

11th Meeting of The Korean Hair Research Society

제 11 차 대한모발학회 학술대회



- 일시 : 2015년 5월 31일(일) 09:00~17:45
- 장소 : 가톨릭대학교 서울성모병원 지하1층 대강당

대 한 모 발 학 회



초대의 글



Dear friends and colleagues of Korean Hair Research Society (KHRS),

On behalf of the society, I would like to cordially invite you to the 11th Annual Meeting of KHRS on May 31, 2015.

For the meeting, we have organized five scientific and educational sessions; 1) Hair follicle morphogenesis & Hair cycles, 2) Cell therapy & Tissue Engineering, 3) Hair Transplantation & Hair cosmetic products, 4) Updates in Hair & Scalp disorders and 5) Free communications.

This 11th annual meeting will give us a good opportunity for building new knowledge and outlooks in the dynamic field of hair research and clinical trichology.

This year, we invited four distinguished guest lecturers in the field of hair research, tissue engineering and hair transplantation for this meeting. We express our sincere gratitude to the esteemed speakers: Michael Philpott (Queen Mary University of London, U.K.), Sarah E. Millar (University of Pennsylvania, USA), Sung-Jan Lin (National Taiwan University, Taiwan) and Wen-Yu Wu (Fudan University, China). Furthermore, we would like to thank the outstanding preparations provided by colleagues and speakers in Korea.

I believe this meeting will provide a valuable chance for all the participants to learn from and share their perspectives with experts in both fields of experimental and clinical trichology. We hope the meeting will be a successful one not only to share the latest understandings in hair science but also to forge friendship with all the participants.

We are looking forward to welcoming many of you in person at this special event of the 11th annual meeting of KHRS in May 2015.

Korean Hair Research Society
President
Woo Young Sim

제11차 대한모발학회 학술대회

일 정 표

Time	Main auditorium
09:00	Session 1: Free Communications (English speaking session) (09:00-10:10)
09:30	
10:00	Coffee Break (10:10-10:30)
10:30	Opening Ceremony (10:30-10:40)
11:00	Session 2: Hair Follicle Morphogenesis, Hair Cycles (English speaking session) (10:40-12:00)
11:30	
12:00	Group Photo (12:00-12:10)
12:30	Lunch / KHRS Board Meeting (12:10-13:20)
13:00	
13:30	Session 3: Cell Therapy & Tissue Engineering (English speaking session) (13:20-14:30)
14:00	
14:30	Session 4: Hair Transplantation & Hair Cosmetic Products (Korean & English) (14:30-15:45)
15:00	
15:30	Coffee Break (15:45-16:05)
16:00	Session 5: Updates in Hair & Scalp Disorders (Korean) (16:05-17:25)
16:30	
17:00	Closing & General Assembly (17:25-17:45)
17:30	

프 로 그 램

Session 1	Free Communications (English speaking session) Chairs: Chang Kwun Hong, Kyu Suk Lee
09:00-09:10	Investigation on the role of necroptosis in alopecia areata: a preliminary study Yong Hyun Jang et al. (<i>Kyungpook National University</i>)
09:10-09:17	Systemic methotrexate therapy for alopecia areata Seul-ki Lim et al. (<i>Chungnam National University</i>)
09:17-09:27	Advanced scalp measuring technique using phototrichogram with a protractor and a tapeline Hee-Chul Chung et al. (<i>Yonsei University Wonju College of Medicine</i>)
09:27-09:33	A case of adolescent androgenetic alopecia Young Jun Woo et al. (<i>The Catholic University</i>)
09:33-09:40	Permanent leukoderma after hair transplantation surgery Joon Seok et al. (<i>Chung-Ang University</i>)
09:40-09:50	Viabilities of androgen stimulated dermal papilla cells are modulated with GPR44 antagonist Kwan Ho Jeong et al. (<i>The Catholic University</i>)
09:50-10:00	Activin A affects trichogenicity of neonatal mouse dermal cells and human dermal papilla cells Chang Hoon Seo et al. (<i>Kyungpook National University</i>)
10:00-10:10	Enhanced graft survival of allogeneic hair follicles with anti-ICAM-1 antibody in nonhuman primate Jin Yong Kim et al. (<i>Seoul National University</i>)
10:10-10:30	Coffee Break
10:30-10:40	Opening Ceremony Opening Address Woo Young Sim (<i>President, Korean Hair Research Society</i>) Congratulatory Address Kyu Suk Lee (<i>President, Korean Dermatological Association</i>)
Session 2	Hair Follicle Morphogenesis, Hair Cycles (English speaking session) Chairs: Woo Young Sim, Hoon Kang
10:40-11:10	Wnt/ β -catenin signaling controls proliferation but not survival of hair follicle stem cells Sarah E. Millar (<i>University of Pennsylvania, USA</i>)
11:10-11:40	Perspectives on human hair follicle organ culture and future developments Michael Philpott (<i>Queen Marys School of Medicine and Dentistry, UK</i>)
11:40-12:00	Aging features of human scalp and regulation of aged hair cycles Ohsang Kwon (<i>Seoul National University</i>)

- 12:00-12:10 Group Photo
 12:10-13:20 Lunch, KHRS Board Meeting

Session 3		Cell Therapy & Tissue Engineering (English speaking session) Chairs: Do-Won Kim, Won-Soo Lee
13:20-13:50	Organ neogenesis of hair follicles	Sung-Jan Lin (<i>National Taiwan University, Taiwan</i>)
13:50-14:10	Cultivation of trichogenic dermal cells for hair follicle neogenesis	Young Kwan Sung (<i>Kyungpook National University</i>)
14:10-14:30	Hair regeneration by adipose-derived stem cells	Jong-Hyuk Sung (<i>Yonsei University</i>)

Session 4		Hair Transplantation & Hair Cosmetic Products (English & Korean speaking session) Chairs: Byung In Ro, Young Chul Kye
14:30-15:00	Hair transplantation in China	Wen-Yu Wu (<i>Fudan University, China</i>)
15:00-15:15	Guide to hair transplantation for dermatologists	Kwang Young Kang (<i>Moraena Dermatology Clinic</i>)
15:15-15:30	Hair dye, permanent & straight	Bark Lynn Lew (<i>Kyunghee University</i>)
15:30-15:45	Cosmetics for hair care	Sang Seok Kim (<i>Hallym University</i>)

15:45-16:05 Coffee Break

Session 5		Updates in Hair & Scalp Disorders (Korean speaking session) Chairs: Seong Jin Kim, Jin Soo Kang
16:05-16:25	Male pattern hair loss	Hoon Kang (<i>Catholic University</i>)
16:25-16:40	Female pattern hair loss	Gwang Seong Choi (<i>Inha University</i>)
16:40-16:55	The recent update of seborrheic dermatitis	Yang Won Lee (<i>Konkuk University</i>)
16:55-17:10	Dermoscopic diagnosis of scalp diseases	Moon Bum Kim (<i>Pusan National University</i>)
17:10-17:25	Scarring alopecia	Dong-Youn Lee (<i>Sungkyunkwan University</i>)

17:25-17:45 Closing, KHRS General Assembly

11th Annual Meeting of The Korean Hair Research Society
제11차 대한모발학회 학술대회

목 차

Session 1 Free Communications (English speaking session)

[Original & Case report]

- Investigation on the role of necroptosis in alopecia areata: a preliminary study
..... **Yong Hyun Jang** et al. (*Kyungpook National University*).... 10
- Systemic methotrexate therapy for alopecia areata
..... **Seul-ki Lim** et al. (*Chungnam National University*).... 11
- Advanced scalp measuring technique using phototrichogram with a protractor and a tapeline **Hee-Chul Chung** et al. (*Yonsei University Wonju College of Medicine*).... 12
- A case of adolescent androgenetic alopecia
..... **Young Jun Woo** et al. (*The Catholic University*).... 13
- Permanent leukoderma after hair transplantation surgery
..... **Joon Seok** et al. (*Chung-Ang University*).... 14
- Viabilities of androgen stimulated dermal papilla cells are modulated with GPR44 antagonist **Kwan Ho Jeong** et al. (*The Catholic University*).... 15
- Activin A affects trichogenicity of neonatal mouse dermal cells and human dermal papilla cells **Chang Hoon Seo** et al. (*Kyungpook National University*).... 16
- Enhanced graft survival of allogeneic hair follicles with anti-ICAM-1 antibody in nonhuman primate **Jin Yong Kim** et al. (*Seoul National University*).... 17

Session 2 Hair Follicle Morphogenesis, Hair Cycles (English speaking session)

- Wnt/ β -catenin signaling controls proliferation but not survival of hair follicle stem cells
..... **Sarah E. Millar** (*University of Pennsylvania, USA*).... 20
- Perspectives on human hair follicle organ culture and future developments
..... **Michael Philpott** (*Queen Marys School of Medicine and Dentistry, UK*).... 23
- Aging features of human scalp and regulation of aged hair cycles
..... **Ohsang Kwon** (*Seoul National University*).... 26

Session 3 Cell Therapy & Tissue Engineering (English speaking session)

- Organ neogenesis of hair follicles..... **Sung-Jan Lin** (*National Taiwan University, Taiwan*)..... 30
- Cultivation of trichogenic dermal cells for hair follicle neogenesis
..... **Young Kwan Sung** (*Kyungpook National University*)..... 32
- Hair regeneration by adipose-derived stem cells..... **Jong-Hyuk Sung** (*Yonsei University*)..... 34

Session 4 Hair Transplantation & Hair Cosmetic Products (English & Korean speaking session)

- Hair transplantation in China..... **Wen-Yu Wu** (*Fudan University, China*)..... 38
- Guide to hair transplantation for Dermatologists
..... **Kwang Young Kang** (*Moraena Dermatology Clinic*)..... 40
- Hair dye, permanent & straight..... **Bark Lynn Lew** (*Kyunghee University*)..... 43
- Cosmetics for hair care..... **Sang Seok Kim** (*Hallym University*)..... 47

Session 5 Updates in Hair & Scalp Disorders (Korean speaking session)

- Male pattern hair loss..... **Hoon Kang** (*Catholic University*)..... 50
- Female pattern hair loss..... **Gwang Seong Choi** (*Inha University*)..... 52
- The recent update of seborrheic dermatitis..... **Yang Won Lee** (*Konkuk University*)..... 54
- Dermoscopic diagnosis of scalp diseases..... **Moon Bum Kim** (*Pusan National University*)..... 56
- Scarring alopecia..... **Dong-Youn Lee** (*Sungkyunkwan University*)..... 58



SESSION 1

Free Communications
(English speaking session)



The Korean Hair Research Society

O1
Investigation on the role of necroptosis in alopecia areata: a preliminary study

**Yong Hyun Jang, Min Ji Kim, Weon Ju Lee, Seok-Jong Lee, Mei Ling Jin¹,
Sang-Hyun Kim¹, Do Won Kim**

Department of Dermatology and ¹Pharmacology,
Kyungpook National University School of Medicine, Daegu, Republic of Korea

A new caspase-independent mode of programmed cell death, termed necroptosis, has recently been identified. Tumor necrosis factor- α , a proinflammatory cytokine implicated in alopecia areata (AA), can activate necroptosis, a necrotic cell death pathway regulated by receptor interacting protein 1 (RIP1) and RIPK3 under caspase-8-deficient conditions. The initiation of necroptosis is principally mediated by the release of RIP1 and RIP3 from suppression by caspase-8. Currently, little is known about events occurring downstream of RIP1 and RIP3 that regulate necroptosis. However, it has recently been suggested that the mixed lineage kinase domain-like (MLKL) factor, an interacting target of RIP3, functions downstream of RIP1 and RIP3 and is recruited to the necrosome through its interaction with RIP3. This study aims at investigating the occurrence of necroptosis in patients with AA and its contribution to cell death following autoimmunity. Biopsy samples were collected from scalp skin of 10 patients with AA and 10 healthy controls. RIP1, RIP3, caspase-8, and MLKL mRNA and protein expression levels were evaluated by real time PCR and western blotting respectively. From results of our preliminary study, the necroptosis has unclear roles in the pathogenesis of AA. Further large scale studies will be needed.

O2

Systemic methotrexate therapy for alopecia areata

**Seul-ki Lim, Jin-hyup Lee, Myung Im, Chang Deok Kim,
Young-Joon Seo, Jeung-Hoon Lee, Young Lee**

Department of Dermatology, School of Medicine, Chungnam National University, Daejeon, Korea

Background: Alopecia areata (AA) is one of the autoimmune skin diseases which is difficult to manage and treat. The pathogenesis of AA is T-cell associated autoimmune process, therefore systemic immunosuppressive therapies are widely considered. Methotrexate (MTX) is folic acid antagonist used in treatment of inflammatory skin diseases such as psoriasis and atopic dermatitis, however in AA still used restrictively. Administration of MTX weekly 7.5-20 mg called low-dose methotrexate (LD-MTX) is one of treatment options in AA.

Objectives: To evaluate efficacy of systemic LD-MTX therapy in AA.

Methods: We conducted a retrospective study including severe AA patients treated with LD-MTX from January 2008 to May 2014 in our clinic.

Results: A total 26 patients (14 males and 12 females) aged between 16 and 65 years (mean 41.6) were included. The treatment was administered twice weekly, the mean maximal dose was 15 mg weekly (range 7.5-17.5). The complete remission (regrowth of more than 50%) was observed in 12 (46.2%) patients, the partial remission (regrowth of 25% to 50%) was observed in 11(42.3%) patients. 3 of them(11.5%) had no response (regrowth less than 25%) to LD-MTX. The most common side effect during the treatment was elevation of liver enzymes (11.5%).

Conclusion: This study suggests LD-MTX could be an effective treatment option for severe AA. However liver enzyme should be monitored closely.

O3

Advanced scalp measuring technique using phototrichogram with a protractor and a tapeline

Hee-Chul Chung, Myungsoo Jun, Won-Soo Lee

Department of Dermatology and Institute of Hair and Cosmetic Medicine,
Yonsei University Wonju College of Medicine, Wonju, Korea

Background: Phototrichogram is a non-invasive technique that allows analysis of physiology of the hair cycle and measurement of various hair growth parameters. Tattooing makes point of site accurate, but is invasive technique and cosmetically disadvantageous. So method using a headband and a tapeline(Lee SH et al. Skin Res Technol. 2013; 19: 183-188) have been used in our clinic. But the accuracy and consistency of measured data depends on examiner or could be affected by measure site on scalp and by measure height in hair shaft.

Objectives: This study was performed to obtain accurate result of phototrichogram analysis.

Methods: 30 patients with pattern hair loss were enrolled and classified according to BASP classification. Two examiners used advanced method using a protractor and a tapeline, measured the straight-line distance and angle from the glabella to the exact target site. Two examiners took the folliscope[®](Seoul, Korea) photos 3 times at the same site using above method. Hair diameters were averaged measuring all hairs in 100-fold magnification(9.28mm^2) at 5mm above the hair ostium. The above procedure was carried out for each visit. Intraclass coefficients(ICCs) of intra- and inter-investigator reliability were calculated to investigate reliability and variability.

Results: Patients were predominantly male, M type and mild androgenetic alopecia(AGA). Analyzed through ICCs, this technique showed minimal variability and could enhance reliability($\text{ICC}>0.81$).

Discussion: In comparison with method using a headband and a tapeline, advanced scalp measuring system enabled us to find the same point by measuring the straight-line distance and angle to the exact point on measure site. Standard technique measuring hair diameter 5mm above hair ostium made trustful results possible. We expect more unbiased and consistent results regardless of examiners. In addition, this technique might provide objective data to evaluate efficacy of treatment or progression of AGA

O4

A case of adolescent androgenetic alopecia

**Young Jun Woo, Ki Min Sohn, Hong Jin Joo,
Won Joon Choi, Jung Eun Kim, Hoon Kang**

Department of Dermatology, St. Paul's Hospital, College of Medicine,
The Catholic University of Korea, Seoul, Korea

Androgenic alopecia (AGA) encompasses both male and female pattern hair loss and is a common form of hair loss in both men and women. Its onset usually occurs in the third or fourth decades of life in men, with later onset in women. AGA does rarely occur, however, in the pediatric population, called adolescent AGA. Adolescent AGA is pattern hair loss occurring in boys and girls younger than 18 years. Herein, we report a rare case of adolescent androgenic alopecia developed in a 16-year-old girl. A 16-year-old girl visited our department complaining of diffuse hair loss on the crown for 5 years. Her father had history of AGA. Hair pull test was negative. Laboratory tests including serum estrone, free testosterone level and thyroid function test were within normal range in relation to her age and sex. Phototrichogram analysis revealed diffuse thinning of hair on the midscalp and the percentages of thin hair and short hair were higher on the midscalp than the occiput. We diagnosed the case with adolescent AGA. 3 % topical minoxidil was prescribed to be applied twice a day. However, she showed poor compliance and there was little improvement on phototrichogram analysis done after 2 years.

O5
Permanent leukoderma after hair transplantation surgery

**Joon Seok, Moo Yeol Hyun, Sun Young Choi, Kui Young Park,
Beom Joon Kim, Seong Jun Seo, Chang Kwun Hong**

Department of Dermatology, Chung-Ang University College of Medicine, Seoul, Korea

Hair transplantation surgery (HTS) is the most permanent and innovative treatment compared to other methods when it comes to treat androgenic alopecia. Severe complications are relatively uncommon, however, adverse effects can still occur even with optimal conditions. A 25-year-old woman visited our hospital for hypopigmented macules and patches at the recipient site of hair transplantation 3 years prior at the private clinic. Although 3 years had passed since the HTS, the leukoderma site still remained in stable state. The hypopigmented lesions occurred at the exact spot where HTS was performed, it is likely they occurred after HTS as an adverse effect of the surgery. These lesions could arise from postinflammatory hypopigmentation. Hypopigmented lesions occurred after HTS are uncommon and difficult to remedy, therefore, we present a case in which the patient developed a hypopigmented macules and patches at the recipient site following HTS.

O6

Viabilities of androgen stimulated dermal papilla cells are modulated with GPR44 antagonist

Kwan Ho Jeong, Ye Jin Lee¹, Young Min Park¹, Jung Eun Kim, Hoon Kang

Department of Dermatology, St. Paul's Hospital, College of Medicine,
The Catholic University of Korea, Seoul, Korea,

¹Department of Dermatology, Seoul St. Mary's Hospital, College of Medicine,
The Catholic University of Korea, Seoul, Korea

Androgenetic alopecia (AGA) is the most common type of hair loss and occurs in both men and women. In AGA, 5α -reductase converts testosterone to dihydrotestosterone (DHT). DHT binds to androgen receptors and activates genes responsible for the gradual miniaturization of terminal hair follicle. Prostaglandin D2 (PGD2) is involved in various kinds of inflammatory disorders, and recently some evidences suggest that it has a role in the pathogenesis of AGA. PGD2 binds to G protein coupled receptors referred to a GPR44/CRT_h2. We conducted study to evaluated changes of PGD2 and its related molecules on the dermal papilla cell (DPCs) in the androgen stimulated environment. To determine the effect of GPR44 antagonist or COX inhibitor such as TM30089, indomethacin and refoxcib, they were applied to DHT-treated DPCs. According to real time-PCR and Western blot assay, androgen receptor (AR), PGD2 synthase and GPR44/CRT_h2 was upregulated in 1-100nM DHT treated samples. The GPR44 antagonist or COX inhibitor inhibited the level of AR, type 2 5α -reductase (5α R2), and PGD2 synthase. These effects positively act on DPCs viability. Until now, effect of GPR44 antagonist on hair follicular level is not known very well. This preliminary experiment arise the possibility of therapeutic role of GPR44 antagonist on the AGA treatment.

07

Activin A affects trichogenicity of neonatal mouse dermal cells and human dermal papilla cells

Chang Hoon Seo, Mi Hee Kwack, and Young Kwan Sung

Department of Immunology, School of Medicine, Kyungpook National University,
Daegu, Korea

Acquisition of potent human dermal papilla (DP) cells which can induce hair follicle neogenesis is an overarching concern and various approaches have been accordingly attempted to solve the concern. As a way of approaches to acquiring hair-inducing DP cells, we have previously applied three-dimensional (3D) culturing method. We then observed *de novo* formation of hair follicles when conducting patch hair reconstitution assay using 3D cultured DP spheres with mouse epidermal cells. Stepping further, in this study, we have focused on the secretory proteins from DP spheres. Activin A, the most up-regulated protein in DP spheres, has been selected for further study assuming that overexpressed Activin A by sphere formation might bind to its receptors on mouse epidermal cells resulting in successful hair induction using DP spheres. As we observed expression of Activin A in neonatal mouse dermal cells and its receptor in mouse epidermal cells, we performed patch assays using Activin A knock-down mouse dermal cells in combination with mouse epidermal cells. The results of our patch assays showed that the Activin A knock-down mouse dermal cells are severely impaired in hair follicle neogenesis. We also found severe impairment of hair follicle neogenesis using Activin A knock-down human DP spheres in combination with mouse epidermal cells. Taken together, we consequently demonstrate that Activin A affects hair induction potency of mouse dermal cells and human dermal papilla cells.

O8

Enhanced graft survival of allogeneic hair follicles with anti-ICAM-1 antibody in nonhuman primate

**Jin Yong Kim^{1,2,3}, Ji-Seon Yoon^{2,3}, Hyein Yum⁴, Jae-Il Lee⁵,
Seong Hoe Park^{4,5}, Kyeong Cheon Jung^{4,5}, Wooseok Koh⁶,
Seong Jin Jo^{1,2,3}, Kyu Han Kim^{1,2,3}, Ohsang Kwon^{1,2,3}**

¹Department of Dermatology, Seoul National University College of Medicine

²Laboratory of Cutaneous Aging and Hair Research, Biomedical Research Institute,
Seoul National University Hospital

³Institute of Human-Environment Interface Biology, Biomedical Research Center,
Seoul National University

⁴Department of Pathology and Graduate School of Immunology,
Seoul National University College of Medicine

⁵Transplantation Research Institute, Seoul National University College of Medicine

⁶JMO Dermatology, Seoul, Korea

Alopecia patients with severe hair loss cannot benefit from autologous hair transplantation (HTPL). However, it would be possible to utilize allogeneic hair follicles as the donor source with the induction of antigen-specific T cell tolerance. Recently, anti-ICAM-1 antibody (MD-3) was developed to induce dendritic cell arrest in a semi-mature stage and antigen-specific T cell tolerance in situ. In this study, we demonstrated that MD-3 promotes allograft tolerance by delaying T cell infiltration in allogeneic HTPL model of nonhuman primate. Following the preparation of recipient sites with a hair removing diode laser in the upper back skin of cynomolgus monkeys, hair follicles from monkey's thick eyebrow were transplanted in recipient sites under MD-3 pretreatment and short-term immunosuppressant. The number of visible hair allograft could be maintained in MD-3 group, whereas those of immunosuppressant and control group became rapidly diminished. In histological examination, outer root sheath of hair allografts were intact over several weeks in MD-3 group while those of control groups were impaired. MD-3 significantly delayed perifollicular CD3+ T cell infiltration, and prevented development of donor specific alloantibody. Although long-term survival was not achieved, MD-3 markedly enhanced hair allograft survival regardless concomitant immunosuppressant. In conclusion, MD-3 pretreatment proved to have therapeutic potential for preventing allograft rejection, and allogeneic HTPL model of nonhuman primate, an effective model for transplantation research.



SESSION 2

Hair Follicle Morphogenesis, Hair Cycles
(English speaking session)



The Korean Hair Research Society

Wnt/ β -catenin signaling controls proliferation but not survival of hair follicle stem cells

Sarah E. Millar, Ph.D.

Department of Dermatology, University of Pennsylvania Perelman School of Medicine,
Philadelphia, PA, USA

Wnt/ β -catenin signaling is a central regulator of adult stem cells. However, the precise functions of this signaling pathway in hair follicle stem cells have been difficult to delineate due to the variable sensitivity of different Wnt reporter transgenes, β -catenin's dual roles in adhesion and signaling, and hair follicle degradation and inflammation resulting from broad deletion of epithelial β -catenin. To address these issues we used inducible genetic systems in mice to delete β -catenin globally in skin epithelia, specifically in hair follicle stem cells, or only in interfollicular epidermis, and compared the phenotypes with those caused by ectopic expression of the secreted Wnt/ β -catenin pathway inhibitor *Dkk1*. These experiments revealed that Wnt/ β -catenin signaling is necessary for hair follicle stem cell proliferation and anagen onset. However, β -catenin is not required within hair follicle stem cells for maintenance of stem cell marker expression. Furthermore, hair follicles resume proliferating after removal of ectopic *Dkk1*, even after prolonged periods of inhibition, indicating that functional progenitors persist in the absence of active Wnt signaling. Wnt/ β -catenin signaling is therefore required for the onset of hair growth, but not for maintenance of hair follicle stem cells. These data suggest inhibition of Wnt/ β -catenin signaling as a promising method to reversibly inhibit hair growth. Conversely, as hair follicle stem cells are known to persist in androgenetic alopecia, forced activation of the Wnt pathway may be useful in promoting hair follicle growth in balding scalp.

[CURRICULUM VITAE]

Sarah E. Millar, Ph.D.

Professor, Department of Dermatology and Cell and Developmental Biology, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA, USA



Education :

1979-1982 B.A. Biochemistry, Cambridge University, U.K
1982-1987 Ph.D. Molecular Biology, University of London, U.K

Academic Appointments :

1987-1990 Fogarty Visiting Fellow, Laboratory of Cellular & Developmental Biology, NIDDK, National Institutes of Health, Bethesda, MD
1990-1992 Fogarty Visiting Associate, Laboratory of Cellular & Developmental Biology, NIDDK, National Institutes of Health, Bethesda, MD
1992-1998 Research Associate, Howard Hughes Medical Institute, Stanford University, CA
1999-2005 Assistant Professor, Department of Dermatology, University of Pennsylvania School of Medicine
2000-2005 Assistant Professor, Department of Cell and Developmental Biology, University of Pennsylvania School of Medicine (Secondary appointment).
2004-2009 Academic Advisor, Developmental, Stem Cell and Regenerative Biology Program, Cell and Molecular Biology graduate group, University of Pennsylvania School of Medicine
2005-2009 Associate Professor with tenure, Departments of Dermatology (primary) and Cell and Developmental Biology (secondary), University of Pennsylvania School of Medicine
2005-2014 Director of Research, Department of Dermatology, University of Pennsylvania Perelman School of Medicine
2009-2012 Chair, Developmental, Stem Cell and Regenerative Biology Program, Cell and Molecular Biology graduate group, University of Pennsylvania
2009- Professor with tenure, Departments of Dermatology (primary) and Cell and Developmental Biology (secondary), University of Pennsylvania Perelman School of Medicine
2014- Vice-Chair for Research, Department of Dermatology, University of Pennsylvania Perelman School of Medicine

Other Experience and Professional Memberships :

- 2002, 2007, 2010, 2011 Co-Chair, Minisymposium: Hair and Cutaneous Development, Society for Investigative Dermatology Annual Meeting
- 2003- Editorial Board, Experimental Dermatology
- 2003 Co-Organizer, Wnt Signaling Mini-Symposium, University of Pennsylvania, PA
- 2004 Chair, "Wnt Signaling in Development" session, The Wnt Meeting, Ann Arbor, MI
- 2005-2007 North American Hair Research Society, Board of Directors
- 2005- Editorial Board, Developmental Cell
- 2006 Co-Chair, Montagna Symposium on Development of the Skin and its Appendages
- 2006-2010 Standing member of the Arthritis, Connective Tissue and Skin (ACTS) study section, NIH
- 2011- Society for Investigative Dermatology Committee on Scientific Programs (member)
- 2011 Vice-Chair, Gordon Research Conference on Epithelial Differentiation and Keratinization
- 2013 Chair-elect, Gordon Research Conference on Epithelial Differentiation and Keratinization

Honors :

- 1986-1987 Cancer Research Campaign Bursary
- 1987-1990 Fogarty Visiting Fellow
- 1990-1992 Fogarty Visiting Associate
- 1999-2000 Dermatology Foundation Career Development Award
- 2000-2001 Dermatology Foundation Career Development Award
- 2012-2017 MERIT Award NIAMS/NIH R37AR047709 "Wnt signals in skin and hair development and hair growth"
- 2013-2014 Executive Leadership in Academic Medicine (ELAM) fellow, Drexel University, Philadelphia, PA
- 2014- Albert M. Kligman Endowed Chair in Dermatology II, University of Pennsylvania

Perspectives on human hair follicle organ culture and future developments

Michael Philpott, Ph.D.

Cutaneous Biology, Centre for Cutaneous Research Blizard Institute, Barts and The London School of Medicine and Dentistry, Queen Mary University of London, UK

Since methods for the isolation and culture of human hair follicles were first published over 20 years ago their importance as model system to study hair biology has been demonstrated in numerous publications. In particular *in vitro* hair follicle culture has played a significant role in helping elucidate the role of signalling molecules in regulating hair growth and hair fibre formation and have been especially useful in understanding metabolic aspects of hair growth. Moreover, with the advent of qPCR the ability to measure changes in gene expression in single cultured follicles has meant it is now possible to monitor changes in gene expression in cultured follicles in great detail. Although full human hair follicle cycling *in vitro* has not yet been achieved cultured human hair follicles do undergo anagen to catagen transition *in vitro* both during normal routine culture and in response to growth regulatory factors. This has been successfully used to investigate factors that influence normal follicle regression and in particular delay catagen onset, but have also been used with great success to identify factors that drive the anagen to catagen transition. Isolated human hair follicles have also been implanted into collagen gels and used to investigate factors that stimulate epidermal regeneration and may prove very useful as models to understand hair follicle stem cell recruitment during epidermal regeneration. Although human hair follicle culture has been useful to understand many aspects of hair biology they are limited by tissue availability and do not really address issues of androgenetic alopecia (AGA). Because the limited life span of DP cells represents a substantial obstacle for biochemical analysis we generated immortalized balding and non-balding DP cell lines by ectopic expression of the catalytic subunit of human telomerase (hTERT). Immortalised lines have been maintained in culture for over 100 passages, maintain expression of Sox-2, Oct-4 and NANOG and can be differentiated down adipocyte bone and cartilage lineages suggesting they retain stemness. When grown in organotypic 3D models they induce expression of hair specific hard keratins in keratinocytes. Immortalised DP cell lines show similar characteristics to primary DP cells and provide another tool in our attempt to understand the actions of androgens on hair growth and enable the

development of better treatment for androgen dependent hair disorders.

In conclusion cultured follicles are highly responsive to *in vitro* manipulation by a wide range of growth regulatory factors and recent publications showing that siRNA technology can also be applied to cultured hair follicles and the ability to generate immortalised cell lines opens up a new and exciting avenue of hair research.

[CURRICULUM VITAE]

Mike Philpott, Ph.D.

Professor, Cutaneous Biology, Barts and The London School of Medicine and Dentistry, Queen Mary University of London, UK



Education :

Mike originally studied Marine Biology and Biochemistry at the University of Wales, Bangor graduating in 1986. He obtained his D. Phil from the University of Oxford in 1990 the title of his thesis was 'Studies on isolated hair follicles' from which he published on the in vitro culture and growth of human hair follicles now referred to as the 'Philpott model'.

Career :

He continued his research into hair follicle biology at the University of Cambridge from 1990 until 1994 and Unilever Research from 1994 to 1996. He was appointed to a lectureship at Barts and The London in 1996. He was promoted to senior lecturer in 1999; Reader in 2003 and Professor of Cutaneous Biology in 2005. He was centre lead for Cutaneous Research from 2006 to 2015. His research interests include hair biology, steroidogenesis and sebocyte differentiation and the role of hedgehog signalling and Gli transcription factors in the development of basal cell carcinoma.

Aging features of human scalp and regulation of aged hair cycles

Ohsang Kwon, M.D., Ph.D.

Department of Dermatology, Institute of Human-Environment Interface Biology,
Seoul National University College of Medicine, Seoul, Korea

1) Aged human develop characteristic changes in the scalp hair such as gray hair and senile alopecia. To date, however, there were few histologic studies to announce morphological changes in aged human scalp and hair follicles. Therefore, the histologic characteristics of scalp were compared between young and old males.

With advancing age, the counts of hair follicles, lobules of sebaceous glands, and sweat glands were found to be decreased. In addition, the rete ridge of epidermis was flattened and elastic fibers in papillary dermis decreased in old men. In hair follicles of old males, increased number of mast cells in connective tissue sheath and decreased mucopolysaccharide in dermal papilla were evident. However, the proliferating activity of matrix keratinocytes in hair follicles was not different between young and old men.

2) Next, one of the major changes in hair with aging is prolonged telogen period known as telogen retention. We explored the physiologic changes of hair follicle stem cells (HFSCs) in telogen hair cycle between young mice (2 months) and aged mice (22-24 months). Interestingly, the percentage of HFSCs was not affected with aging in basal and suprabasal bulge populations. Furthermore, no cellular senescence was observed by senescence-associated β -galactosidase assay. Endogenous p21, which is cyclin-dependent kinases inhibitor (CDKi), is significantly upregulated in the bulge and hair germ (HG) of aged mice, with concomitant upregulation of cytoplasmic p15 expression in the bulge. Unexpectedly, nuclear Runx1 protein known as a repressor of p21 is highly expressed in the HG and base of bulge of aged mice, compared to the young mice. Meanwhile, p57 expression was not significantly different between young and aged mice. In conclusion, we unveiled that p21 is the major regulating CDKi to enforce quiescence of HFSC in telogen retention caused by aging and that Runx1 activation signal can be interfered through the aging process.

[CURRICULUM VITAE]

Ohsang Kwon, M.D., Ph.D.

Department of Dermatology, Seoul National University College of Medicine



Education and Training :

- 2002-2005 Ph.D. in Medicine (Dermatology)
Graduate School, Seoul National University, Seoul,
Korea
- 1997-1999 M.S. in Medicine (Dermatology)
Graduate School, Seoul National University, Seoul,
Korea
- 1988-1994 B.S. in Medicine
Seoul National University College of Medicine, Seoul, Korea

Professional Experiences :

- 2015.3-present Professor, Department of Dermatology, Seoul National University College of
Medicine, Seoul, Korea
- 2010.7-present Secretary, Institute of Human-Environment Interface Biology, Medical
Research Center, Seoul National University College of Medicine, Seoul, Korea
- 2007.7-2009.7 Visiting Scholar, Department of Dermatology, University of Pennsylvania,
Philadelphia, PA, USA
- 2003.4-2015.2 Clinical Instructor, Assistant Professor, Associate Professor, Department of
Dermatology, Seoul National University College of Medicine, Seoul, Korea
- 2002.5-2003.2 Research Fellowship, Department of Dermatology, Seoul National University
College of Medicine, Seoul, Korea
- 1995.3-1999.2 Resident, Department of Dermatology, Seoul National University Hospital,
Seoul, Korea

Academic Appointments :

- 2014.6- Board Member, Director of Scientific Affairs, Korean Hair Research Society
(KHRS)
- 2015.4- Board Member, Director of Scientific Affairs, Korean Society for Investigative
Dermatology (KSID)

Honors :

2014. 04 47th Yuhan Medical Award, Seoul Medical Association
2013. 12 SNUH Outstanding Award, Seoul National University Hospital
2011. 10 11th Inbong Academic Award, Korean Dermatological Association



SESSION 3

Cell Therapy & Tissue Engineering
(English speaking session)



The Korean Hair Research Society

Organ neogenesis of hair follicles

Sung-Jan Lin, M.D., Ph.D.

Institute of Biomedical Engineering, Department of Dermatology, and Research Center for Developmental Biology and Regenerative Medicine, National Taiwan University, Taipei, Taiwan

When organs are injured, our body tends to repair the damage with fibrosis rather than to regenerate. Up to date, hair follicles are one of the few organs that can be fully regenerated after they are lost. We use hair follicles as a model organ to investigate how organs are damaged and also to develop strategies to mitigate the damage and to enhance regeneration. In this talk, I will talk about how to efficiently regenerate hair follicles via tissue engineering to enhance epithelial-mesenchymal interaction by use of hair follicle mesenchymal cells. In addition, I will talk about a new strategy to initiate spontaneous hair follicle neogenesis by environmental modification. We find that protein extract from stage-specific embryonic skin is able to induce hair follicle neogenesis. Short-term exposure to the extract is sufficient to confer adult cells trichogenic ability. Through proteomics analysis, we identified 3 key extracellular proteins that together are essential and sufficient to induce hair follicle neogenesis. Therefore, without the introduction of inductive dermal papilla cells, hair follicle organ neogenesis can be initiated by creating a pro-regeneration environment with defined extracellular factors. Identification of such factors in other organs may help to elicit spontaneous organ neogenesis.

[CURRICULUM VITAE]

Sung-Jan Lin, M.D., Ph.D.

Associated professor & Taiwan Bio-Development Foundation Chair in Biotechnology, Institute of Biomedical Engineering & Department of Dermatology, National Taiwan University, Taipei, Taiwan



Education :

1998 M.D., National Taiwan University College of Medicine
2007 Ph.D., Institute of Biomedical Engineering, National Taiwan University

Academic Appointments :

2007-2012 Assistant Professor, Institute of Biomedical Engineering & Dept. of Dermatology, National Taiwan University
2010-2012 Visiting Assistant Professor, Dept. of Pathology, Keck School of Medicine, University of Southern California, USA. (Professor Cheng-Ming Chuong's lab)
2003-present Attending Physician, Dept. of Dermatology, National Taiwan University Hospital
2012-present Associate Professor, Institute of Biomedical Engineering & Dept. of Dermatology, National Taiwan University
2012-present Vice Chief Executive Officer, Research Center for Development Biology and Regenerative Medicine, National Taiwan University

Honor

2006 International Scholarship Grant, 18th World Congress of Dermatology Fund/ 2007 Galderma Skin Research Award/ 2008 Career Development Grant, National Health Research Institutes, Taiwan/ 2009 Award for Junior Research Investigators in Life Science, Academia Sinica, Taiwan; Physician Scientist Award, National Health Research Institutes, Taiwan/ 2010 Ta-You Wu Memorial Award of National Science Council, Taiwan; Excellent Teaching Award, National Taiwan University/ 2012 Basic Research Award, Asia-Pacific La Roche-Posay Foundation; Ching-Shing Medical Award/ 2013 Excellent Teaching Award, National Taiwan University; Best paper award, 2013 Annual Meeting of Formosa Association of Regenerative Medicine; Excellent paper award, Laser Medicine Foundation R.O.C./ 2014 Taiwan Bio-Development Foundation (TBF) Chair in Biotechnology, 2014-2024; Distinguished Research Award, Ministry of Science and Technology, Taiwan; Distinguished Research Award, National Taiwan University Hospital

Patent

1. Lin SJ. Chitosan-based pigment transplant. Taiwan patent No.: I290475
2. Lin SJ, Chan CC, Yen CM. Method for the manufacture of microtissues for inducing the growth of a hair follicle. USA patent No.: US 8,492,112 B2

Cultivation of trichogenic dermal cells for hair follicle neogenesis

Young Kwan Sung, Ph.D.

Department of Immunology, School of Medicine,
Kyungpook National University, Daegu 700-422, Korea

Neogenesis of hair follicles by cell implantation is a promising alternative for the treatment of hair loss. Because the hair-inductive capacity (trichogenicity) of cultured follicular dermal cells as well as epidermal cells are lost during cultivation, to achieve successful hair follicle neogenesis, identification of cell culture supplements and/or culture conditions that enable cells to maintain trichogenicity is an important matter. In this presentation, I will show our recent data of maintenance and restoration of trichogenicity by supplementation of various factors to cell culture media, 3D cultivation, and forced expression of a trichogenic gene.

[CURRICULUM VITAE]

Young Kwan Sung, Ph.D.

Professor, Department of Immunology, School of Medicine, Kyungpook National University, Daegu, 700-422, Republic of Korea.



Education :

1988-1992 B.Sc. Kyungpook National University, Korea.
1993-1996 Ph.D. Imperial College, University of London, UK

Research Training :

1996-1996 Post-doctoral fellow, University of Cambridge, UK
1996-2001 Post-doctoral fellow, The Johns Hopkins University School of Medicine, USA

Professional Experience :

2001-2004 Research Professor, Biomolecular Engineering Center, Kyungpook National University, Korea.
2004-2006 Assistant Professor, Bio-Medical Research Institute, Kyungpook National University Hospital, Korea.
2006-2008 Assistant Professor, School of Medicine, Kyungpook National University, Korea
2008-2013 Associate professor, School of Medicine, Kyungpook National University, Korea
2013-present Professor, School of Medicine, Kyungpook National University, Korea

Memberships :

2006- Korean Society for Molecular and Cellular Biology
2006- Korean Society for Biochemistry and Molecular Biology
2011- Korean Tissue Engineering and Regenerative Medicine Society
2011- Korean Hair Research Society
2012- Tissue Engineering and Regenerative Medicine International Society

Major Research Field :

Hair follicle bioengineering/ Mechanisms of hair loss and hair growth

Hair regeneration by adipose-derived stem cells

Jong-Hyuk Sung, Ph.D.

College of Pharmacy, Yonsei University

We have previously demonstrated that adipose-derived stem cells (ASCs) have diverse skin regenerative potential such as wound-healing, antioxidant, and antiwrinkling. In addition, ASCs exhibits hair-growth promoting effects *in situ* and *in vivo*. Conditioned medium (CM) of ASCs increased the proliferation and migration of dermal papilla cells. ASC-CM increased the Ki67-positive cells and hair length in hair organ culture. In addition, subcutaneous injection of ASCs or ASC-CM in the back of C3H mice accelerated the telogen-to-anagen induction in this model. However, clinical application of ASC-CM is not satisfactory in this stage, and we should search for ASC stimulator for enhancing hair-regenerative potential of ASCs. I'll introduce my recent results on the preconditioning of ASCs by diverse chemical and mechanical stimuli such as vitamin C, low dose UVB, PDGF-D, and hypoxia.

[CURRICULUM VITAE]

Jong-Hyuk Sung, Ph.D.

Associate Professor, College of Pharmacy, Yonsei University



Education :

B.S. in Pharmacy, Seoul National University (1998)

M.S. in Pharmaceutics, Seoul National University (2000)

Ph.D. in Pharmaceutics, Seoul National University (2005)

Career :

Postdoc, Seoul National University, South Korea (2005-2006)

Postdoc, Yale University School of Medicine (2006)

Director, Prostemics(2007-2009)

Assistant professor, CHA University (2009~2014)

CEO, STEMORE (2015~)



SESSION 4

Hair Transplantation & Hair Cosmetic Products
(English & Korean speaking session)



The Korean Hair Research Society

Hair transplantation in China

Wen-Yu Wu, M.D., Ph.D.

Department of Dermatology, Huashan Hospital affiliated to Fudan University, Shanghai, China

This lecture describes current market analysis on Chinese hair transplantation (analysis of market scale and output during 2006-2013), brief introduction of hair transplantation clinics (the change of hair transplantation clinic's number during 2006-2013, and introduction of both public and private hair transplantation clinics), the technology of hair transplantation (FUT, FUE, SHT, and BHT etc), the characteristics of hair transplantation in Chinese (including hair features, donor area, and recipient area features), and the prospect of hair transplantation development (restoration robotics and hair follicles regeneration technology).

[CURRICULUM VITAE]

Wen-Yu Wu, M.D., Ph.D.

Professor, Department of Dermatology, Huashan Hospital, Fudan University, Shanghai, China



Education :

1990-1995 M.D., Shanghai Medical University
1998-2003 Ph.D., Medical Center, Fudan University

Academic Appointments :

1995-2000 Resident, Department of Dermatology, Huashan Hospital, Fudan University, Shanghai, China
2000-2008 Attending Doctor, Department of Dermatology, Huashan Hospital, Fudan University, Shanghai, China
2006-2007 Clinical and Research Fellowship/Postgraduate Training in Hair, Division of Dermatology, University of British Columbia, Vancouver, BC, Canada, Tutor: Jerry Shapiro, MD, FRCPC
2008-2013 Associate Professor, Department of Dermatology, Huashan Hospital, Fudan University, Shanghai, China
2013-present Professor, Department of Dermatology, Huashan Hospital, Fudan University, Shanghai, China

Memberships :

Vice Chairman, China Dermatologist Association, Dermatological Surgery Group
Vice Chairman, Chinese Society of Plastic Surgery, Hair Transplantation Group
Board Member, Chinese Society of Dermatology, Hair Group
Board Member, China Dermatological Society of Integrated Traditional and Western Medicine, Dermatological Surgery Group
Board Member, Shanghai Dermatological Society
Board Member, Shanghai Medical Aesthetics and Plastic Society
International Member, North American Hair Research Society

Honors :

Outstanding Dermatologist by Chinese Medical Doctor Association in 2012.

Guide to hair transplantation for dermatologists - Simple hair transplantation

Kwang Young Kang, M.D., Ph.D.

Moraena Dermatology Clinic

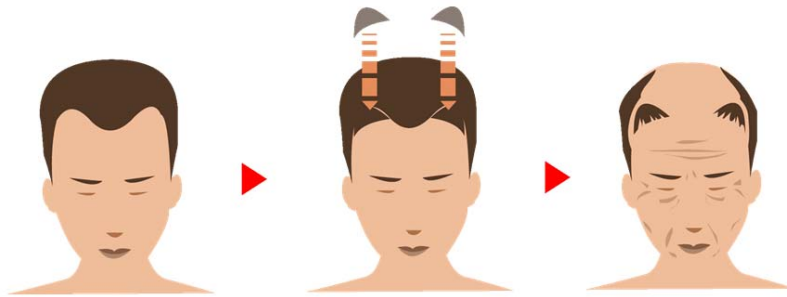
There are medical and surgical treatments for male & female pattern baldness. Hair Transplantation is popular extensively in surgical treatment of androgenic hair loss. Hair Transplantation was introduced to Korea approximately 30 years ago. At that time we transplanted hair with using punch.(minigraft), but punch graft was not natural to Korean people like tooth brush and cobblestone appearance.

So professor Kim Jung-chul has invented implanter to get the natural appearance in Korean. Now KNU Implanter is popular worldwide. Using KNU Implanter, We can transplant a lot of hairs (3,000~5,000).

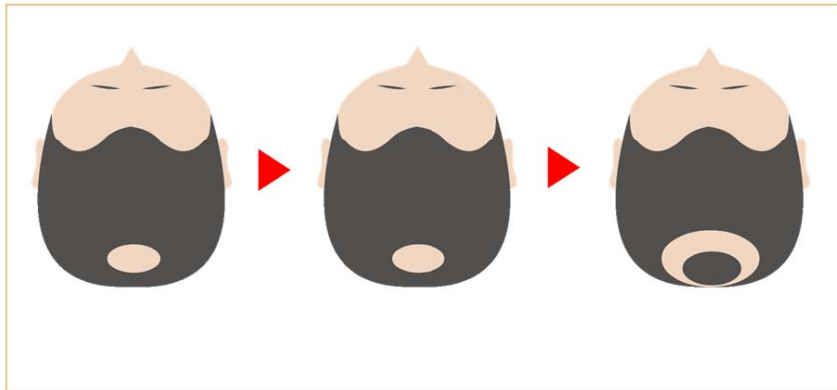
I have transplanted hair since 2,000. At first I had transplanted 1,500 hairs to male pattern baldness patient. Now I have transplanted 3,000~5,000 hairs generally. After hair transplantation, patients often complain of pain, scar & facial swelling. Dermatologic doctors don't like above complains & long spending time for hair transplantation.

I am a dermatologist. I am going to suggest simple hair transplantation to dermatologist. I think simple hair transplantation will be possible in lunch time lowering adverse effect.

모발배치가 잘못된 경우



모발배치가 잘못된 경우



[CURRICULUM VITAE]

Kwang Young Kang, M.D, Ph.D.

Moraena Dermatology Clinic



Education :

Jeonbuk National University College of Medicine

Internship and Residency :

Jeonbuk National University Hospital

Membership of Academic Societies :

Korean Dermatologic Association

Korean Society of Hair Restoration Surgery

Korean Research Society

Hair dye, permanent & straight agents

Bark-Lynn Lew, M.D., Ph.D.

Department of Dermatology, College of Medicine, Kyung Hee University

Hair is an important component of body image and has immense psychological importance for both men and women. Women, in particular, over the ages have modified their appearance through changing their hair color or style. Hair can be straight, wavy or curly, blonde, black, brown or red. These natural variations are an important part of our identity that can be manipulated according to the dictates of fashion, culture or society.

Hair cosmetics including bleaching and coloring agents are widely available and manipulate the structural properties of hair. Whilst most procedures are safe, there is considerable potential for damage to the hair and hair problems of acute onset, including hair breakage, hair loss and loss of condition, are frequently blamed on the last product used on the hair. It is important to understand the ingredients, processes and side effects of coloring and bleaching agents for appropriate care and accurate clinical assessment of the patient's hair.

Hair coloring is widely used by women and men either to change their natural hair color. A wide variety of natural and synthetic hair coloring agents is available. Vegetable and metallic dyes are natural colorants, but these have largely been replaced by synthetic organic dyes. The size of the coloring molecule, the swelling of the hair at the time of application and the basicity of the dye determines whether the dye penetrates the cortex or precipitates on the cuticle. The most successful dyes are small, basic molecules. Hair dyes are classified according to their resistance to washing and the length of time the coloring will remain on the hair: permanent, semipermanent, temporary and gradual.

Bleaching permanently lightens the natural colour of hair. It can be used in combination with permanent dyeing. Bleaching oxidizes the existing melanin in the cortex. Darker hair requires longer bleaching times. Hair bleaches consist of hydrogen peroxide of up to 12% strength. The hydrogen peroxide is an oxidizing agent that releases oxygen from the hair shaft. The amount of lightening obtained is related to the amount of oxygen released. Bleaching is damaging to the hair causing weakening and a change in texture of the hair. The oxidization reaction destroys some of the disulfide bonds within the keratin and can damage the cuticle making it more porous.

Permanent waving is achieved by altering the disulfide bonds, using an alkaline reducing agent to

cleave some of the bonds and an oxidizing agent to solidify newly formed bonds. Permanent waving of negroid hair requires an additional initial straightening step which uses a reducer.

Hair straightening is achieved either mechanically through pressing, or chemically by using relaxers. Pressing provides temporary straightening using hot combs, flat irons, curling irons or marcel stove. Chemical relaxing is similar to permanent waving except that curly hair is permanently straightened using a comb during reducing phase. Heavy cream formulation, rather than a solution, is preferred for strongly alkaline relaxing agents, which consists of NaOH, guanidine hydroxide, KOH or LiOH.

[CURRICULUM VITAE]

Bark-Lynn Lew, M.D., Ph.D.

Department of Dermatology, College of Medicine, Kyung Hee University



Education :

- 2001. Feb A Graduate of College of Medicine, Kyunghee University, Seoul, Korea
- 2005. Feb A Master of Medicine, Kyunghee University, Seoul, Korea
- 2007. Aug. A Doctor of Medicine, Kyunghee University, Seoul, Korea

Positions Held Since Graduation :

- 2001.3~2002.2 Internship, Kyunghee University hospital
- 2002.3~2006.2 Residency in Dermatology, Kyunghee University hospital
- 2006.3~2008.8 Clinical Instructor, Clinical Assistant Professor, Dept. of Dermatology, Kyunghee University hospital at Gangdong
- 2008.9~2010.8 Instructor, Dept. of Dermatology, Kyunghee University hospital at Gangdong
- 2010.9~2014.8 Assistant Professor, Dept. of Dermatology, Kyunghee University hospital at Gangdong
- 2014.9~present Associate Professor, Dept. of Dermatology, Kyunghee University hospital at Gangdong

Medical Society Membership :

- Korean Hair Research Society, Financial Director
- Korean Atopic Dermatitis Association, Publication Director
- Korean Society of Medical Mycology, Scientific Assistant Director
- Korean Society of Chemical Peeling, Financial Director
- Korean Society of Aesthetic and Dermatologic Surgery, Financial Assistant Director
- Korean Society for Cosmetics, Board
- Seoul Regional Society of Korean Dermatologic Association, General Secretary Director
- Korean Dermatologic Association, Educational program Assistant Director
- Korean Dermatologic Association, Board of Medical Ethics and Legislation
- Korean Dermatologic Association, Board of Examination
- Financial Committee for the 36th International Society for Dermatologic Surgery, Board

Journal of American Academy of Dermatology, Reviewer
American Academy of Dermatology, Member
Society for Investigative Dermatology, Member

Awards :

2004, Travel Grant, Korean Hair Research Society
2006, Best Poster, the 58th Annual Meeting of KDA
2009, Best Paper, College of Medicine, Kyunghee University
2012, Best Poster, the 9th Annual Meeting of Korean Hair Research Society
2013, Research scholarship, Amore pacific
2014, Faculty Excellence prize, College of Medicine, Kyunghee University

Interests :

Atopic dermatitis, Hair and Hair diseases, Laser and Dermatologic surgery

Cosmetics for hair care

Sang Seok Kim, M.D.

Department of Dermatology Kangdong Sacred Heart Hospital
Hallym University School of Medicine, Seoul, Korea

Hair care, color, and style play an important role in people's physical appearance and self-perception. Among the earliest forms of hair cosmetic procedures in ancient Egypt were hair setting by the use of mud and hair coloring with henna. In ancient Greece and Rome, countless ointments and tonics were recommended for the beautification of the hair, as well as remedies for the treatment of scalp diseases.

Cosmetics for hair are applied topically to the scalp and hair and an important tool that helps to increase patient's adherence to alopecia and scalp treatments. Through the development of cosmetics with pharmaceutically active compounds, products are evolving that are becoming more similar to topical therapeutic agents.

The various components of hair at the molecular level regulate the efficacy of various hair cosmetic products, allowing their classification as follows:

Category 1: Those that work on the exocuticle. These hair cosmetics include shampoos, conditioners, serums, hair sprays, waxes, gels, and mousses.

Category 2: Those that work on the cortex or alter the structural integrity of the hair shaft. These include hair colors, bleaching agents, straightening, and perming agents.

Although dermatologists are experts in managing scalp and hair diseases, the esthetic applications of newer cosmetic therapies still remain elusive. Knowing their mode of action, safeness and ingredients will enable the physician to better assess different problems secondary to cosmetic treatments. The dermatologist's knowledge of hair care products, their use, and their possible side effects can extend to an understanding of cosmetic resources and help dermatologists to better treat hair and scalp conditions according to the diversity of hair types and ethnicity.

[CURRICULUM VITAE]

Sang Seok Kim, M.D.

Director, Associate Professor, Department of Dermatology, Kangdong Sacred Heart Hospital, Hallym University School of Medicine



Academic Education :

- 1997 B.S. M.D., College of Medicine, Hallym University
- 2001 M.S., College of Medicine, Hallym University

Appointments And Professional Activities :

- 2002-2003 Clinical Instructor, Department of Dermatology, Kangdong Sacred Heart Hospital, Hallym University
- 2003 Clinical Visiting Fellow, National Skin Centre, Singapore
- 2003-2005 Full Time Instructor, Department of Dermatology, Kangdong Sacred Heart Hospital, Hallym University
- 2006-2012 Assistant Professor, Department of Dermatology, School of Medicine, Hallym University
- 2006-present Director, Department of Dermatology, Kangdong Sacred Heart Hospital, Hallym University
- 2012-present Associate Professor, Department of Dermatology, School of Medicine, Hallym University
- 2012-2013 Visiting Assistant Professor, Department of Dermatology, Perelman School of Medicine, University of Pennsylvania, USA

Member :

- 2008-2010 Director, Financial affairs, the Seoul Regional Society of the Korean Dermatological Association
- 2011-present International member, American Academy of Dermatology
- 2012-present Director, The Korean Society for Skin Cancer
- 2014-present Director, The Korean Hair Research Society
- 2014-present Director, Planning affairs, The Korean Society for Photomedicine



SESSION 5

Updates in Hair & Scalp Disorders
(Korean speaking session)



The Korean Hair Research Society

Update on male pattern hair loss

Hoon Kang, M.D., Ph.D.

Department of Dermatology, College of Medicine, The Catholic University of Korea, Seoul, Korea

Male Pattern Hair Loss (MPHL) is a common androgen-dependent disorder in which there is a progressive decline in the activity and size of scalp hair follicles. Despite of an entirely natural process with no significant detriment to physical health, male balding can cause remarkable adverse effects on psychosocial wellbeing in the affected males.

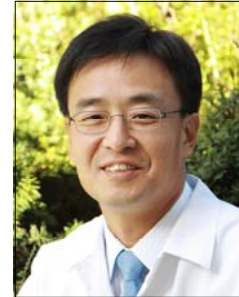
The development and occurrence of MPHL depends on the genetic predisposition and an interaction of endocrine factors. The mode of inheritance of MPHL remains uncertain. However, it is most likely polygenic. No main causative genes have yet been described that contribute to this condition. The objectives to the treatment of MPHL are 1) recovery from the hair loss, 2) stabilization of the progression, and 3) prevention of the loss of hairs in the future. Recently there are several effective and safe medications available to manage MPHL.

For dermatologists who deal with MPHL at the professional level, it is important to acquire the accurate and up-to-date knowledge and make prompt treatment strategies. In this section, I will discuss about the update on clinical characteristics, diagnostic approaches and therapeutic options for the MPHL.

[CURRICULUM VITAE]

Hoon Kang, M.D., Ph.D.

Department of Dermatology, College of Medicine, The Catholic University of Korea, Seoul, Korea



Education :

M.D. degree from College of Medicine, The Catholic University of Korea, Seoul, Korea (1988)

Ph.D. degree from College of Medicine, The Catholic University of Korea, Graduate School, Seoul, Korea (1998)

Internship, Seoul St. Mary's Hospital, The Catholic University of Korea, Seoul, Korea (1991)

Dermatology residency, Department of Dermatology, Seoul St. Mary's Hospital, The Catholic University of Korea, Seoul, Korea (1995)

Professional Experience :

Grade V of Medical Officer, Department of Dermatology, National Medical Center, Seoul Korea

Visiting Scholar, Department of Dermatology, New York University, New York, USA

Hair Fellowship, Department of Dermatology & Skin Science, University of British Columbia, Vancouver, Canada

Professor, Department of Dermatology, St. Paul's Hospital, The Catholic University of Korea, Seoul, Korea

Professional Society :

The Korean Society for Dermatology

The Korean Hair Research Society

The Korean Society for Acne Research

The Korean Society for Dermatologic Surgery

American Academy of Dermatology, International Fellow

American Society for Dermatologic Surgery

North American Hair Research Society

Major Interest :

Hair loss and scalp disorders

Skin cancer and surgery

Acne scar

Female pattern hair loss

Gwang Seong Choi, M.D., Ph.D.

Department of Dermatology, Inha University College of Medicine,

Female pattern hair loss(FPHL) is the most common hair loss disorder in women. It is characterized by progressive decrement of terminal hair follicles over the frontal and vertex regions by miniaturized hair follicles. Hormonal factors and genetic predisposition are believed to contribute to FPHL, but the complete mechanism is still unclear and the most affected women have normal androgen levels. The only approved treatment is topical minoxidil, and offer moderate improvement, lack of a permanent cure. Several other alternative modalities, such as 5-alpha reductase inhibitors, antiandrogens, and prostaglandin analogs are reported to be beneficial. Laser and light therapies have also become popular despite of the little evidence of improvement. Platelet rich plasma(PRP) and stem cells(SC) are also emerging treatment modalities for the treatment of hair loss.

Management of patient's expectation is also crucial, given the current therapeutic options, is to slow or stop disease progression despite patient expectations of permanent hair regrowth.

This presentation is reviewing the current knowledge about pathogenesis, clinical manifestations, diagnosis and therapeutic options for female pattern hair loss.

[CURRICULUM VITAE]

Gwang Seong Choi, M.D., Ph.D.

Professor and Director, Department of Dermatology, Inha University College of Medicine, Chairman of Institutional Review Board (IRB), Inha University Medical Center



Education :

1983-1989 Graduated from Yonsei University College of Medicine
1997-1999 Received the Ph.D. at Graduate School of Yonsei University

Professional Experience :

1993-1997 Resident in the Department of Dermatology, Yonsei University Hospital
1997-present Research instructor, Clinical instructor, Assistant professor, Associate professor and Professor in the Department of Dermatology, Inha University College Medicine
2005-2006 Visiting Investigator, Center for Cutaneous Research, Bart and London, London University

Professional Society :

1997-present Member of Korean Dermatological Association
 Member of Korean Society for Investigative Dermatology
2008-present Academic, Financial, Project Director of Korean Hair Research Society
 Director of Korean Society for Chemical Peeling, Korean Society for Aesthetic and Dermatological Surgery, Korean Academy of Vitiligo

Major Interest :

Hair and Hair diseases
Vitiligo
Dermatologic surgery

The recent update of seborrheic dermatitis

Yang Won Lee, M.D., Ph.D.

Department of Dermatology, Konkuk University School of Medicine, Seoul, Korea

Malassezia yeasts are lipophilic fungi that are recovered in 75-98% of healthy adults. The yeasts, since being first introduced in 1889, have been linked to various skin conditions such as pityriasis versicolor, seborrheic dermatitis, Malassezia folliculitis, and most recently, atopic dermatitis. Its pathogenic ability is drawing attention more than ever as cases of confluent and reticulated papillomatosis and Malassezia onychomycosis, as well as systemic Malassezia infection in immunocompromised adults and neonates receiving intravenous fluid replacement have recently been reported.

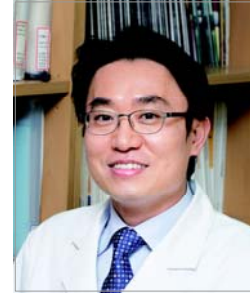
Conventional studies and identification on Malassezia yeasts have traditionally been based on morphological and biochemical analyses. However, these methods often have dubious criteria, and environmental factors and genetic mutations are giving rise to new species. Therefore, new molecular biological methods, which would overcome these limitations, are now in demand.

The authors have already reported successful identification of Malassezia yeasts using 26S rDNA PCR-RFLP (polymerase chain reaction-restriction fragment polymorphism). RFLP methods enable us to analyze the pattern and size of fragmented amplified ribosomal DNA with the use of two restriction enzymes, Hha1, and BstF1. With these methods, genetic diversity can be examined, and it can be widely used in the rapid diagnosis and epidemiological study of fungal species because it is rapid, precise and cost-effective. In addition, the pyrosequencing method, which has recently been brought into the spotlight, enables us to identify the species with only a 30-40 bp sequence.

[CURRICULUM VITAE]

Yang Won Lee, M.D., Ph.D.

Associate Professor, Department of Dermatology, Konkuk University



Education :

- 1996-2000 Konkuk University College of Medicine (M.D.), Seoul, Korea
- 2001-2003 Konkuk University College of Medicine (M.S.), Seoul, Korea
- 2003-2006 Konkuk University College of Medicine (Ph.D.), Seoul, Korea

Training and Fellowship Appointments :

- 2001-2005 Dermatology residency, Konkuk University Hospital, Seoul, Korea
- 2005-2006 Dermatology fellow, Konkuk University Hospital, Seoul, Korea
- 2010-2011 Visiting scholar, Dep. of Biomechanical Engineering, Michigan State University, USA

Faculty Appointment :

- 2006-2007 Clinical Assistant professor, Dermatology, Konkuk University Hospital, Seoul, Korea
- 2007-2011 Assistant professor, Dermatology, Konkuk University Hospital, Seoul, Korea
- 2011-present Associate professor, Dermatology, Konkuk University Hospital, Seoul, Korea

Memberships :

- 2010-present Member of board of directors, The Korean Hair Research Society
- 2012-present Director of ethics legislation, Korean Society for cosmetic Dermatology
- 2013-present Treasurer, Korean Society of Medical Mycology
- 2014-present Planning director, Korean Atopic Dermatitis Association

Dermoscopic diagnosis of scalp diseases

Moon-Bum Kim, M.D., Ph.D.

Department of Dermatology, Pusan National University Hospital,
179 Gudeok-Ro, Seo-Gu, Busan, Korea

Dermoscopy is non-invasive diagnostic technique for the in vivo observation of skin lesion, and provides a better visualization of surface and subsurface structures due to its characteristic optical structures.

By using dermoscopy, dermatologists can increase the diagnostic accuracy as much as 30% compared to visual clinical inspection alone. Thus, it is now regarded as an in vivo bridge between clinical morphology and histopathology.

Though it was usually used for pigmented skin lesions such as nevocytic nevus, melanoma, basal cell carcinoma, and etc, its clinical application has been extending into other non-pigmented diseases including inflammatory and even infectious conditions.

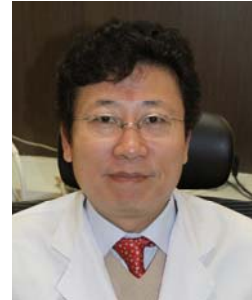
Trichoscopy is the term when dermoscopy is tried for hair and scalp abnormalities. It started from the early 1990s, but gained popularity in recent years. According to the contribution of leading groups (Tosti A I Miami university, Rudnicka L in CSK MSWiA, and Inui S in Osaka university in trichoscopy) and other trichoscopists, specific or characteristic trichoscopic findings of various hair and scalp disorders have been identified. These trichoscopic findings were proved to be useful for the dermatologists dealing with hair and scalp abnormalities.

Here, I will present the characteristic trichoscopic findings of various scalp disorders.

[CURRICULUM VITAE]

Moon-Bum Kim, M.D., Ph.D.

Professor, Department of Dermatology, Pusan National University Hospital,
179 Gudeok-Ro, Seo-Gu, Busan 602-739, Korea



Education :

1988-1992	M.D. degree from College of Medicine, PNU
1992-1993	Internship, Pusan National University Hospital(PNUH), Pusan, Korea
1997-2001	Residency of Dermatology, PNUH
2001-2002	Fellow, Department of Dermatology, PNUH
2003-2005	Clinical assistant professor, Department of Dermatology, PNUH
2006-2007	Assistant professor, Department of Dermatology, College of Medicine, PNU
2008-	Associate professor, Department of Dermatology, College of Medicine, PNU
2013-	Professor, Department of Dermatology, College of Medicine, PNU

Memberships :

The Korean Dermatological Association (1997-) Board of Director (2010-) Executive Director of Planning and Policy Division (2014-)
The Korean Hair Research Society (2006-) Executive Director of Education (2010-2014), Executive Director of Publication & Information (2014-)
The Korean Society for Dermatopathology (2005-) Board of Director
The Korean Society of Investigative Dermatology (2006-) Board of Director
The Korean Society for Atopic Dermatitis(2006-) Board of Director, Executive Director of Education (2010-2012)

Scarring alopecia

Dong-Youn Lee, M.D., Ph.D.

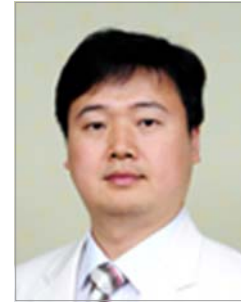
Department of Dermatology, Samsung Medical Center, Sungkyunkwan University

Scarring alopecia is rare hair loss characterized by permanent hair follicle destruction. The common clinical manifestation of scarring alopecia is the loss of follicular ostia in the scarring area. The histopathological hallmark of a fully developed lesion is the replacement of the hair follicle structure by fibrous tissue. Scarring alopecia may result from trauma (burn, radiation), infection (bacteria, fungus) or other processes. In those conditions, permanent hair loss is a secondary event, which is called secondary scarring alopecia. However, primary scarring alopecia is a group of hair loss, in which the hair follicle is the main target of destructive inflammation resulting in irreversible hair loss. It includes the conditions of varied clinical and pathological features. Histopathology is an important component of the diagnostic evaluation. Early diagnosis is critical because early treatment can stop progression of permanent hair loss.

[CURRICULUM VITAE]

Dong-Youn Lee, M.D., Ph.D.

Professor, Department of Dermatology, Samsung Medical Center,
Sungkyunkwan University School of Medicine



Education :

1986-1992 Seoul National University, College of Medicine
1994-1996 M.S., Seoul National University, College of Medicine
2000-2003 Ph.D., Seoul National University, College of Medicine

Training and Fellowship :

1992-1993 Internship, Seoul National University Hospital
1993-1997 Resident, Department of Dermatology, Seoul National University Hospital
2000-2001 Fellow, Department of Dermatology, Seoul National University Hospital
2001-2002 Fellow, Department of Dermatology, Samsung Medical Center
2006-2008 Visiting Scholar, Department of Dermatology, UCSD, San Diego, CA, USA

Faculty Appointment :

2002-2007 Assistant Professor, Department of Dermatology, Samsung Medical Center,
Sungkyunkwan University School of Medicine
2007-2013 Associate Professor, Department of Dermatology, Samsung Medical Center,
Sungkyunkwan University School of Medicine
2013-Present Professor, Department of Dermatology, Samsung Medical Center, Sungkyunkwan
University School of Medicine

Membership :

Society for Investigative Dermatology
American Academy of Dermatology
Council for Nail Disorders
American Society of Dermatopathology
International Society of Dermatopathology

대한모발학회 회칙

제 1 장 총 칙

제 1 조 (명칭) 본회는 대한모발학회(The Korean Hair Research Society)라 하며 대한피부과 학회의 산하학회이다.

제 2 조 (구성) 본회는 모발 및 모발과 관련된 질환을 다루고 연구하는 사람으로 구성한다.

제 3 조 (목적) 본회는 모발에 대한 연구, 교육 및 학술활동을 수행하고 회원 간의 친목을 도모함을 목적으로 한다.

제 4 조 (사업) 본회는 전항의 목적을 달성하기 위하여 다음과 같은 사업을 수행한다.

1. 총회 및 학술대회 개최
2. 초록집, 학술지 및 소식지의 발간
3. 모발 및 모발질환에 대한 연구, 교육 등 제 문제에 대한 사업
4. 국내외 관련 학술단체와의 교류 및 제휴
5. 기타 본 학회 목적 달성에 필요한 사업

제 2 장 회 원

제 5 조 (자격) 본회의 회원은 모발 관련 진료 및 연구에 종사하거나 관심을 가지고 본 학회의 취지에 찬동하는 자로서 소정의 입회 수속을 밟고 이사회회의 의결을 거쳐 총회에서 인준을 받은 자로 한다.

제 6 조 (구분) 본회의 회원은 다음과 같이 구분한다.

1. 정회원: 대한피부과학회 정회원 자격자로 본 회 목적에 찬동하는 자로한다.
2. 명예회원: 모발 관련 진료 및 연구 업적이 탁월하고 본 회 발전에 공헌이 지대한 자로 한다.
3. 연구회원: 생명과학 관련분야에 종사하는 박사학위 소지자이거나 이에 준하는 경력자로 본 회 목적에 찬동하는 자로 한다.
4. 전공의준회원: 대한피부과학회 준회원 자격자로 피부과 수련병원에서 수련 받는 전공의로 한다.
5. 연구준회원: 정회원 또는 연구회원의 지도를 받거나 생명과학 관련분야에 종사하는 연구원 또는 이에 준하는 경력자로 본 회 목적에 찬동 하는 자로 한다.

제 7 조 (의무) 회원은 본 회의 회칙, 제 규정 및 결의 사항을 준수하여야 하고, 정회원, 및 연구회원은 회비 및 기타의 부담금을 납부할 의무가 있다.

제 8 조 (권리) 모든 회원은 본회에서 발간하는 소식지 및 학회지를 배부 받을 권리가 있으며 정회원은 선거권, 피선거권 및 기타 소정의 의결권을 가진다.

제 9 조 (제명) 본회의 의무를 준수하지 않거나 명예를 훼손한 회원은 이사회를 거쳐 총회의

인준을 받아 제명할 수 있다.

제 3 장 임 원

제 10 조 (임원) 본회는 회장, 부회장 3명 이내, 총무, 학술, 교육, 재무, 홍보, 간행정보, 기획, 의무, 무임소 상임이사, 감사 2명 및 약간 명의 고문을 두며 이사의 정원은 30명 내외로 한다. 무임소 상임이사는 2-5명으로 한다.

제 11 조 (선임)

1. 회장은, 감사는 총회에서 선출한다.
2. 부회장, 상임이사는 회장이 위촉한다.
3. 이사는 상임이사회에서 추천하여 회장이 위촉한다.
4. 고문은 회장이 위촉한다.

제 12 조 (임기) 임원의 임기는 2년으로 하며 연임할 수 있다.

전임자의 유고로 인해 보선된 임원의 임기는 전임자의 잔여 임기로 한다.

제 13 조 (직무)

1. 회장은 본회를 대표하여 업무를 총 관리하고 총회, 이사회의 의장이 된다.
2. 부회장은 회장의 유고시 그 직무를 대행하며, 본 회 운영의 주요한 사항을 심의하고 제반 업무를 집행한다.
3. 총무이사는 본 회 운영의 주요한 사항을 심의하고 제반 업무를 집행한다.
4. 학술이사는 학술 모임에 관한 업무를 집행한다.
5. 교육이사는 회원 교육에 관한 업무를 집행한다.
6. 재무이사는 재무에 관한 업무를 집행한다.
7. 홍보이사는 홍보 및 대중 매체에 다루어지는 업무를 집행한다.
8. 간행정보이사는 간행 및 정보에 관한 업무를 집행한다.
9. 기획이사는 기획에 관한 업무를 집행한다.
10. 의무이사는 의무에 관한 업무를 집행한다.
11. 무임소이사는 특정 사업이나 지속적 업무를 집행한다.
12. 감사는 본 학회의 재산 상황과 사업과 관련된 사항을 감사하고 이를 총회에 보고한다.
13. 이사는 이사회를 구성하여 본 학회 운영의 주요 사항을 심의 의결한다.
14. 고문은 본 학회의 운영 전반에 대한 자문을 한다.

제 4 장 회 의

제 14 조 (구분) 본회에는 총회와 이사회, 상임이사회를 둔다.

제 15 조 (총회)

1. 정기총회는 연 1 회 회장이 소집한다. 단 정회원 5분의 1이상의 요구나 이사회의 요청이 있으면 임시 총회를 소집하여야 한다.
2. 총회는 출석 정회원으로 성립되고 재석 인원 과반수로 의결한다.

3. 총회는 다음과 같은 사항을 의결한다.
 - (1) 회장, 감사 선출
 - (2) 예산과 결산의 인준
 - (3) 회칙 개정의 인준
 - (4) 기타 이사회에서 제출한 사항

제 16 조 (이사회)

1. 이사회는 임원과 이사로 구성하며 회장이 의장이 되어 회의를 진행한다.
2. 이사회는 과반수 출석으로 성립하고 재석 인원 과반수로 의결한다.
3. 이사회는 총회에 제출하여 인준 또는 의결할 사항, 제 규정의 제정과 개정, 회원의 자격과 제명 및 기타 필요한 사항에 대하여 심의 의결 또는 인준한다.

제 17 조 (상임이사회)

1. 상임이사회는 상임이사로 구성하며 회장이 의장이 되어 회의를 진행한다.
2. 상임이사회는 이사회 및 총회에 제출하여 인준 또는 의결할 사항을 포함하여 회무 전반에 관한 사항을 심의 의결 또는 인준하여 집행한다.

제 18 조 (각종 위원회)

1. 이사회는 의결을 거쳐 각종 위원회를 둘 수 있다.

제 5 장 재 정

제 19 조 (재원) 본 회의 재원은 회비, 입회비, 찬조금 및 기타 수입금으로 한다.

제 20 조 (회계연도) 본 회의 회계연도는 매년 정기 총회 일에서 다음 정기 총회 전일까지로 한다.

제 21 조 (임기) 본 회의 수지 결산은 감사의 감사를 거쳐 차기 정기 총회에 보고한다.

제 6 장 부 칙

제 22 조 본 회칙에 규정되지 않은 세칙은 일반 관례에 준한다.

제 23 조 본 회칙의 개정은 이사회의 심의를 거쳐 총회의 인준을 받아야 한다.

제 24 조 본 회칙은 공포일로부터 시행한다.

2004. 7. 1. 제정
2006. 5. 28 개정
2009. 5. 24 개정
2010. 10. 16 개정
2012. 6. 3 개정
2012. 10. 20 개정
2014. 10. 18 개정

대한모발학회 임원명단

(2014년 6월 - 2016년 5월)

- 고 문 노병인, 임철완, 강진수, 김도원
- 회 장 심우영
- 부 회 장 이원수

- 총무이사 강 훈
- 기획이사 최광성
- 학술이사 권오상
- 재무이사 유박린
- 교육이사 이동윤
- 간행정보이사 김문범
- 홍보이사 허창훈
- 의무이사 강광영
- 무임소이사 이양원
- 무임소이사 김범준
- 무임소이사 이 영
- 감 사 김규한, 박성욱

- 이 사 계영철, 김기호, 김도영, 김상석, 김성진, 김정철, 김효진, 민복기, 박병철, 박 진, 서구일, 서수홍, 원종현, 윤태영, 이드보라, 이상훈, 이인준, 임이석, 장승호, 장용현, 조성빈, 조성진, 조성환, 조항래, 최유성, 홍창권, 황성주

대한모발학회 연혁

● 대한모발학회 소개 ●

대한모발학회는 1998년 10월 29일 대한피부과학회 내에 모발연구분과위원회를 설립하기 위한 발기인 모임을 가진 것을 시작으로 하여 태동이 되었습니다. 이후 모발연구분과위원회의 주도로 매년 대한피부과학회 춘추계학술대회 때마다 모발심포지엄을 개최하여 왔습니다. 이후 기존의 모발연구분과위원회를 확대 개편하여 대한모발학회를 창립하기로 하고 2004년 7월 11일 제주도 샤인빌 호텔에서 창립총회를 가졌습니다. 초대회장으로 노병인 교수를 비롯한 임원진이 선출되었고, 이후 본격적인 활동을 시작하였습니다.

현재 대한모발학회는 북미모발학회, 유럽모발학회, 일본모발학회 및 호주모발학회와 함께 세계모발연구학회를 구성하는 5대 학회로서 당당히 어깨를 겨루는 세계 속의 학회로 성장하게 되었으며 2006년 5월 28일 제2대 회장으로 박장규 교수, 2008년 5월 25일 제3대 회장으로 임철완 교수, 2010년 6월 13일 제4대 회장으로 강진수 원장, 2012년 6월 3일 제5대 회장 김도원 교수가 선출되어 임기동안 학회를 훌륭히 이끌었습니다. 현재는 2014년 5월 17일 제주에서 개최된 제8차 세계모발학회에서 제6대 심우영 교수가 회장으로 선출되어 제 6기 집행부를 구성하여 회무를 담당하고 있습니다.

● 학술활동 소개 ●

1. 대한모발학회 학술대회

대한모발학회 학술대회는 1년에 한 번 개최되며, 해외학자 초청강연, 특강 및 교육 강연, 각종 구연 및 포스터 연제 발표 등으로 이루어지는 대한모발학회의 꽃이라고 할 수 있습니다. 제 1차 및 제 2차 심포지엄을 거쳐 2006년 제 3차 대회 때부터 정식 학술대회의 면모를 갖추게 되었습니다.

- 1) 제1차 대한모발학회 심포지엄
 - 2004년 11월 7일 밀레니엄 힐튼 호텔
 - 탈모에서 Mesotherapy 외 9 강좌
- 2) 제2차 대한모발학회 심포지엄
 - 2005년 6월 19일 밀레니엄 힐튼 호텔
 - 탈모증의 진단 외 12강좌

- 3) 제3차 대한모발학회 학술대회
 - 2006년 5월 28일 밀레니엄 힐튼 호텔
 - 원형탈모증의 임상적 특징 외 8강좌 및 일반연제
- 4) 제4차 대한모발학회 학술대회
 - 2007년 5월 27일 밀레니엄 힐튼호텔
 - 원형탈모증의 원인과 발생기전 외 10강좌 및 일반연제
- 5) 제5차 대한모발학회 학술대회
 - 2008년 5월 25일 밀레니엄 힐튼호텔
 - 모낭과 안드로겐 외 15강좌 및 일반연제
- 6) 제6차 대한모발학회 학술대회
 - 2009년 5월 24일 밀레니엄 힐튼 호텔
 - 모낭의 발생 외 12 강좌 및 일반연제
- 7) 제7차 대한모발학회 학술대회
 - 2010년 6월 13일 밀레니엄힐튼호텔
 - New insights into hair biology 외 14 강좌 및 일반연제
- 8) 제8차 대한모발학회 학술대회
 - 2011년 9월 18일 코엑스 회의실 Hall E (3층)
 - Current and new aspects of female pattern hair loss 외 23 강좌 및 일반연제
- 9) 제9차 대한모발학회 학술대회
 - 2012년 6월 3일 백범김구기념관
 - Defining the function of genes in differentiation of hair follicle stem cells 외 13 강좌 및 일반연제
- 10) 제10차 대한모발학회 학술대회
 - 2013년 5월 26일 백범김구기념관
 - Latest news about the genetics of alopecia areata 외 18 강좌 및 일반연제

2. Hair Forum

2001년 시작하여 해마다 참석하는 인원이 늘어나고 있는 Hair Forum은 모발학회 회원들

간의 격식 없는 모임입니다. 이는 자유로운 토론과 회원 상호간의 친목도모를 위하여 마련되고 있으며, 주로 진단 및 치료가 어려운 증례에 대한 토론, 그동안 연구했던 내용 발표, 해외모발학회 참관기 소개 등 다른 회원들과의 의견공유를 위해서 밤늦은 시간까지 진행됩니다. 최근에 개최된 Hair Forum 현황은 다음과 같습니다.

- 1) 2004년 8월 28일 대전 유성 스파피아 호텔
모낭유래세포에서의 androgen receptor, estrogen receptor의 발현 양상 외 13건 발표
- 2) 2005년 8월 20일 대전 유성 스파피아 호텔
원형탈모증 환자 400명의 임상적 고찰 외 8건 발표
- 3) 2006년 8월 19일 대전 유성 레전드호텔
Acute diffuse alopecia areata 외 11건 발표
- 4) 2007년 8월 18일 대전 유성 리베라 호텔
모낭유래세포의 특성분석 외 13건 발표
- 5) 2008년 8월 23일 대전 유성 리베라호텔
전두탈모증 환자에서 모반 제거후 모발재생의 치료 경험 외 18 건 발표
- 6) 2009년 8월 22일 대전 유성 리베라 호텔
원형 탈모증 환자에서 스트레스 평가에 대한 예비 연구 외 9건 발표
- 7) 2010년 8월 21일 대전 유성 리베라호텔
Effect of radiofrequency radiation on human hair follicle cells 외 16건 발표
- 8) 2011년 8월 27일 대전 유성 호텔아드리아
Ultraviolet radiation alters lipid metabolism in human hair follicle 외 11건 발표
- 9) 2012년 8월 18일 대전 유성 호텔아드리아
Effects of Mycophenolic acid and Rapamycin on hair growth외 12건 발표
- 10) 2013년 8월 17일 대전 유성 호텔아드리아
How can we enhance follicular penetration? 외 14건 발표
- 11) 2014년 7월 26일 대전 호텔 리베라 유성
털겉질(hair-cuticle)이 모발색조에 미치는 영향 외 6건 발표

3. 대한피부과학회 학술대회 시 모발심포지엄 개최

대한모발학회는 대한피부과학회 산하의 모발연구분과위원회이기도 하므로, 1999년부터 매년 대한피부과학회의 춘추계 학술대회에서 모발심포지엄을 진행하고 있습니다. 2009년부터는 대한피부과학회 춘추계학술대회시 한 번에 한해 분과심포지엄을 개최할 수 있는 대한피부과학회의 새로운 자체 규정에 따라 추계학술대회에서 모발심포지엄을 개최해 오고 있습니다.

대한모발학회 학술대회 전시 및 광고회사

● 전시회사

등급	회사명	연락처
골드	한국MSD	02-331-2000
	글락소스미스클라인	02-709-4114
	갈더마코리아	02-6717-2000
실버	현대약품	02-2600-3899
	종근당	02-3149-7917
	한미약품	02-410-9173
	후파르마	02-3444-4064
	에이치피앤씨	02-553-7895
	레오파마	02-771-1110
	동화약품	02-2021-9300
브론즈	정우의학서적	02-822-1361

● 광고회사

No.	회사명	연락처
1	한국MSD	02-331-2000
2	글락소스미스클라인	02-709-4114
3	에스트라	02-3780-9494
4	갈더마코리아	02-6717-2000
5	동아ST	02-920-8798
6	에이치피앤씨	02-553-7895
7	바름메디	02-733-2900
8	라로슈포제	02-3497-9819
9	유한양행	02-828-0313
10	보령제약	02-708-8456



**2015년 제11차 대한모발학회
학술대회**

인 쇄 2015년 5월 25일

발 행 2015년 5월 31일

발행처 대 한 모 발 학 회

인쇄처 나림컨벤스

서울시 영등포구 선유로 27

대룡오피스텔 613호

Tel: 02-6671-1373, Fax: 02-6671-1374

E-mail: narim2007@daum.net

