl Adipate, Polysilicone-15, 1,2-Hexanediol, Pentylene Glycol, Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine, Caprylyl Methicone, Coco-Caprylate/Caprates, Poly C10-30 Alkyl Acrylate, Glyceryl Stearate, Potassium Cetyl Phosphate, Hydroxyacetophenone, Sodium Acrylates Crosspolymer-2, Methylpropanediol, Polyether-1, Acrylates/C10-30 Alkyl Acrylate Crosspolymer, Glyceryl Stearate Citrate, Polyacrylate Crosspolymer-6, Adenosine, Biosaccharide Gum-1, Hydroxypropyl Methylcellulose, Acetyl Glucosamine, Sodium Hyaluronate Crosspolymer, Caprylyl Glycol, Allantoin, Madecassoside, Panthenol, Beta-Glucan, Cetearyl Alcohol, Carbomer, Disodium EDTA

Appendix 3. Patch test result data

Control No.	Vegan Comforting Suncream	
	30 minutes	24 hours
01	1	0
02	0	0
03	0	0
04	0	0
05	0	0
06	0	0
07	0	0
08	0	0
09	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	0	0
25	0	0
26	0	0

27	0	0
28	0	0
29	0	0
30	0	0
31	0	0
32	0	0

*0-No reaction, 1-Slight erythema, either spotty or diffuse, 2-Moderate uniform erythema, 3-Intense erythema with edema, 4-Intense erythema with edema & vesicles

Facilities and faculty involved in the study

■ Institute			
Name	Human Co., Ltd. Skin Clinical Trial Center		
Address	1005~1008, 24, Gasan digital 1-ro, Geumcheon-gu, Seoul, Republic of Korea		
President	Huijeong Jung		
Study director	Wonkyu Hong / Dermatologist		
Tel.	+82-70-5222-9663	FAX	+82-70-7500-9650
e-mail	cosmetic0206@naver.com		

■ Purpose of establishment of test agency
This institution was established to evaluate the safety, effectiveness, and functionality of test product by performing clinical study, providing results of related tests as well as technical information.

■ Clinical study items	
Cosmetics safety evaluation and research	Functional cosmetics evaluation and research
Cosmetics efficacy evaluation and research	Quasi-drugs evaluation and research
Skin related product evaluation and research	Functional food evaluation and research

■ Facilities		
A thermo-hygrostat	VECTRA XT	Mark-Vu
F-ray	DSLR (Cannon EOS 80D)	Antera 3D
DUB®SkinScanner	Epsilon E100	Electronic scale
Cutometer® dual MPA 630	Corneometer® CM825	Sebumeter® SM815
Moisturemeter D	Vapometer	SkinGlossmeter
SkinColorCatch	Skin pH meter	FLIR E75
Kong Camera	Dino-Lite Digital Microscope	Folliscope
Fine dust injection system	Infrared Moisture Analyzer	Bathtub
Infrared Sauna System	IR lamp	PRIMOS CR
SPSS Statistics	Image-Pro 10	Fluorescence microscope
Static meters	Ballistometer	Clean bench
Incubator	Auto clave	Water Purification System
DERMAVISION Beaty Edition	MulteTest-dV	Black D-Squame

Researcher CV

■ Director of the agency

Heejung Jung / CEO

Educational background	2002 ~ 2004	Graduated from Department of Environmental Engineering, Konkuk University, bachelor of engineering
Career	2018 ~ 2020	Head of Skin Clinical Trial Center, OATC Co., Ltd.
	2020 ~ present	CEO of Human Skin Clinical Trial Center
		Reliability review of whitening function evaluation using transparent film mapping
		Patent registration for blue light blocking test device [10-2346709]
		Patent registration of anti-dust performance test device and method [10-2019883]
		Patent application for portable cosmetic container [10-2019-0052712]
		Patent application for cosmetics sterilizer [10-2019-0080854]
		Patent application for cosmetic container with temperature control [10-2019-0084935]
		Patent application for skin heavy metal measuring device [10-2019-0168852]
		Patent application for skin type analysis and patent application for customized cosmetics preparation device [10-2020-0068940]

■ Test manager

Wonkyu Hong/ Dermatologist

Education	2004	Graduated from Inha University School of Medicine, Bachelor of Medicine
	2004 ~ 2005	Intern of Inha University Hospital
	2005 ~ 2009	Resident of Inha University Hospital
	2007	Graduated from Inha University School of Medicine, Master of Medicine
Career	2004	Acquired Doctor's License (License number: 83931)
	2009	Acquired dermatologist (License number: 1771)
	2009 ~ 2012	Associate Chairman of Hansen Welfare Association Jeonbuk Branch
	2013 ~ 2015	Representative Director of Pyeongtaek Human Dermatology
	2013 ~ present	Adjunct Professor of Dermatology Class, Inha University
	2016	Representative Director of Cheongna Human Dermatology
	2018	Research Director of Human Cosmetic

	2018	Adjunct Professor of International St. Mary's Hospital
	2018 ~ 2020	Research Director of Skin Clinical Trial Center, OATC Co., Ltd.
	2020 ~ present	Research Director of Human Skin Clinical Trial Center
Society activities		Regular member of Korean Society of Dermatology
		Regular member of the Korean Society for Acne Research
		Regular member of Korean Hair Research Society
		Regular member of Association of Korean Dermatologists
	2018 ~ present	Intelligence member of Association of Korean Dermatologists
	2018 ~ present	Planning policy member of Association of Korean Dermatologists

■ Reliability assurance officer

Hongsuk Kim / Dermatologist

Education	2001	Graduated from Dong-A University College of Medicine, Bachelor of Medicine
	2001 ~ 2002	Intern of Dong-A University Hospital
	2002 ~ 2006	Resident of Dong-A University Hospital
	2004	Master of Dermatology, Dong-A University College of Medicine, Master of Medicine
Career	2001	Acquired Doctor's License(License number: 72561)
	2006	Acquired dermatologist (License number: 1629)
	2006 ~ 2009	Manager, Jeju Special Self-Governing Province Branch, Korea Hansen Welfare Association
	2010 ~ 2011	Manager of Nohyung Beautiful Dermatology
	2011 ~ 2012	Representative Manager of Dermatology, Seoul Clinic
	2014 ~ present	Adjunct Professor of Dermatology Class, Dong-A University,
	2012 ~ present	Representative director of Wine Dermatology Plastic Surgery
	2015 ~ present	Clinical Instructor of Department of Medical Beauty, Chungcheong University
	2016 ~ present	Clinical Instructor of Cosmetics Consulting Professional Association
	2020 ~ present	Human Skin Clinical Trial Center Reliability assurance officer
Society activities		Publication director of the Korean Society for Anti-aging Dermatology

Director of the Korean Society for Skin Type Research
Director of the Korean Society of Cosmetics and
Cosmetology
Regular member of Korean Society of Dermatology
Regular member of Korean Society of Dermatology Surgery
Regular member of Korean Medical Society for Cosmetics
Regular member of Korean Laser Society
Regular member of the Korean Society for Psoriasis
Regular member of the Korean Society for Acne Research
Regular member of Korean Society of Vitiligo
Regular member of the Korean Atopic Dermatitis
Association

■ Researchers

Myoung-rae Kim/ Clinical Trial Division Head

Education	1996 ~ 2003	Bachelor of Science, Life Science, Konkuk University
	2003 ~ 2005	Master of Science, Medical life science, Catholic University
Career	2006 ~ 2007	Researcher / SK bioland Co. Ltd., Research planning team
	2007 ~ 2009	Senior researcher / Dermapro Co. Ltd., Skin Research Center
	2009 ~ 2012	Researcher / Coway Co. Ltd., Cosmetic R&D, EA team
	2012 ~ 2016	Senior researcher / Coway Co. Ltd., Cosmetic R&D, EA team
	2016 ~ 2018	Senior researcher / Coway Co. Ltd., Cosmetic R&D, TD team
	2018 ~ 2018	Senior researcher / Coway Co. Ltd., Cosmetic R&D, QC TFT
	2018 ~ 2019	General manager / Coway Co. Ltd., Cosmetic Business Division
	2022 ~ present	Human Skin Clinical Trial Center, Clinical Trial Division Head

Kyel Ko / Clinical Trial Division Head

Education	2002 ~ 2009	Soong-sil University, Department of Information and Communication Engineering, Bachelor
	2009 ~ 2011	Soong-sil University, Department of Information and Communication Engineering, Master
	2020 ~ 2022	Dong-guk University, Department of Medical Device Industry, Ph.D. completion
Career	2011 ~ 2016	Toshiba Samsung storage technology, Product Planning, Assistant Researcher
	2016 ~ 2019	BIUMTEC Co., Ltd., Research Planning, Manager
	2018 ~ 2022	KHMEDICARE, Clinical Trial Division, CEO
	2022 ~ present	Human Skin Clinical Trial Center, Medical Device Clinical Trial Division Head

Seungbae Hong / Medical Device Clinical Trial Team leader

Education	2003 ~ 2009	Kangwon National University, Department of Mechanical and Biomedical Engineering, Bachelor
	2009 ~ 2012	Kangwon National University, Department of Mechanical and Biomedical Engineering, Master
Career	2012 ~ 2015	Kangwon National University, University-Industry Cooperation Foundation(BIOSYSTEMS Lab.), Assistant Researcher
	2015 ~ 2020	AIMEDIC, R&D Division, Quality Certification Department(RA, Clinical Trial), Director

2021 ~ 2022	KHMEDICARE, Clinical Trial Division, Director
2022 ~ present	Human Skin Clinical Trial Center, Medical Device Clinical Trial Team, Team Leader

Soyeon Kim / Team leader 1

Education	2013 ~ 2015	Shin Ansan University, Department of Food and Life Sciences
Career	2015 ~ 2021	DERMAPRO Ltd. Researcher
	2021 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team 1, Team Leader

Minji Seo / Team leader 2

Education	2014 ~ 2017	Daejon Health University, Cosmetic Science, Associate of Science
Career	2017 ~ 2019	IEC Korea Co., Ltd. Safety team, Researcher
	2020 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team 2, Team Leader

Jisoo Kim / Chief researcher

Education	2014 ~ 2018	Hoseo University, Cosmetic Science, Bachelor of Science
Career	2018 ~ 2020	KC Skin Research Center, Researcher
	2020 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team 1, Chief researcher

Hyunji Kim / Chief researcher

Education	2015 ~ 2019	Semyung University, Department of Oriental Bio Convergence Science, Bachelor of Science
Career	2019 ~ 2020	ES Cosmetics CO., Ltd., Researcher
	2020 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team 1, Chief researcher

Jungyeong Kim / Chief researcher

Education	2015 ~ 2020	Semyung University, Department of Oriental Bio Convergence Science, Bachelor of Science
Career	2020 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team 1, Chief researcher

Eunseok Lee/ Chief researcher

Education	2009 ~ 2011	Shin Ansan University
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Career	2018	Academic Creditbank System, business administration
	2011 ~ 2021	Dermapro Skin Research Center, Senior researcher
	2021 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team 2, Chief researcher
Hayoung Choi / Chief researcher		
Education	2016 ~ 2020	Semyung University, Department of Oriental Bio Convergence Science, Bachelor of Science
Career	2020 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team 2, Chief researcher
Heejin Lim / Researcher		
Education	2017 ~ 2021	Kyungsoo University, chemistry department, Bachelor of Science
Career	2021 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team 1, Researcher
Yujin Heo / Researcher		
Education	2015 ~ 2020	Chungwoon University, Department of Chemical Engineering, Bachelor of Engineering
Career	2021 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team 1, Researcher
Hyunjung Woo / Researcher		
Education	2017 ~ 2021	Inje University, Department of Pharmaceutical Engineering, Bachelor of Engineering
Career	2021 ~ present	Human Skin Clinical Trial Center, Clinical Trial Team 1, Researcher
Dahyeon Kim / Researcher		
Education	2018 ~ 2022	Bucheon University, Department of Beauty Care
Career	2022 ~ present	OATC Skin Clinical Test Center, researcher Human Skin Clinical Trial Center, Clinical Trial Team 1, Researcher

Soobin Moon / Researcher

Education 2013 ~ 2016

Suwon Girls'High School

Career 2020 ~ 2021

JNTC, Tempered glass Dept, staff

2022 ~ present

Human Skin Clinical Trial Center, Clinical Trial Team 1,
Researcher

Heejin Kim / Researcher

Education 2016 ~ 2020

Shinhan University, Department of Beauty health , Bachelor
of Hygiene

Career 2021 ~ present

Human Skin Clinical Trial Center, Clinical Trial Team 2,
Researcher

Eunjin Park / Researcher

Education 2017 ~ 2021

Inje University, Department of Pharmaceutical Engineering,
Bachelor of Engineering

Career 2021 ~ present

Human Skin Clinical Trial Center, Clinical Trial Team 2,
Researcher

Gahyeon Kim / Researcher

Education 2018 ~ 2022

Bucheon University, Department of Beauty Care

Career 2022 ~ present

OATC Skin Clinical Test Center, esearcher
Human Skin Clinical Trial Center, Clinical Trial Team 2,
Researcher

Subin Hwang / Researcher

Education 2020 ~ 2022

Doowon University, Department of Beauty art

Career 2022 ~ present

Human Skin Clinical Trial Center, Clinical Trial Team 2,
Researcher

Yelim Lee / Researcher

Education 2020 ~ 2022

Ansan University, Dept. of Culinary

Career 2022 ~ present

Human Skin Clinical Trial Center, Clinical Trial Team 2,
Researcher

Boram Heo/ Team leader

Education	2017 ~ 2020	Konkuk University Future Knowledge Education Center, Department of K-beauty Industrial Convergence, Bachelor of Science
Career	2017 ~ 2019	Korea Institute of Dermatological Sciences, Researcher
	2019 ~ 2022	PNK Skin Clinical Research Center, Researcher
	2022 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Team Leader

Minhwa Lee / Team leader

Education	2013 ~ 2017	Dongguk University, Department of Biotechnology, Bachelor of Science
Career	2018 ~ 2021	Korea Institute of Dermatological Sciences, Researcher
	2021 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Team Leader

Yukyeong Lee / Chief researcher

Education	2015 ~ 2019	Semyung University, Department of Oriental Bio Convergence Science, Bachelor of Science
Career	2020 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Chief researcher

Youngseo Kim / Researcher

Education	2016 ~ 2020	Jungwon University, Department of Medical Beauty Care
Career	2021 ~ 2022	Korea Institute of Dermatological Sciences, Researcher
	2023 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Sumin Lee / Researcher

Education	2021 ~ 2023	Konkuk University Future Knowledge Education Center, of K-Department beauty Industrial Convergence, Bachelor of Science
Career	2022 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Minjeong Seo / Researcher

Education	2019 ~ 2023	Eulji University, Department of Beauty and Cosmetic Science
Career	2022 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Kyungeun Kim / Researcher

Education	2019~2020	Osan Univerity, Beauty and Cosmetics affiliation Department of Skin and Cosmetics
	2021 ~ 2023	Mokwon Univerity, Department of Cosmetics Engineering, Bachelor of Science
Career	2022 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Seonyoung Kim / Researcher

Education	2018 ~ 2022	Mokwon Univerity, Department of Cosmetics Engineering
Career	2022 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Jieun Kim / Researcher

Education	2018 ~ 2022	Mokwon Univerity, Department of Cosmetics Engineering
Career	2022 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

Hajeong Nam / Researcher

Education	2013 ~ 2015	Shinsung University, Department of Hotel Cooking associate degree
	2022 ~ present	Konkuk University Future Knowledge Education Center, Department of K-beauty Industrial Convergence, Bachelor of Science
Career	2022 ~ present	Human Ethic Skin Clinical Trial Center, Clinical Trial Team, Researcher

List of scientific publications

■ Study Director

No.	Journal
1	Bohee Yang, Wongyu Hong, Sunghyup Han, Jiwon Byeon, Heejin Song, Seunggyun In, Kwangsung Choi, Jeonghyun Shin. Skin Granulomas associated with Common Variable Immunodeficiency. Journal of Korean Society of Dermatology. 2011;49(7):601-605
2	Heejin Song, Sunghyup Han, Jiwon Byeon, Wongyu Hong, Hyunsook Lee, Jeonghyun Shin, Kwangsung Choi. Sodium Tetradecyl Sulfate 3 Cases of Mucosal Cyst treated with Sclerotherapy. Journal of Korean Society of Dermatology. 2008;46(9):1249-1252
3	Sunghyup Han, Heejin Song, Wongyu Hong, Hyunsook Lee, Jeonghyun Shin, Kwangsung Choi. A Case of Sister Mary Joseph node. Journal of Korean Society of Dermatology. 2008;46(8):1103-1107
4	Heejin Song, Wongyu Hong, Hyunsook Lee, Jeonghyun Shin, Sunyoung Moon, Kwangsung Choi. A Case of Pregnant Woman Tsutsugamushi Disease treated with Azithromycin. Journal of Korean Society of Dermatology. 2008;46(6):859-861
5	Wongyu Hong, Jeonghyun Shin, Kwangsung Choi. Effect of Topical Treatment with Anthralin in Patients with Refractory Alopecia Areata having a Wide Range of Hair Loss. Journal of Korean Society of Dermatology. 2008;46(5):641-647
6	Heejin Song, Sunghyup Han, Wongyu Hong, Hyunsook Lee, Kwangsung Choi, Jeonghyun Shin. A Case of Rheumatic Neutrophil Dermatitis. Journal of Korean Society of Dermatology. 2008;46(4):514-516
7	Wongyu Hong, Jeonghyun Shin, Kwangsung Choi. Clinical Treatment Effect of Germinated Brown Rice Phellinus linteus in Atopic Dermatitis. Korea Journal of Herbology. 2008;23(1):103~108
8	Heejin Song, Wongyu Hong, Hyunsook Lee, Kwangsung Choi, Jeonghyun Shin. A Case of Macular Amyloidosis Presented as Depressed Patches on the Face. Journal of Korean Society of Dermatology. 2008;46(2):285-288
9	Hyunsook Lee, Sunghyup Han, Heejin Song, Wongyu Hong, Jeonghyun Shin, Kwangsung Choi. A Case of Lichenoid Drug Eruption by Allopurinol. Journal of Korean Society of Dermatology. 2008;46(1);130-133
10	Wongyu Hong, Heejin Song, Hyunsook Lee, Jongrok Lee, Jeonghyun Shin, Kwangsung Choi. A Case of Cowen Syndrome. Journal of Korean Society of Dermatology. 2007;45(8);829-831
11	Hyeyoung Lee, Wongyu Hong, Jeonghyun Shin, Juyoung Noh, Jongrok Lee. A Case of

	Umbilical Omphalomesenteric Duct Polyp. Journal of Korean Society of Dermatology. 2006;44(11);1342-1344
12	Hyunsook Lee, Wongyu Hong, Jongrok Lee, Jeonghyun Shin, Kwangsung Choi, Yuchan Kim. A Case of Acrosyringial Nevus. Journal of Korean Society of Dermatology. 2006;44(6);751-753
13	Wongyu Hong, Hyunsook Lee, Jongrok Lee, Kwangsung Choi, Jeonghyun Shin, Yuchan Kim. 2 Cases of Pilomatricoma with Bullous Appearance. Journal of Korean Society of Dermatology. 2006;44(3);330-333
14	Hyunsook Lee, Wongyu Hong, Seunggyun In, Jongrok Lee, Jeonghyun Shin, Kwangsung Choi. A Case of Dermatomyositis Associated with Scarring Alopecic Patches. Journal of Korean Society of Dermatology. 2006;44(2);250-252
15	Wongyu Hong, Jeonghyun Shin, Kwangsung Choi. Effect of Anthralin Immunotherapy in Patients with Alopecia Areata having a Wide Range of Hair Loss. Journal of Korean Society of Dermatology. 2009;42(9);1130-1137
16	Heejin Song, Wongyu Hong, Sunghyup Han, Jiwon Byeon, Hyunsook Lee, Kwangsung Choi, Jeonghyun Shin. Acral Angioosteoma Cutis. American Journal of Dermatopathology. 2010;32(5):477-478
17	Heejin Song, Sunghyup Han, Wongyu Hong, Hyunsook Lee, Jeonghyun Shin, Kwangsung Choi. Paraneoplastic bullous pemphigoid: Clinical disease activity correlated with enzyme-linked immunosorbent assay index for the NC16A domain of BP180. Journal of Dermatology. 2009;36:66-68
18	Jiwon Byeon, Sunghyup Han, Heejin Song, Wongyu Hong, Hyunsook Lee, Jeonghyun Shin, Kwangsung Choi. A case of supraumbilical skin rash after chemoembolization for hepatocellular carcinoma. Journal of the European Academy of Dermatology and Venereology. 2009;23(12):1463-1459
19	Wongyu Hong, Heejin Song, Hyunsook Lee, Jeonghyun Shin, Kwangsung Choi. Hobnail haemangioma associated with a secondary sexual characteristic. Journal of the European Academy of Dermatology and Venereology. 2009;23:465-466
20	Heejin Song, Wongyu Hong, Hyunsook Lee, Kwangsung Choi, Jeonghyun Shin. Herpes zoster complicated by delayed intracranial haemorrhage. Clinical and Experimental Dermatology. 2009;34:518-540
21	Sunghyup Han, Heejin Song, Wongyu Hong, Hyunsook Lee, Kwangsung Choi, Jeonghyun Shin. Rhabdomyomatous mesenchymal hamartoma of the vagina. Pediatric Dermatology. 2009;26(6):753-755
22	Sunghyup Han, Heejin Song, Wongyu Hong, Hyunsook Lee, Kwangsung Choi, Jeonghyun Shin. A case of adult blaschkitis with features of interface dermatitis. British Journal of Dermatology. 2008;159:231-266

23	Heejin Song, Wongyu Hong, Hyunsook Lee, Jeonghyun Shin, Kwangsung Choi. Intramuscular lipoma of the sternocleidomastoid muscle. J Eur Acad Dermatol Venereol. 2008;22:363-404
24	Hyunsook Lee, Heejin Song, Wongyu Hong, Jeonghyun Shin, Kwangsung Choi. Pseudoxanthoma elasticum-like papillary dermal elastolysis with solar elastosis. J Eur Acad Dermatol Venereol. 2008;22:363-404
25	Shingu Park, Uicheol Lee, Wongyu Hong, Heejin Song, Jeonghyun Shin. A Case of Occupational Allergic Contact Dermatitis due to PVC Hose. Journal of Occupational Health. 2008;50:197-200
26	Jeonghyun Shin, Wongyu Hong, Heejin Song, Kwangsung Choi, Yuchan Kim. Atypical Acute Graft-Versus-Host Disease. American journal of dermatopathology. 2007;29;576-577
27	Byun JW, Hong WK, Han SH, Song HJ, Lee HS, Choi GS, Shin JH. Red scrotum syndrome: successful treatment with oral doxycycline. International Journal of Dermatology. 2012;51(3):362-363

■ Quality Assurance

No.	Journal
1	Sentinel Lymph Node Biopsy and Staging of Melanoma Using Lymphoscintigraphy and Gamma-probe
2	Preference of Near-erythemogenic Narrow-band UVB Phototherapy in Psoriasis and Change of Dendritic Cells and Chemokines
3	Effectiveness of Amniotic Membrane Patch in the Treatment of Chronic Ulcers
4	Effects of Keratinocyte Growth Factor (KGF), Epidermal Growth Factor (EGF), and Extracellular Calcium on the Growth of Cultured Psoriatic Keratinocytes
5	Photodynamic Therapy of Actinic Keratoses Using 637nm Dye Laser and Variable Lights
6	A Clinical Analysis of the Risk Factors of Varicose Veins in Korean
7	A Case of Churg-Strauss Syndrome Associated with Small Bowel Perforation following High Dose Systemic Steroid Intravenous Injection
8	A Case of Multicentric Reticulohistiocytosis Misdiagnosed As Rheumatoid Arthritis
9	A Case of Pigmented Clear Cell Acanthoma
10	A Case of SAPHO Syndrome in a Palmoplantar Pustulosis Patient
11	A Case of Xanthoma Disseminatum with Diabetes Insipidus
12	A Case of Chilblain Lupus Erythematosus Associated with Antibodies to SSA/Ro
13	A Case of Primary Mucinous Carcinoma of the Skin
14	A Case of ALK-negative Systemic Anaplastic Large Cell Lymphoma
15	CD4-/CD56+/CD123+ Hematodermic neoplasm showing early liver metastasis