

# **Test Report of Human Body Application**

GMRC-20610-I20R

Sharechem Co., Ltd.

Anti Bacterial Film Primary Irritation Test on a Human body

June 23<sup>rd</sup> 2020

Global Medical Research Center

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## About This Report

Global Medical Research Center reports as follows for the Primary Irritation test on human skin of “anti bacterial film”, requested by Sharechem Co., Ltd., which has carried out by complying with The Cosmetic Toiletry and Fragrance Association (CTFA) guideline and standard operating procedure of Global Medical Research Center.

June 23<sup>rd</sup> 2020

Representative of Global Medical Research Center

Lee, Hwancheol (Signature)

Person in charge of the Test: Dermatology Specialist

Kim, Jihee (Signature)

## Confirmation on Reliability Assurance

Title	Anti Bacterial Film Primary Irritation Test on a Human body
Test Code	GMRC-20610-I20
Research Period	From June 3 <sup>rd</sup> 2020 to June 23 <sup>rd</sup> 2020
Test Period	From June 10 <sup>th</sup> 2020 to June 12 <sup>th</sup> 2020

Checklist for Test Reliability	Check Result
1. Are the following basic documents stored? - Research Plan - Case Report (e-CRF) - Written Consent - Written Agreement - Written Explanation for the Test Subject	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Was the test carried out as the test plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3. Was the human body application test carried out pursuant to the standard operating procedure (SOP) of Global Medical Research Center?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4. Have all of the test subjects signed and privately wrote the date of the test on the approved written consent form?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Has the test result derived by proper research ethics and consciences?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

I hereby certify that the test has sincerely carried out under the supervision of a personnel in charge of the test in accordance with the test plan and the standard operating procedure of Global Medical Research Center Inc., and checked by a personnel in charge of reliability assurance.

June 23<sup>rd</sup> 2020

Personnel in charge of Reliability Assurance      Park, Changwook (Signature)

Personnel in charge of Test      Kim, Jihee (Signature)

## Major Facilities & Devices

Major Facilities	
Face wash room · Wet test room Cold · Warm test room & Body test room Wrinkle/Whitening test Safety test room Effect test room Facial photography room 3D photography room Anti-pollution test room	Examining room Data storage In vitro test room Tissue culture room Cell culture room Flow cytometry room Microscopy room Multipurpose device storage Darkroom
Major Devices	
Customer dual MPA 580 Customer Probe(2mm) Ambient Condition Sensor RHT100 Multi Display Device MDD4 Comeometer CM825 Probe Mexameter MX18 Probe Skin pH meter PH905 probe Skin Thermometer ST500 Probe Tewameter TM300 Probe Skin Colorimeter CL400 Probe Glossymeter GL200 Probe Skin Visiometer SV700 USB Visioscan VC98 USB Sebumeter SM815 Moisture Map MM100 Moisture Map Probe Ultrascan applicator Antera3D CS FLIR-E6390 EOS650 Amaran LED lighting Moisturemeter SC Moisturemeter D Ultrascan UC22 InBody720 Mark-Vu Morpheus3D Antipollution chamber SPSS statistics 25 standard Constant Temperature and Humidity system ASW300 D-Squame pressure instrument Folliscope 5.0 Derma Torque Meter Photo Therapy Unit(UVA) Vapometer Spectrophotometer CM-700d Laser doppler PIM3 Exbody 9100 Skincolor catch Oral Chroma	Infrared light Examiner Water bath Pipette Vortex Auto Clave Water apparatus Freezer Refrigerator Fluorescence microscopy Deep freezer Oven Flow cytometry Clean bench Incubator LN2 tank DNA Electrophoresis system Protein Electrophoresis system Microplate reader Thermal cycler Real-Time PCR Nano drop Micro-centrifuge Mini-centrifuge Centrifuge Brightfiled microscopy Confocal microscopy Cryostat Microtome Heat-block Shaker pH meter Moisture analyzer Slit lamp microscope Ballistometer Translucency Meter Photo Therapy Unit(UVB) Multiport UV Solar Simulator PIMOS lite Fibra.one Glossmeter DSI-24

## Summary Report

Title	Anti Bacterial Film Primary Irritation Test on a Human body
Test Code	GMRC-20610-I20
Tested by	Global Medical Research Center Inc. Address: F/L 17, 107 Dosandae-ro, Gangnam-gu, Seoul, Republic of Korea
Requested by	Sharechem Co., Ltd. Address: RN 512 of BLDG B, 142-10, Saneop-ro 156beongil, Gwonseon-gu, Suwon-si, Gyeonggi-do, Republic of Korea
Research Period	From June 3 <sup>rd</sup> 2020 to June 23 <sup>rd</sup> 2020
Test Period	From June 10 <sup>th</sup> 2020 to June 12 <sup>th</sup> 2020
Personnel in Charge	Researcher Lee, Yeongbin
Tested Product	Anti bacterial film
Test Subjects	33 people who meet the inclusion criteria and not correspond to the exclusion criteria. (32 have finished the test, 1 drop-out)
Test Method	Selecting subjects who meet the inclusion criteria and not correspond to the exclusion criteria, to patch the product on the subjects' upper back part for 24 hours, and carrying out eye inspections after 1 hour from dispatching the product and after 24 hours from dispatching the product.
Result	- The episodic index point of "anti bacterial film" is 0.00, which shall be evaluated as a bland product.

## **1. Background**

### **1-1. Purpose**

This human body application test of “anti bacterial film” requested by Sharechem Co., Ltd. is for manufacturing safe products by reducing possibilities of side effects through information earned from the primary irritation test on human skin.

### **1-2. Research Period**

From June 3<sup>rd</sup> 2020 to June 23<sup>rd</sup> 2020

### **1-3. Test Period**

From June 10<sup>th</sup> 2020 to June 12<sup>th</sup> 2020

### **1-4. Tested by**

Global Medical Research Center Inc.

Address: F/L 17, 107 Dosandae-ro, Gangnam-gu, Seoul, Republic of Korea

### **1-5. Requested by**

Sharechem Co., Ltd.

Address: RN 512 of BLDG B, 142-10, Saneop-ro 156beongil, Gwonseon-gu,  
Suwon-si, Gyeonggi-do, Republic of Korea

## 2. Tested Product

### 2-1. Product Information

Product Name	Test Code	Description
Anti bacterial film	GMRC-20610-I20-M1	Blue, opaque film

### 2-2. Management & Storing of Test Product

Labeling the product when delivered, and recording information on the label such as the deliver date, serial number, numbers of products, and requested institute to store in the product storage for 6 months.

### 2-3. Product Safety

The institute requested this test shall take responsibilities for any extraordinary reactions that may occur during the test period.



### **3. Selecting Test Subjects**

#### **3-1. Inclusion Criteria**

- 1) Male and female adults, age range between 19 to 59
- 2) Persons who voluntarily signed the agreement after listening to the explanations of the test information
- 3) Persons who can be monitored during the test period
- 4) Persons who are in good physical conditions without any acute/chronic diseases including dermatopathy

#### **3-2. Exclusion Criteria**

- 1) Women who are pregnant or on breast-feeding, and women of childbearing age who do not agree with the birth control procedure this protocol is providing
- 2) If the person has a lesion on the test part
- 3) If the person is suffering from any infectious disease
- 4) If the person is suffering from any allergy or hypersensitivity
- 5) If the person feels abnormal stimulations from cosmetics, pharmaceuticals, or daily sun exposures
- 6) If the person has taken full body steroid treatment or laser treatment within 1 month before the test
- 7) If the person has taken any skin managements or treatments (scaling/Botox/peeling/laser/tattoo)
- 8) If the person is suffering from any mental diseases or disorders
- 9) Other cases where the personnel in charge or the researcher judges to be difficult to carry out the body application test

#### **3-3. Drop-out Criteria**

- 1) If the subject voluntarily expresses the opinion of ceasing the test participation
- 2) If any dermatopathy or extraordinary reaction occurs to the subject
- 3) If the test part is excessively exposed to ultraviolet rays
- 4) If any disturbance to the test result occurred due to drinking/smoking
- 5) If it is difficult for the subject to continue or to be monitored due to his/her personal reasons

## **4. Test Method**

### **4-1. Test Part & Materials**

- 1) Test part: Plane back part except for vertebra area without any pigmentation or damage
- 2) Test Material: IQ Ultimate chamber, 3M Micropore Tape, Skin Marker, Micropipette

**4-2.** Photoshoots of the test part and questionnaire assessments on the subjects' skin conditions have carried out before applying the test product.

### **4-3. Test Product Application**

- 1) Applying type test product has been dripped to IQ Ultimate chamber for 20  $\mu$ l, and patch type test product has been cut as 1 cm x 1 cm to be completely attached to a skin and fixed by 3M Micropore Tape.
- 2) The IQ Chamber the test product was applied to, has been patched to the test part for 24 hours.
- 3) First Inspection: The IQ Ultimate chamber has detached after 24 hours, and after 1 hour from the detachment, the test part was photographed and assessed by the researcher.
- 4) Second Inspection: After 24 hours from the detachment, the test part was, once again, photographed and assessed by the researcher.

### **4-4. Extraordinary Reaction & Medication**

The subjects were checked every visit for any possible extraordinary reactions on the test part, and medications they were on that may affect their skin

## 5. Evaluation Method

### 5-1. Judgment Criteria

The researcher carried out eye inspections pursuant to the criteria of Frosch & Kligman and The Cosmetic Toiletry and Fragrance Association (CTFA) guideline.

### 5-2. Evaluation Point

- Eye Inspection: Degree of skin irritation found on the test part where the product is applied

### 5-3. Evaluation Method for Skin irritation

The researcher's eye inspections were carried out in accordance with the Frosch & Kligman guideline and The Cosmetic Toiletry and Fragrance Association (CTFA) guideline, and evaluated by the following [Table 1] criteria.

[Table 1. Grade Classification by Skin Reactions]

Symbol	Grade	Criteria
+	1	Slight erythema, either spotty or diffuse
++	2	Moderate uniform erythema
+++	3	Intense erythema with edema
++++	4	Intense erythema with edema & vesicles

The degree of skin reactions was derived from the average degree of the reaction results of after 1 hour / after 24 hours from detachment.

$$\text{Skin Reaction Degree} = \left( \frac{\sum_{i=1}^n \text{Evaluated Value}}{n(\text{Headcount of Subjects})} \right)_{1hr} + \left( \frac{\sum_{i=1}^n \text{Evaluated Value}}{n(\text{Headcount of Subjects})} \right)_{24hrs}$$

The skin irritation index was derived from the following equation.

$$\text{Skin Irritation Index} = \frac{\text{Degree of Skin Reaction}}{n(\text{Test Frequency})}$$

The Degree of Skin Irritation was evaluated in accordance with the following [Table 2].

[Table 2. Skin Irritation Index]

Skin Irritation Index	Classification
0.00 – 0.25	Bland
0.26 – 1.00	Mild Irritation
1.01 – 2.50	Medium Irritation
2.51 – 4.00	Strong Irritation

#### 5-4. Extraordinary Reaction & Medications

The subjects were checked for any possible extraordinary reactions on the test part between visits, and medications they were on that may affect their skin reactions.

## 6. Test Result

### 6-1. Basic Information of Subjects

The headcounts of the subjects and counts by age group are as below [Table 3].

[Table 3. Basic Information of Test Subjects · Summary]

Total Number of Subjects	32	
Headcounts by Age Group	20's	3
	30's	5
	40's	11
	50's	13
Age Average	45	

### 6-2. Drop-out

1 of the total subjects of 33 has dropped out from the test due to a reason of 'schedule noncompliance' as below [Table 4], which made final headcounts of the subject completed the test to be 32.

[Table 4. Drop-out Information]

	Subject Code	Reason
Drop-out	S25	Schedule Noncompliance

### 6-3. Skin Irritation Result

Eye inspections by the researcher has carried out for 1 hour after / 24 hours after the patch detachment to evaluate index and degree of the skin irritation. [Table 5]

[Table 5. Index and Degree of Skin Irritation]

Test Product	Skin Irritation Index	Skin Irritation Degree
anti bacterial film	0.00	Bland

## **7. Conclusion & Consideration**

The 24-hour patch test of “anti bacterial film” has completed on total of 32 subjects. Skin irritation degrees of 1 hour after and 24 hours after the patch detachment were checked by the researcher’s eye inspections, and extraordinary reactions with subjects’ medications were inspected separately. The skin reaction evaluation was in accordance with Frosch & Kligman guideline and CTFA guideline, and concluded as below from the skin reaction points of each test subjects. There were no extraordinary reactions and medications of the test subjects during the test period.

**- The skin irritation index of “anti bacterial film” is 0.00, which is judged to be bland product.**

**Attachment 1. Test Subject Information**

Subject Code	Date of Birth (YYYY-MM-DD)	Age	Sex
20610-I-S01	1965-07-01	54	F
20610-I-S02	1970-08-16	49	F
20610-I-S03	1980-08-25	39	F
20610-I-S04	1982-04-22	38	F
20610-I-S05	1977-10-15	42	F
20610-I-S06	1968-10-03	51	F
20610-I-S07	1976-10-25	43	F
20610-I-S08	1989-11-08	30	M
20610-I-S09	1966-02-05	54	F
20610-I-S10	1969-10-25	50	F
20610-I-S11	1967-12-17	52	F
20610-I-S12	1970-01-21	50	F
20610-I-S13	1977-01-25	43	F
20610-I-S14	1980-02-01	40	F
20610-I-S15	1976-06-14	44	F
20610-I-S16	1968-05-16	52	F
20610-I-S17	1980-06-22	39	F
20610-I-S18	1977-07-02	42	F
20610-I-S19	1990-07-07	29	F
20610-I-S20	1965-04-15	55	F
20610-I-S21	1962-01-15	58	F
20610-I-S22	1968-05-25	52	F
20610-I-S23	1969-05-25	51	F
20610-I-S24	1964-02-24	56	F
20610-I-S25	1972-09-10	47	F
20610-I-S26	1996-06-02	24	F
20610-I-S27	1990-03-05	30	F
20610-I-S28	1970-09-06	49	F
20610-I-S29	1997-06-18	22	F
20610-I-S30	1970-11-07	49	F
20610-I-S31	1972-09-13	47	F
20610-I-S32	1964-01-16	56	F
20610-I-S33	1971-02-07	49	F

**Attachment 2. Ingredients of Test Product**

## 2-1. anti bacterial film

NO	In Korean	INGREDIENT NAME
1	피이티 필름	PET film



### Attachment 3. Researcher's Eye Inspection Result

#### 3-1. Researcher's Skin Irritation Evaluation

Test Subject Code	GMRC-20610-I20-M1	
	1hr	24hr
20610-I-S01	0	0
20610-I-S02	0	0
20610-I-S03	0	0
20610-I-S04	0	0
20610-I-S05	0	0
20610-I-S06	0	0
20610-I-S07	0	0
20610-I-S08	0	0
20610-I-S09	0	0
20610-I-S10	0	0
20610-I-S11	0	0
20610-I-S12	0	0
20610-I-S13	0	0
20610-I-S14	0	0
20610-I-S15	0	0
20610-I-S16	0	0
20610-I-S17	0	0
20610-I-S18	0	0
20610-I-S19	0	0
20610-I-S20	0	0
20610-I-S21	0	0
20610-I-S22	0	0
20610-I-S23	0	0
20610-I-S24	0	0
20610-I-S25	NA	NA
20610-I-S26	0	0
20610-I-S27	0	0
20610-I-S28	0	0
20610-I-S29	0	0
20610-I-S30	0	0
20610-I-S31	0	0
20610-I-S32	0	0
20610-I-S33	0	0
<b>Skin Irritation Index</b>	<b>0.00</b>	
<b>Result</b>	<b>Bland</b>	

## Attachment 4. Participation Agreement of Human Body Application Test

### Participation Agreement of Human Body Application Test

#### Skin Primary Irritation Test

I hereby recognize that I have received a written form of explanation that describes the purpose, detailed method, expected effects and side effects, participation benefit, indemnity and remedy in case of damage occurrence due to this test, and how my photographic portraits may be used for theses, books, periodical publications, reports, and broadcast medias, and understood the same from listening to the researcher or a person in charge of the test.

I have also listened that the participation decision shall be fully voluntary where the disagreement shall not make any problem, even the agreement decision may be withdrawn anytime I want without any disadvantage, and all of the collected information with regard to the test shall be strictly treated as confidential.

Hereupon, I voluntarily agree with the participation of this human body application test.

#### Human Body Application Test Subject

Name:	(Sign)	Date Signed:	YY MM DD
Resident Registration No.(only first half):	(Age	Y.O.)	

#### Person in Charge of the Test

Name:	(Sign)	Date Signed:	YY MM DD
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## **Attachment 5. Explanation for Agreement of Test Subjects**

### **Explanation for Agreement of Test Subjects**

#### **Skin Primary Irritation Test**

This explanation is prepared for you to understand your role and the test process in case of your participation. It is very important for you to accurately understand why this human body application test is going to be carried out and how exactly it will be before you decide to participate the test. You shall take enough time to read this explanation before signing the agreement, and may consult with your family or others. If you have any inquiries, please do not hesitate to ask the person in charge of this test and carefully consider to decide.

#### **1. Purpose of Human Body Application Test**

Global Medical Research Center is trying to take Human Skin Primary Irritation Test on male and female subjects of age range 19 to 59.

- ① The purpose of this test is to evaluate the irritation of a cosmetic product on male and female subjects of age range 19 to 59.
- ② For this, the test product will be applied to a patch, and the patch will be attached to a subject for 24 hours, to be inspected for skin reaction degree after 1 hour and 24 hours from detachment of the patch.
- ③ If you participate the test, you will have to come visit the center, for your test part to be checked and photographed on the date, a day after, and two days after the patch is attached.

#### **2. Test Method**

##### **① Number of Subjects & Participation Period**

Total number of test subjects will be over 30. If a subject or the subject's representative signs the participation agreement and the person is selected to be appropriate for the test, the person will be participating this test for 3 days as it was scheduled.

##### **② Inclusion & Exclusion of Test Subjects**

This test is targeting the male and female subjects of age range 19 to 59, and you will be participating the test if you satisfy all of the inclusion criteria and do not correspond to the exclusion criteria.

③ **Patching Test Product**

When patching, Applying type test shall be dripped to IQ Ultimate chamber for 20  $\mu$ l, and patch type test product shall be cut as 1 cm x 1 cm to be completely attached to a skin and fixed by 3M Micropore Tape.

④ **Visiting Schedule**

The test subjects shall come visit the research center on the second and third dates at the exact same time of product application to get detachment and/or test part evaluations.

**3. Expecting Extraordinary Reactions & Side Effects**

The test product is a product which is able to be used as an ingredient of cosmetic products. As the very product was manufactured by using safe ingredients provided by Korea Ministry of Food and Drug Safety, it is expected that that will be no significant extraordinary reactions. However, there may be exceptional and unknown side effects such as an itchiness, a stinging reaction, or a rash. Accordingly, if there is any new information with regard to the safety issue collected during the test period, it will be provided to the subjects or their representatives.

**4. Benefits**

All of the products scheduled to be used in every inspections and tests will be provided for free, and prescribed transportation expenses will be paid to the subjects of test completion.

**5. Compensation & Remedy Plan**

Safety of the subjects will be the number one priority during the test period. If there is any extraordinary reaction occurred, the relevant subject may take all the required inspections and treatments, and will be follow-up studied until either the problem is solved and stabilized, or become explainable or impossible to be followed.

Also, in case where any side effects occurred, the treatment expense will be on the institute requesting this test.

**6. Agreement Withdrawal**

The participation of this test is only up to your voluntary decision. In addition, even after your participation agreement, you may withdraw the decision anytime you want without any disadvantages or losses. If there was any extraordinary reaction due to the test, you may take the relevant treatment even after your withdrawal of agreement. If you want to cease the test participation and withdraw the agreement, you may contact the person in charge of the test in the center.

## **7. Confidentiality**

All of your private information collected with regard to this test will be treated as confidential, and even in case of publishing the test result, your information will not be going public.

However, your photographic portraits may be used in theses, books, periodical publications, reports, and broadcast medias.

## **8. Subjects' Guidelines**

These are the matters for all the subjects to comply with for the safety of the subjects and accuracy of the test result:

- ① You have to follow the schedule of product patch and other inspections;
- ② You may not contact water on the test part or remove the patch after attaching the product;
- ③ After detaching the patch, water wash is allowed. However, you may not use body soap or washcloth;
- ④ You may not add any stimulus on the test part such as scratching and rubbing;
- ⑤ You shall refrain yourself from strenuous exercises and intensive arm movements;
- ⑥ You shall avoid immoderate use of alcohol; and
- ⑦ You shall inform the person in charge of the test about your medications.

## **9. Signature**

After listening to the explanations about this test, and you still want to participate, you shall sign the separate Human Body Application Test Participation Agreement.

## **10. Personnel in Charge of Human Body Application Test**

You or your legal representative can contact the person in charge of this test anytime to consult further information, extraordinary reactions regarding this test, or other medical purposes. (+82-2-517-0877)

## **Attachment 6. References**

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2. CTFA Safety Testing Guideline: The Cosmetic, Toiletry and Fragrance Association, Inc. Washington, D.C. 20036.(1991)
3. K.-P. and Mcfadden J. Individual, ethnic and seasonal variability in irritant susceptibility of skin: the implications for a predictive human patch test. *Contact Dermatitis* 35, 208-213. (1996)
4. York M., Griffiths H. A., Whittle E. and Basketter D. A. Evaluation of a human patch test for the identification and classification of skin irritation potential. *Contact Dermatitis* 34, 204-212. (1996)
5. F. Alan Andersen, Annual Review of Cosmetic Ingredient Safety Assessments: 2007-2010, international Journal of Toxicology, 30, 5\_suppl, (73S), (2011).
6. Safety Evaluation Guidelines of Cosmetic Products. (Re) Foundation of Korea Cosmetic Industry Institute (2011)

## Attachment 7. Profile & Research History of Test Manager

### Test Manager : Kim, Jihee

#### 1. Educational Background

2005-2019 Yonsei University College of Medicine, Bachelor of Medicine, M.D.

#### 2. Career History

2005-2011	Yonsei University College of Medicine
2011-2012	Yonsei University College of Medicine, Intern
2012-2016	Yonsei University College of Medicine, Resident of Dermatology
2016-2017	Yonsei University College of Medicine, Instructor of Dermatology
2017-2019	Yonsei University College of Medicine, Research Assistant Professor
2019-Present	Yonsei University College of Medicine, Assistant Professor
2019-Present	Dermatology Section Chief of Yongin Severance Hospital
2016-Present	Regular Member of European Society for Dermatological Research
2016-Present	Regular Member of The Korean Society for Investigative Dermatology
2019-Present	Committee Member of Korean Dermatological Association
2019-Present	General Manager of Korean Society for Laser Medicine & Surgery

#### 3. Research Achievements

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- 11) Kim J, Kim HS, Seo JM, Nam KA, Chung KY. Evaluation of a novel thread-lift for the improvement of nasolabial folds and cheek laxity. *J Eur Acad Dermatol Venereol.* 2017 Mar;31(3):e136-e179. (First Author).
- 12) Kim J, Zheng Z, Kim H, Nam KA, Chung KY. Investigation on the Cutaneous Change Induced by Face-Lifting Monodirectional Barbed Polydioxanone Thread. *Dermatol Surg.* 2017 Jan;43(1):74-80. (First Author).



- 13) Seo J, Kim J, Nam KA, Zheng Z, Oh BH, Chung KY. Reconstruction of large wounds using a combination of negative pressure wound therapy and punch grafting after excision of acral lentiginous melanoma on the foot. *J Dermatol.* 2016 Jan;43(1):79-84.
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## Attachment 8. Profile of Reliability Assurance Manager

### Park, Changwook

#### 1. Educational Background

1996.03-2015.08 Yonsei University College of Medicine, M.D. Master, PhD.

#### 2. Career History

2007.03-2009.04 Section Chief of Dermatology, Armed Forces Gangneung Hospital

2009.05-2016.02 Section Chief of Dermatology, Armed Forces Byeokje Hospital

2014.11-2016.02 Yonsei University College of Medicine, Research Assistant Professor

2016.03-2019.02 Yonsei University College of Medicine, Assistant Professor

2017.05-Present Committee Member of Integrated Test, Severance Hospital

2019.03-Present Yonsei University College of Medicine, Associate Professor

## Tested Product Background Chief Researcher: Seok, Jangmi

#### 1. Educational Background

2007.03-2009.02 Daegu Haany University College of Oriental Medicine, Master

#### 2. Career History

2009.03-2010.12 Researcher of Daegu Technopark Oriental Medicine Industry Support Center

2011.01-2016.02 Managing Researcher of P&K Skin Research Center

2018.05-Present Chief Researcher of Global Medical Research Center

### Managing Researcher: Jeong, Inhee

#### 1. Educational Background

2007.03-2009.02 Sejong University Graduate School of Molecular Biology, Master

#### 2. Career History

2012.05-2018.01 Assistant Manager of L&C Bio

2019.04-2019.11 Manager of NA Vaccine Institute

2019.11-Present Managing Researcher of Global Medical Research Center

### Senior Researcher: Kim, Inah

1. Educational Background

2007.03-2012.02 Sungshin Women's University College of Natural Sciences, Bachelor of Life Science

2. Career History

2013.10-2016.10 Associate Researcher of P&K Skin Research Center

2016.11-2018.08 Senior Researcher of SKINMED Clinical Trials Center

2018.08-Present Senior Researcher of Global Medical Research Center

**Senior Researcher: Lee, Sieun**

1. Educational Background

2009.03-2013.02 Suwon University College of Natural Sciences, Bachelor of Bioengineering

2. Career History

2012.10-2016.03 Associate Researcher of P&K Skin Research Center

2016.08-2018.07 Senior Researcher of KC Skin Research Center

2019.01-Present Senior Researcher of Global Medical Research Center

**Senior Researcher: Kim, Minwook**

1. Educational Background

2012.09-2014.08 Dongguk University College of Biosystem, Master of Biomedical Engineering

2. Career History

2015.01-2017.06 Researcher of Ellead Skin & Bio Research

2017.07-2018.04 Associate Researcher of L&C Bio

2018.05-Present Senior Researcher of Global Medical Research Center

**Associate Researcher: Yoo, Jeongseo**

1. Educational Background

2010.03-2015.02 Konkuk University Bachelor of Biochemistry

2. Career History

2015.01-2017.06 Researcher of Korea Dermatology Research Institute

2018.05-Present Associate Researcher of Global Medical Research Center

**Associate Researcher: Kim, Heewon**

1. Educational Background

2011.03-2013.02 The Catholic University of Korea Bachelor of Life Science

2. Career History

2015.12-2017.02 Researcher of KC Skin Research Center

2018.05-Present Associate Researcher of Global Medical Research Center

**Associate Researcher: Kim, Jiyeong**

1. Educational Background

2011.03-2015.08 Hoseo University Bachelor of Oriental Medicine Cosmetic Science

2. Career History

2015.06-2018.02 Researcher of Korea Dermatology Research Institute

2018.06-Present Associate Researcher of Global Medical Research Center

**Associate Researcher: Gu, Goeun**

1. Educational Background

2014.03-2016.02 Jungang University College of Medicine, Master of Biochemistry

2. Career History

2016.02-2018.07 Associate Researcher of P&K Skin Research Center

2019.01-Present Associate Researcher of Global Medical Research Center

**Researcher: Kang, Hansol**

1. Educational Background

2013.03-2018.02 Sungshin Women's Univ. College of Natural Sciences, Bachelor of Life Science Chemistry

2. Career History

2019.02-Present Researcher of Global Medical Research Center

**Researcher: Kim, Hyeonji**

1. Educational Background

2012.03-2017.02 Suwon University Bachelor of New Materials Engineering

2. Career History

2017.02-2019.03 Employee of C&C International QA Team

2019.07-Present Researcher of Global Medical Research Center

**Researcher: Shin, Yeonwoo**

1. Educational Background

2011.03-2016.02 Soongsil Univ. College of Natural Sciences Bachelor of Chemistry

2. Career History

2019.11-Present Researcher of Global Medical Research Center

**Researcher: Cho, Hana**

1. Educational Background

2012.03-2016.08 Seoul National University of Science and Technology College of Energy Bio, Bachelor of Biotechnology

2. Career History

2019.11-Present Researcher of Global Medical Research Center

**Researcher: Kim, Jinju**

1. Educational Background

2017.03-2020.02 Konkuk Univ. College of Life Sciences Master of Agriculture

2. Career History

2020.02-Present Researcher of Global Medical Research Center

**Researcher: Lee, Yeongbin**

1. Educational Background

2011.03-2016.02 Sunghin Women's Univ. College of Natural Sciences, Bachelor of Life Science Chemistry

2. Career History

2020.03-Present Researcher of Global Medical Research Center

**Researcher: Kim, Hyejin**

1. Educational Background

2012.03-2019.02 Hankook University of Foreign Studies Bachelor of Chemistry

2. Career History

2020.03-Present Researcher of Global Medical Research Center

**Researcher: Kim, Hyejin**

1. Educational Background

2015.03-2019.08 Konkuk Univ. College of Medical Life Bachelor of Bioengineering

2. Career History

2020.03-Present Researcher of Global Medical Research Center