# The 13th Annual Meeting
# The Korean Society for Psoriasis

## PROGRAM

May 16, 2009

Diamond Hall
COEX InterContinental Hotel Seoul,
Seoul, Korea

*Organized by*
The Korean Society for Psoriasis
*Co-sponsored by*
The Korean Dermatological Association
The Korean Society for Investigative Dermatology

# 인사말씀

대한건선학회 제13차 학술대회를 맞이하여 그 동안 성원하고 지원하여 주신 회원 여러분들께 깊은 감사의 말씀을 드립니다. 우리 건선학회는 건선의 임상 증례 발표 이외에도 건선의 발생기전과 치료에 관한 폭넓고 깊이 있는 연구를 발표하고 토론하는 장이 되어 왔으며, 국내의 건선에 관한 기초 및 임상 연구에 중추적인 역할을 하고 있습니다. 또한 건선 이외에도 다른 구진인설성 질환도 학술대회 주제에 포함시켜서 연구영역을 확장하고 있습니다.

건선은 발생기전에 대한 면역학적, 분자생물학적 연구가 전세계적으로 활발하게 진행되고 있으며 특히 치료에 있어서는 biologics를 비롯한 다양한 최신 치료법들이 시도되고 있는 질환입니다. 최근에는 건선의 면역학적 발생기전에 있어서 Th1 T-cell subset 이외에도 IL-17, 21, 22, 23이 관여하는 Th17 T-cell subset이 중요한 역할을 한다는 것이 밝혀짐에 따라 ustekinumab을 비롯한 새로운 생물학적 제제들이 건선의 치료에 사용하기 위해 개발되고 있습니다.

금년도 학술대회에는 이러한 세계적인 추세에 발맞추어 캐나다 University of British Columbia의대 피부과 Vincent Ho 교수의 “Ustekinumab in Psoriasis: review of mechanism of action, efficacy, safety and treatment guidelines”이란 주제의 초청강연과 아울러 “Immuno-pathogenesis of Psoriasis: IL-23/IL-17(Th17) and IL-12/IFN-ɣ(Th1) axes”라는 주제의 강연을 준비하여 이들 주제에 관하여 보다 심층적으로 살펴보고자 하였습니다. 또한 서울의대 윤재일 교수의 “Facial psoriasis; Significance and classification”이란 연제의 특별강연을 통하여 최근 그 임상적 중요성이 대두되고 있는 안면부 건선에 대해서도 알아 볼 기회를 마련하였습니다.

국내외적으로 경제적 여건이 어려운 시기임에도 불구하고 이번 제13차 학술대회를 준비하는데 수고하신 건선학회 임원 여러분과, 동참하여 주신 해외 및 국내 초청 연자, 좌장, 발표자 여러분께 다시 한번 깊은 감사를 드립니다. 앞으로도 대한건선학회에 대한 회원 여러분의 지속적인 관심과 후원, 그리고 적극적인 참여를 부탁드립니다.

2009. 5. 16

대한건선학회 회장 **최 지 호**

# INFORMATION

◆ **Advance Registration**

Not available

◆ **On-site Registration**

Physicians: ₩20,000 (including annual membership)
Residents: free

◆ **Official Language**

Oral presentations will be made in Korean language. However, all the presentation material should be prepared in English. Non-Korean participants are allowed to use English language in oral presentations.

◆ **Venue: COEX InterContinental Seoul**

159 Samsung-dong, Gangnam-gu
Seoul 135-975, South Korea
Tel: +82-2-3452-2500, Fax: +82-2-3430-8000
E-mail: coexseoul@interconti.com

◆ **Presentation**

Please be advised that slide projection has been completely replaced by beam projection and will be no longer available. Those who would like to use beam projection are advised to use Microsoft PowerPoint (version 2000 or compatible). Double slide projection or overhead projection is not available for the presentation.

- Suggested duration of presentation:

| | |
|---|---|
| Free communications | 7 minute presentation + 1 minute discussion |
| Educational lectures | 13 minute presentation + 2 minute discussion |
| Special lectures | 50 minute presentation + 5 minute discussion |

▶ Preview Booth: Located in Registration Area (Harmony Level)

All the presenters are required to submit their presentation material at least 1 hour prior to the scheduled presentation time. Recommended media for digital files are CD-ROM or USB type memory. Digital files in presenter's notebook computers will not be accepted.

◆ **Social Program**

Cocktail party (free admission, 17:30-18:30) is ready for all the participants.
Please enjoy tasty cuisine and beverage with your colleagues and friends.

# PROGRAM

## MORNING SESSION

09:30-10:00 Registration

09:55-10:00 Opening Remark **CHOI Jee-Ho** (President of the KSP)

10:00-11:00 **FREE COMMUNICATIONS I [FC]**
Chairs: **AHN Kyu-Joong** (*Konkuk Univ.*), **KYE Young-Chul** (*Korea Univ.*)

11:00-11:30 **SPECIAL LECTURE I [SL]**
Chair: **KIM Kwang-Joong** (*Hallym Univ.*)

**SL-1 FACIAL PSORIASIS; SIGNIFICANCE AND CLASSIFICATION** ····· **11**

Professor **YOUN Jai-Il**(*Seoul Univ.*)
*Department of Dermatology, Seoul National University, Seoul, Korea*

11:30-11:50 **SPECIAL LECTURE II [SL]**
Chair: **YOUN Jai-Il** (*Seoul Univ.*)

**SL-2 IMMUNOPATHOGENESIS OF PSORIASIS: IL-23/IL-17(Th17) AND IL-12/IFN-γ(Th1) AXES** ····· **12**

Professor **CHOI Jee-Ho**
*Department of Dermatology, Ulsan University, Seoul, Korea*

12:00-12:10 기념사진 촬영

12:10-13:30 *Lunch*
Council meeting (평의원회의) VENUS Room (30th floor)

## AFTERNOON SESSIONS

13:30-14:30 **SPECIAL LECTURE III [SL]**
Chair: **KIM Nack-In** (*Kyung Hee Univ.*)

**SL-3 USTEKINUMAB IN PSORIASIS: REVIEW OF MECHANISM OF ACTION, EFFICACY, SAFETY AND TREATMENT GUIDELINES** ····· **14**

Professor **HO Vincent**
*Department of Dermatology and Skin Science, University of British Columbia, Vancouver, Canada*

14:30-15:30 **FREE COMMUNICATIONS II [FC]**
Chairs: **KIM Tae-Yoon** (*Catholic Univ.*), **LEE Seung-Churl** (*Chonnam Univ.*)

**FC-8** THE EXPRESSION OF TH17-RELATED CYTOKINES IN PSORIASIS ····· **32**
**OH Byung-Ho, KO Jong-Hyun, KIM Ji-Young, SONG Young-Chan, KIM Sang-Min, LEE Yang-Won, CHOE Yong-Beom, AHN Kyu-Joong**
*Department of Dermatology, School of Medicine, Konkuk University*

**FC-9** EXPRESSION OF G PROTEIN-COUPLED RECEPTOR(GPCR) GENE IN PSORIASIS (2) ····· **33**
**MABUCHI Tomotaka[1], YAHAGI Eiichiro[1], AKASAKA Emiko[1], HIRUMA Azusa[1], KATO Masayuki[1], IKOMA Norihiro[1], TAMIYA Shiho[1], MATSUYAMA Takashi[1], OZAWA Akira[1], OKA Akira[2] and INOKO Hidetoshi[2]**
*Departments of [1]Dermatology and [2]Molecular Life Science, Tokai University School of Medicine, Kanagawa, Japan*

**FC-10** EXPRESSION OF RHO-A AND RHO-B IN PSORIASIS ····· **34**
**PARK Gyeong-Hun, BAK Hana, CHOI Suk-Joo, KIM Chae-Hwa, CHUNG Woon-Kyong, WON Chong-Hyun, CHANG Sung-Eun, LEE Mi-Woo, CHOI Jee-Ho, MOON Kee-Chan**
*Department of Dermatology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea*

**FC-11** COMPARISON OF QUALITY OF LIFE BEFORE AND AFTER TREATMENT IN PSORIASIS PATIENTS ····· **35**
**LEE Young-Wook, SEUNG Na-Reu, PARK Eun-Joo, KIM Kwang-Ho, KIM Kwang-Joong**
*Department of Dermatology, College of Medicine, Hallym University*

**FC-12** A PILOT OBSERVATIONAL STUDY ON THE OBESITY AND METABOLIC STATUS OF PSORIASIS PATIENTS IN SAMUNG MEDICAL CENTER ····· **36**
**KIM Chorok, LEE Joo-Heung**
*Department of Dermatology, Sungkyunkwan University School of Medicine, Samsung Medical Center, Seoul, Korea*

**FC-13** CLINICAL FEATURES OF PSORIATIC ARTHRITIS IN KOREA ····· **37**
**SONG Yeong-Wook[1], CHOI Hyo-Jin[2], CHOI Jung-Won[3], YOUN Jai-Il[3]**
*[1]Division of Rheumatology, Department of Internal Medicine, Seoul National University College of Medicine, [2]Division of Rheumatology, Department of Internal Medicine, Gachon University of Medicine and Science, [3]Department of Dermatology, Seoul National University College of Medicine*

**FC-14** STUDY ON THE FACIAL INVOLVED AREAS USING OUR NEW DEVISED METHOD, "RULE OF FOURS": COMPARISON BETWEEN THE SUBTYPES OF FACIAL PSORIASIS ····· **38**
**KWON In-Ho, YOON Hyun-Sun, CHOI Jung-Won, YOUN Jai-Il**
*Department of Dermatology, Seoul National University College of Medicine, Seoul, Korea*

15:30-16:00 *Coffee Break*

16:00-17:00 **EDUCATIONAL LECTURES [EL]**
Chair: **CHOI Jee-Ho** (*Ulsan Univ.*)

**UPDATE IN PSORIASIS, 2009**

**EL-1** WHAT'S NEW IN TOPICAL THERAPY? ····· **17**
**LEE Ju Hee**
*Department of Dermatology, Yonsei University College of Medicine*

**EL-2** CURRENT TRENDS IN COMBINATION THERAPY ····· **19**
**PARK Chul Jong**
*Department of Dermatology, College of Medicine, The Catholic University of Korea*

**EL-3** UPDATE IN BIOLOGICS THERAPY ····· **20**
**LEE Joo-Heung**
*Department of Dermatology, Sungkyunkwan University School of Medicine, Samsung Medical Center*

**EL-4** WHAT'S NEW IN PHOTOTHERAPY? ····· **21**
**CHOE Yong-Beom**
*Department of Dermatology, School of Medicine, Konkuk University*

17:00-17:30 Closing Remark & General Meeting of Korean Society for Psoriasis

17:30-18:30 **Farewell Cocktail Party** ALLEGRO Room (Harmony Level)

# SPECIAL LECTURES

SL-1

# SIGNIFICANCE AND CLASSIFICATION OF FACIAL PSORIASIS

Professor **YOUN Jai-Il**

*Department of Dermatology, Seoul National University, College of Medicine, Seoul, Korea*

The most bothersome symptom for patients with psoriasis is visibility. Facial involvement in psoriasis is more common than generally believed. A small number of reports have suggested that facial involvement might be a marker of severe psoriasis, and that it might be associated with early disease onset and nail or joint involvement. Facial involvement in psoriasis has received little attention because the face has long been thought of as rarely involved.

We sought to evaluate the prevalence and characteristics of facial involvement by comparison study with or without facial lesion. Our results showed that 67.7% of patients in our psoriasis clinic of tertiary referral hospital had facial involvement. The sites of the face most often affected were upper and lower forehead. We suggests that facial involvement may be a marker of severe psoriasis. The face was often involved for patients with long duration or early onset of disease; with nail or joint involvement; and those requiring more extensive treatments. patients with facial involvement were found to have more frequent pruritus, positive family history, and history of Koebner response.

However some patients with facial involvement present relatively mild body lesions. Patients with facial psoriasis were classified into three different types based on distribution, peripherofacial type, centrofacial type and mixed type. We compare the clinical characteristics and severity of body, scalp and face lesion.

We concluded that the central aspect of the face was more frequently associated with earlier onset of psoriasis, with more severe body involvement, and in patients who required more extensive treatment. Involvement of the peripheral aspect of the face was associated with earlier appearance of facial psoriasis and more severe scalp involvement. Consideration of facial distribution may reflect underlying clinical characteristics of disease and influence patient counseling or therapy.

SL-2

# IMMUNOPATHOGENESIS OF PSORIASIS: IL-23/IL-17(Th17) AND IL-12/IFN-γ(Th1) AXES

Professor **CHOI Jee-Ho**

*Department of Dermatology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea*

Psoriasis is traditionally believed to be a chronic inflammatory skin disease mediated by Th1 type T cell immune responses. Recently, a novel T cell subset of helper T cells, which express IL-17A and F, IL-6, IL-21, IL-22, IL-23 receptor, has been characterized. These Th17 effector T cells have been implicated in the pathogensis of autoimmune inflammatory diseases including psoriasis. IL-23 promotes the development of an IL-17-producing Th17 type helper T cell subset. Both subunits of IL-23 (IL-23/IL-12p40 and IL-23p19) are over-expressed in psoriatic lesions and the intradermal injection of IL-23 stimulates epidermal hyperplasia in mouse skin. IL-17A has pleiotropic effects such as recruitment and activation of neutrophils, enhancing angiogenesis, and keratinocyte activation. IL-17 mRNA is increased in psoriatic lesional skin compared with nonlesional skin. IL-21, in combination with TGF-β induces IL-17 production from naïve CD4+ T cells. IL-21, like IL-6, can dictate the generation of Th17 versus Treg. Both IL-21 and IL-6 upregulated IL-23R, thereby priming Th17 cells to the amplifying and stabilizing effect of IL-23. IL-22 induces keratinocyte hyperproliferation *in vitro* and *in vivo* and mediates IL-23 induced acanthosis and dermal inflammation via Stat3 signaling. IL-22 also stimulates keratinocytes to secrete antimicrobial peptides. Levels of IL-22 are elevated in psoriatic lesional skins and in plasma of psoriatic patients, and these levels correlate with disease severity. IL-22 amounts also correlated positively with production of β-defensins within skin. Clinical trials with anti IL-23/IL-12p40 monoclonal antibody, which simultaneously blockes both IL-12 (Th1) and IL-23 (Th17), showed the dose-dependent therapeutic efficacy with few adverse events. These results provided further evidence of a role of Th17 type T cell responses in the pathogenesis of psoriasis. The IL-23/IL-17 (Th17) inflammatory pathway, in contrast to the IL-12/IFN-ɣ (Th1) pathway, is central to the inflammatory, neutrophilic types of psoriasis. Some authors hypothesized that the existence of two opposing immune pathways where both the ‘classical IL-12/IFN-ɣ (Th1) directed pathway as well as the IL-23/IL-17 (Th17) pathway orchestrate lesional activity and clinical phenotypes (e.g. stable plaque type psoriasis vs. inflammatory (eruptive, guttate and pustular) type psoriasis.

# CURRICULUM VITAE

Professor **HO Vincent**

Vincent Ho, B. Sc (Pharm), MD, FRCPC, FRCP (Lon), FRCP (Edin) is Professor of Dermatology at the University of British Columbia and Head of the Department of Dermatologic Oncology at the British Columbia Cancer Agency.

He received his Bachelor of Science in Pharmaceutical Sciences and his MD degree from the University of British Columbia. After completing his dermatology training at UBC, he obtained postgraduate training in Clinical Pharmacology and Immunodermatology (Michigan University) and Cutaneous Oncology (Harvard University).

His clinical and research interests include dermatologic therapeutics and oncology.

He is currently Director of the Immunodermatology Clinic at the University of British Columbia and Head of the multidisciplinary Skin Cancer Management Group at the British Columbia Cancer Agency.

**POST-SECONDARY EDUCATION**

1972-1973 Vancouver City College
1973-1977 University of British Columbia (B.Sc. Pharmacy)
1977-1981 University of British Columbia (M.D. Medicine)

**PROFESSIONAL QUALIFICATIONS**

1. Rotating internship, St Paul's Hospital, Vancouver, 1981-82
2. Residency II & III, Internal Medicine, St. Paul's Hospital, Vancouver, B.C. 1982-84
3. Residency IV, V, Dermatology, VGH, Vancouver 1984-86
4. Residency VI, Dermatology, Univ of Michigan Medical Center 1986-87
5. Fellow, Royal College of Physicians of Canada, FRCPC 1987
6. American Board of Dermatology, Diplomate Dermatology 1987
7. Research Fellow, Immunodermatology. University of Michigan 1987-88
8. Clin./Research Fellow, Cutaneous Oncology, Harvard Medical School 1988-89
9. Fellow, Royal College of Physicians of London, FRCP (Lon) 1999
10. Fellow, Royal College of Physicians, Edinburgh, FRCP (Edin) 1999

SL-3

# USTEKINUMAB IN PSORIASIS: REVIEW OF MECHANISM OF ACTION, EFFICACY, SAFETY AND TREATMENT GUIDELINES

Professor **HO Vincent**

*Department of Dermatology and Skin Science, University of British Columbia, Vancouver, Canada*

Ustekinumab is a novel monoclonal antibody that binds to the p40 subunit of IL-12 and IL-23 thereby inhibiting these cytokines. Both IL-12 and IL-23 are over-expressed in psoriasis and are believed to play a significant role in the pathogenesis of psoriasis.

Two phase 3 clinical trials (PHOENIX 1 and 2) evaluated the efficacy and safety of ustekinumab in moderate to severe psoriasis. PHOENIX 1 and 2 randomized 766 patients and 1230 patients, respectively, to receive ustekinumab subcutaneous injections at does of 45 mg or 90 mg at weeks 0, 4 and every 12 weeks thereafter. At week 12 PASI-75 responses from both studies were 67.1% and 66.7% in the 45 mg treatment cohort and 66.4% and 75.7% in the 90 mg group vs response rates of 3.1% and 3.7% in the placebo groups. PASI-90 responses were achieved by 42% and 37%. Clinical response can be sustained by maintenance injections every 12 weeks (data available up to 76 weeks). Long term extension studies are underway. In patients withdrawn from therapy, the median time to relapse is 15 weeks. There were no rebound. Clinical response can be restored within 12 weeks of re-initiating therapy.

Safety data demonstrated no significant differences between active treatment and placebo. The most common reported adverse effects were mild and included nasopharyngitis, upper respiratory tract infection, and headache. There were no cases of active tuberculosis, anaphylactic or serum sickness reaction. Injection site reactions were mild.

The ACCEPT trial compared ustekinumab 45 and 50 mg at weeks 0 and 4 with etanercept 50 mg twice weekly for 12 weeks. PASI 75 responses at week 12 were 68%, 74% and 57%, respectively. All were well-tolerated.

In a study on psoriatic arthritis, Ustekinumab produced ACR 20, 50, and 70 responses at week 12 of 42%, 25% and 10%, respectively. There was comparable improvement in disease disability and quality of life scores. The improvement was durable.

In summary, ustekinumab which targets IL12/23 is a novel and promising treatment for psoriasis. It has an excellent efficacy and safety profile. Clinical response is rapid and can be sustained by 4 injections per year. Early studies also demonstrate that ustekinumab has activity against psoriatic arthritis.

# EDUCATIONAL LECTURES

EL-1

# WHAT'S NEW IN TOPICAL THERAPY?

**LEE Ju Hee, M.D.**

*Department of Dermatology & Cutaneous Biology Research Institute,*
*Yonsei University College of Medicine*

Psoriasis is a relatively common, chronic, inflammatory, multi-systemic disease, which predominantly manifest by skin lesions. The majority of psoriasis patients shows mild to moderate severity and can be treated only with topical therapy or combination with topical therapy and systemic therapy. Therefore, topical therapy is important in the treatment of psoriasis because it can be used as initial monotherapy or adjunctive therapy with systemic drugs, phototherapy, or biologic therapy.

Classical topical drugs including dithranol, tar, glucocorticosteroids, vitamine A derivatives, Vitamine D derivatives showed some limitation in the treatment of psoriasis.

Dithranol and tar are highly effective in clinical practice, but because of the inconvenience of using it in the inpatient system, they are rarely used in clinics.

Topical corticosteroids show excellent efficacy, but variable complications or side effects including skin atrophy, telangiectasia, or adrenal gland suppression may be developed in long term treatment.

Topical vitamin D derivatives including calcipotriol, calcitriol, tacalcitol showed limited efficacy as a monotherapy, and skin irritation or abnormal calcium metabolism can be developed. Therefore, recently, two-compound products containing calcipotriol and betamethasone dipropionate are being used as complementary drugs. Up to date data associated with these two-compound products will be discussed in the educational lecture.

Vitamin A derivatives including tazarotene, or adapalene showed moderate response as a monotherapy in the treatment of psoriasis, but skin irritation and teratogenic potential are the points to be considered as limitations.

Recently, calcineurin inhibitors including tacrolimus, or pimecrolimus are widely used in the treatment of facial psoriasis or flexural psoriasis and showed good efficacy, but showed limited response in the treatment of plaque type psoriasis.

Until now, topical agents are not sufficiently effective and showed side effects or limitations, and as a result, topical treatments often fail in clinical practice.

Therefore combination therapy of topical agents and new topical agents are needed in the treatment of psoriasis.

New potential agents in the topical therapy of psoriasis are under the developmental phase or under the phase of clinical study. In the last few years, according to a novel understanding of the disease pathogenesis of psoriasis, there has been an increased interest in the research of new agents for the treatment of psoriasis.

Antisense oligonucleotides, innovative corticosteroids or their receptor ligands, vitamin D receptor ligands, new vitamin A derivatives, agents aimed at toll-like receptors, agents inhibiting proinflammatory cytokines, topical methotrexate, indigo naturalis, janus kinase 3(JAK3) inhibitor, and cyclic nucleotide phosphodiesterase inhibitors are emerged as new topical treatments. These new agents will be discussed in this educational lecture session.

Especially related to TNF and its receptors, antisense oligonucleotides, agents inhibiting proinflammatory cytokines(VX-745, BIRB-796, trianinotriazine aniline amides) are under clinical trials. If the efficacy is proven in clinical practice, these new topical treatments would be promising.

Recent clinical trends of topical therapy are combination therapy or alternative therapy of two or three topical agents. Furthermore, different formulation types of applicable agents including shampoos, emulsion foams, or sprays are being developed as to improve the quality of life of the psoriasis patients. Clobetasol propionate shampoo, emulsion foam, or spay are developed and these new formulations which are in clinical phases will be reviewed in this educational lecture.

Topical therapy is important as monotherapy or as adjunctive therapy in the treatment of psoriasis regardless of the severity. Therefore, further development and research of effective and safe topical agents would be needed in the treatment of psoriasis.

EL-2

# CURRENT TRENDS IN COMBINATION THERAPY

**PARK Chul Jong, M.D.**

*Department of Dermatology, Holy Family Hospital,*
*College of Medicine, The Catholic University of Korea*

Psoriasis is a common, chronic, inflammatory, multi-system disease with predominantly skin and joint manifestations affecting approximately 2% of the population. It is often life-long condition that requires a long-term treatment strategy. Therapy varies depending on disease severity and spread and will shift from control of acute flares to long-term maintenance. Topical treatment for mild psoriasis includes the use of topical corticosteroids, calcipotriene, tazarotene, topical tars, anthralin, and keratolytics. Treatment of moderate to severe psoriasis includes phototherapies, such as narrowband UVB, broadband UVB, and PUVA, and systemic therapies, such as methotrexate, acitretin, cyclosporine, and biologic agents. Treatment can be effected using combination, rotational, or sequential regimens. The basis for combination therapy of psoriasis that different agents have different mechanisms of action that allow them to be combined at lower individual dosages to provide synergistic or additive efficacy with reduced toxicity or side effects. The treatment must be tempered by patient type, disease presentation/severity, costs of therapy, and patient preferences.

EL-3

# UPDATE IN BIOLOGICS THEARAPY

**LEE Joo-Heung, M.D.**

*Department of Dermatology, Sungkyunkwan University, Samsung Medical Center, Seoul, Korea*

Biologics have revolutionized not only treatment paradigm but also our understanding of pathogenesis of psoriasis. However, as we go into the real world application from the greenhouse called clinical trial, many mythical and promising beliefs are now turning into hard reality.

First, we have once again encountered critical weak points in our new medicine verification system. Five years of experience of efalizumab shattered the dermatology world by producing mortalities through activating JC virus in our patients' brains. Although the resultant disease 'progressive multifocal leucoencephalopathy (PML)' is not even well known to our neurology colleagues, JC virus is known to be hiding in our brains in up to 80% of the general population. Although true causality and long-term impact cannot be confirmed at this time, the concept of biologics as safer immunosuppressive than conventional agents is being shattered.

In the midst of this chaos, new biologics are stepping onto the main stage, among which ustekinumab is getting the hottest attention. Ustekinumab is not just an addition to our biologics armamentarium but it has enriched our understanding of pathogenesis. Clinical trials now ongoing in Korea and Taiwan are already reproducing its superb efficacy demonstrated in North Americas.

Psoriasis is now understood as a multi-system disorder involving joints and metabolic systems as well as skin. Increased obesity or adiposity is believed to turn our body into pro-inflammatory environment in which many chronic inflammatory diseases can occur more frequently and more severely. Therefore, true anti-psoriatic agents should be able to address metabolic derangements as well as cutaneous symptoms. So far, many conventional systemic agents are known to have diverse influence upon metabolic systems and it is not known how the positive and negative influences can affect psoriasis in the long run. In that sense, it is not surprising that biologics are under scrutiny in terms of its metabolic influence. TNF-a antagonists are reported to increase body weight and aggravate lipid profiles whereas it can improve glucose intolerance. It is not known this effect on metabolic system is related to its long-term reduction of efficacy recently demonstrated.

In this educational lecture, many new aspects of biologics, some of which are negative and others of which are promising will be presented.

EL-4

# WHAT'S NEW IN PHOTOTHERAPY?

**CHOE Yong-Beom, M.D.**

*Department of Dermatology, College of Medicine, Konkuk University*

An essential method of treatment for psoriasis vulgaris in the twenty-first century will remain the option for UVB light therapy and photochemotherapy. During the last half of the twentieth century, the use of UVB therapy was one of the mainstays of treatment for psoriasis. During the last quarter century, photochemotherapy in the form of psoralen plus UVA (PUVA) emerged as one of the most effective modalities of treatment for psoriasis. Accompanying the advent of the most recent era of psoriasis with targeted biologic therapies has been a decline in the frequency of phototherapy. This does not diminish its known clinical effects and, because of a better understanding of photobiology, the therapeutic approach to treatment of psoriasis with UV light has a common basis for treatment of psoriasis along with and in combination with new biologic agents. This review emphasizes newly recognized aspects of the phototherapy of psoriasis and summarizes important findings from 15 articles published between January 2008 and March 2009.

# FREE COMMUNICATIONS

FC-1

# A CASE OF VITILIGO AND PSORIASIS OCCURRING INDEPENDENTLY OF EACH OTHER

LEE Jung-Yeon, LEE Se Eun, CHOI Yeon-Jin, SHIN Mi-Sun,
PARK Mi-Youn, AHN Ji-Young

*Department of Dermatology, National Medical Center, Seoul, Korea*

The worldwide occurrence of psoriasis is 1% to 3%, and that of vitiligo in the general population is about 1%; therefore, simultaneous occurrence of these disorders should not be unexpected. Autoimmunity, common neuropeptides, and Koebner's phenomenon have been implicated to explain the pathogenic link between the two disorders. But the interrelationship between the two disorders is still not well understood. A 32-year-old man presented with a few depigmented patches over both fingers and nipples of 10 years duration. He also noted the development of red, scaly, elevated lesions on the back several months ago. A biopsy was taken from an area where the lesions of psoriasis were present. Histopathologic examination revealed hyperkeratosis with parakeratosis, hypogranulosis, and clubbing of the rete ridges with suprapapillary thinning of the epidermis. The features were consistent with psoriasis. There has been only one report of vitiligo and psoriasis occurring independently in the same individuals in the Korean dermatologic literatures. We herein report a case of vitiligo and psoriasis anatomically unrelated to each other.

FC-2

# THREE CASES OF SAPHO SYNDROME WITH PALMOPLANTAR PUSTULOSIS AND ARTHRO-OSTEITIS IN THE ANTERIOR CHEST WALL

CHOI Jung-Won, YOUN Jai-Il

*Department of Dermatology, Seoul National University College of Medicine*

SAPHO syndrome is a clinical syndrome characterized by Synovitis, Acne, Pustulosis, Hyperostosis, and Osteitis. This disease affects both skin and bones, mainly in the costal area and anterior chest wall. Clinical symptoms vary according to the age of onset and response to the treatment is uncertain. SAPHO syndrome may occur in any age and both sexes are equally affected. This is considered a rare disease, although its real prevalence is not known.

Pustulosis palmoplantaris (PPP) is a primary skin disease of unknown etiology, clinically characterized by recurrent eruptions of sterile pustules on the palms and/or soles. Some of these patients have associating symptoms from the bones and joints, often localized to the anterior thorax wall where both osteolytic foci and arthritis can be seen.

Hereby we report three cases with characteristic bone and joint lesions and palmoplantar pustulosis that are considered to be SAPHO syndrome.

FC-3

# TWO CASES OF PSORIASIS ASSOCIATED WITH UVEITIS AND SPONDYLOARTHROPATHY

PAIK Seung-Hwan, CHOI Jung-Won, YOUN Jai-Il

*Department of Dermatology, Seoul National University College of Medicine*

Spondyloarthropathy develops in approximately 10 percent to 15 percent of psoriasis patients. And the prevalence of uveitis in spondyloarthropathy is significantly greater than in normal population, which suggests that there is a relationship between uveitis and spondyloarthropathy. Also, in the study of histocompatibility antigen linkage, HLA-B27 is strongly associated with psoriasis, spondyloarthropathy and uveitis.

Hereby, the authors report 2 cases of psoriasis associated with uveitis and spondyloarthropathy. First case is a 51-year-old male patient. He has been treated under diagnosis of psoriasis vulgaris since he was 35 years old. When he was 45 years old, he suffered from lower back pain. Radiologic examination revealed mild cervical and lumbar spondylosis and right sacroiliitis. One year after the diagnosis of spondyloarthropathy, he had slightly blurred vision. Uveitis was diagnosed in opthalmologic examination. HLA-B27 was negative in laboratory findings. He had been treated with methotrexate, acitretin and prednisolone. Another case is a 34-year-old male patient. He was diagnosed ankylosing spondylitis at the age of fifteen. HLA-B27 was positive. And since he was 26 years old, he has suffered from recurrent uveitis. When he was 35 years old, he presented with scaly erythematous patches in his back. The clinical impression of his skin lesions was psoriasis. Histopathology showed hyperkeratosis and parakeratosis. He had been treated for ankylosing spondylitis with prednisolone, azathioprine and etanercept.

FC-4

# A CASE DISCUSSION FOR THE FURTHER TREATMENT IN A PATIENT WITH ERYTHRODERMIC PSORIASIS

LEE Chae-Young, HONG Jin-Woo, LEE Ki-Yeol, CHOI Kyu-Won, KIM Young-Hun, KIM Ki-Ho

*Department of Dermatology, Dong-A University College of Medicine, Pusan, Korea*

Erythrodermic psoriasis is a rare and the most severe form of psoriasis that becomes unstable and extends into the whole skin, and it may be potentially life-threatening. Precipitating factors include withdrawal of systemic and topical corticosteroids, phototoxic reactions, severe emotional stress, and preceding medical illness.

In general, systemic treatment of erythrodermic psoriasis is inevitable, and patients sometimes should be admitted at the inpatient department of dermatology. Methotrexate, acitretin and cyclosporine are well-established therapeutic options for severe psoriasis, including erythrodermic psoriasis. However, the therapeutic response in patients with erythrodermic psoriasis may be variable and sometimes disappointing. When erythrodermic psoriasis persists in partial remission despite long-term systemic medication, we would be in need of some efforts, such as increasing doses of present medication, adding another drug, or switching to other classes of medications.

This patient, a 43-year-old female with erythrodermic psoriasis, is obese in BMI and has suffered frequently respiratory and skin infections. At 20years-of-age, her disease started as mild degree of chronic plaque psoriasis on trunk and extremities, and then she received topical therapy with topical calcipotriol and narrow band UVB phototherapy for several years. When she visited us, her disease covered over 90% body surface area with PASI score 57.0 as erythrodermic psoriasis, and then we treated her with low dose systemic cyclosporine and PUVA therapy, resulting in substantial improvement of in PASI score 39.8. But erythroderma persists in partial remission with sometimes flare-up. So, some efforts are needed to look for another therapeutic strategy, for examples, increasing doses of cyclosporine, adding or switching into another drugs such as retinoid, methotrexate, biologics.

The aim of this case discussion is to present an example of intractable erythrodermic psoriasis, and to discuss about its clinical evaluation including comorbidities during long-term treatment with currently available systemic agents, and then to make a therapeutic plan on individualized bases in aspects of efficacies, possible risk factors, cost-effectiveness, and so on.

FC-5

# A CLINICAL TRIAL OF COMBINATION THERAPY WITH ETANERCEPT AND CYCLOSPORINE IN THE TREATMENT OF PSORIASIS

LEE Eun-Ju, JEONG Taek-Jo, JEONG Ki-Heon, KIM Nack-In

*Department of Dermatology, School of Medicine, Kyung Hee University*

Over the past decade, combination therapy has become a mainstay of dermatologic care for psoriasis. Combination therapies are often more effective and safer than large dose single-agent therapy. Apparent synergistic enhancement is seen with most paired combinations of the four major therapies: acitretin, methotrexate, cyclosporine and phototherapy. With the emergence of new biologic therapies, dermatologists now have a wider array of tools for use against psoriasis. Although numerous data exist regarding the monotherapy of cyclosporine or biologic agent for psoriasis, little is known about the efficacy, safety, and tolerability of cyclosporine combined with biologic agents. A Few cases of psoriasis or other diseases treated by combination therapy of TNF-α inhibitor and cyclosporine have been reported. In these cases, their diseases were controlled effectively. Besides, the adverse effects associated therapy were not observed. To investigate effect and safety of this combination therapy, we designed the study on 8 patients with recalcitrant psoriasis. Of 8 patients, 7 patients showed rapid response to the combination therapy, but one patient didn't respond to therapy. We expect that this new combination therapy will be helpful alterative treatment strategy in patients with recalcitrant psoriasis. The combination therapy comprised of etanercept, low-dose cyclosporine, induced rapid improvement of the psoriatic lesions and quality of life dramatically.

FC-6

# A CASE OF EXACERBATION OF CUTANEOUS PSORIASIS DURING ETANERCEPT THERAPY

KIM Hyun-Je, LEE Dong-Yun, LEE Joo-Heung, YANG Jun-Mo, LEE Eil-Soo

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

The widespread use of TNF alpha antagonist in recent years has led to the recognition of paradoxical adverse effects, defined as the onset or exacerbation of disorders that are usually improved by TNF alpha antagonist. The mechanism underlying psoriasis onset or exacerbation during TNF alpha antagonist therapy in not yet agreed on. TNF alpha antagonist promotes infection, which may trigger the skin disorder, in keeping with the high rate of palmoplantar pustulosis. Alternatively, a treatment-induced cytokine imbalance may be involved: inhibition of TNF alpha can induce overexpression of cutaneous interferon alpha, which in turn predisposes to psoriasis.

We describe a 52-year-old man with ankylosing spondylitis and psoriasis, who experienced exacerbation of cutaneous psoriasis during etanercept therapy. The patient was treated with etanercept 25 mg twice a week from July 2005 because ankylosing sponylitis did not response to disease-modifying antirheumatic drugs (DMARDs). But he had to cease etanercept February 2007 and December 2007 for about 8 months and 6 months each because of serious infection (pulmonary tuberculosis, septic knee). At that time he experienced improvement of cutaneous psoriasis. And also, after restart of etanercept from May 2008, he experienced exacerbation of cutaneous psoriasis especially the pattern of thick crusts of lower legs.

FC-7

# A CASE OF PUSTULAR PSORIASIS INDUCED BY TUMOR NECROSIS FACTOR-α INHIBITORS

PARK Jae-Jeong, YUN Sook-Jung, LEE Jee-Bum, KIM Seong-Jin,
WON Young-Ho, LEE Seung-Churl

*Department of Dermatology, Chonnam National University Medical School, Gwangju, Korea*

Anti-tumor necrosis factor (TNF)-α agents promise better disease control for the treatment of ankylosing spondylitis resistant to classical disease-modifying treatment, and provide a better functional outcome. Etanercept is a recombinant human TNF receptor fusion protein, which inhibits the biological activity of TNF-α. The common side effects of TNF-α inhibitors are injection site reactions, infusion reactions and infection.

We experience a case of pustular psoriasis in a 32-year-old man during anti-TNF-α therapy with etanercept. He had 2-year history of ankylosing spondylitis. Two years after treatment of etanercept, erythematous pustules developed on the palm and sole. He did not have a history of pustular psoriasis before. The skin lesion improved as the etanercept therapy was stopped, but pustular skin eruption recurred as adalimumab, a different TNF-α inhibitor, was administered to manage ankylosing spondylitis. Several TNF inhibitors have different structure of the molecule, but might have a similar potency to induce pustular psoriasis from this case.

FC-8

# THE EXPRESSION OF TH17-RELATED CYTOKINES IN PSORIASIS

OH Byung-Ho, KO Jong-Hyun, KIM Ji-Young, SONG Young-Chan,
KIM Sang-Min, LEE Yang-Won, CHOE Yong-Beom, AHN Kyu-Joong

*Department of Dermatology, School of Medicine, Konkuk University*

Psoriasis is a chronic inflammatory skin disease, evolving over time during a complex interplay between environmental and genetic factors. To date, the direct causes of psoriasis are not fully identified but many researchers revealed that T cells are the key factors for developing psoriasis. There are infiltrations of CD4+ and CD8+ T cells in the early lesions of psoriasis and these CD4+ T cells are known to secrete the Th1 cytokines to proliferate keratinocytes in the psoriatic lesions. Recently, a new population of IL-17-producing Th cells, accordingly named Th17, has been described as an important cell in inflammatory reaction and autoimmune disorder, and it also has been reported to have a close relationship with psoriasis. Increased level of IL-17 was observed in the psoriatic lesions and the IL-22 produced by Th17 cells are recently reported to regulate acanthosis and dermal inflammations induced by IL-23 so that the Th17 cells and related cytokines are considered to have a crucial role in the pathogenesis of psoriasis.

In order to clarify the possible role of Th17 cells and Th17-associated cytokines in the pathogenesis of psoriasis, we evaluated tissue expression of Th17-related cytokines on the psoriatic skin lesions using immunohistochemistry.

FC-9

# EXPRESSION OF G PROTEIN-COUPLED RECEPTOR (GPCR) GENE IN PSORIASIS (2)

MABUCHI Tomotaka[1], YAHAGI Eiichiro[1], AKASAKA Emiko[1], HIRUMA Azusa[1], KATO Masayuki[1], IKOMA Norihiro[1], TAMIYA Shiho[1], MATSUYAMA Takashi[1], OZAWA Akira[1], OKA Akira[2] and INOKO Hidetoshi[2]

*Departments of [1]Dermatology and [2]Molecular Life Science, Tokai University School of Medicine, Kanagawa, Japan*

We have been systematically performed genome-wide association analysis to define all psoriasis susceptibility loci.

At the present, putative psoriasis candidate genes were estimated to be less than 7 genes including G protein-coupled receptor (GPCR) gene, SEEK1 gene located on 6p21.3, $Ca^{2+}$ independent cell adhesion molecule gene and BTNL2 gene located within HLA class II region.

To be clear identification and functions of these candidate genes in psoriasis are caring out now.

In this presentation, genetic association between the GPCR gene and HLA gene will be reported.

FC-10

# EXPRESSION OF RHO-A AND RHO-B IN PSORIASIS

PARK Gyeong-Hun, BAK Hana, CHOI Suk-Joo, KIM Chae-Hwa, CHUNG Woon-Kyong, WON Chong-Hyun, CHANG Sung-Eun, LEE Mi-Woo, CHOI Jee-Ho, MOON Kee-Chan

*Department of Dermatology, Asan Medical Center,*
*University of Ulsan College of Medicine, Seoul, Korea*

Rho GTPases are a subset of the superfamily of Ras-related small GTPases. Rho proteins have diverse cellular functions, which include the regulation of cell-cycle progression, cell shape change, cell adhesion and cell migration. Rho-A, a member of the Rho GTPase family, is found in many malignancies and elevated Rho-A activity is associated with cell proliferation phenotypes. Rho-B, in contrast with its close relatives Rho-A and Rho-C, plays a negative role in oncogenesis. However, the role of the Rho GTPases in psoriasis has not been investigated. In this study, we examined the expression of Rho-A and Rho-B by immunohistochemistry, western blot, RT-PCR, and real-time RT PCR in psoriatic lesional skin and non-lesional skin. We found that the expression of Rho-A and Rho-B were decreased in psoriatic lesional skin compared with non-lesional skin. These findings suggest the potential association between Rho GTPases and psoriatic pathogenesis. Further investigations will be needed to elucidate more precise roles of Rho GTPases in psoriasis.

FC-11

# COMPARISON OF QUALITY OF LIFE BEFORE AND AFTER TREATMENT IN PSORIASIS PATIENTS

LEE Young-Wook, SEUNG Na-Reu, PARK Eun-Joo,
KIM Kwang-Ho, KIM Kwang-Joong

*Department of Dermatology, College of Medicine, Hallym University*

Quality of life is broad concept that incorporates all aspects of an individual's existence. Psoriasis is a chronic relapsing disease of the skin and may produce a range of quality of life impacts as complex as those from more debilitating and life-threatening disease. So recently, the quality of life is emphasized during the treatment of psoriasis patients. However, the comparison of quality of life before and after treatment in psoriasis patients has not yet been investigated.

The purpose of this study is to compare the quality of life, stress, depression and anxiety before and after treatment in psoriasis patients.

Seventy five patients with psoriasis were recruited in this study. The questionnaire was administered to the patient before and after treatment. Questionnaire comprised of generic WHO Quality of Life (QOL) Scale (WHOQOL-BREF), dermatology-specific questionnaires (Skindex-29), Psoriasis life stress inventory (PLSI), Beck depression inventory (BDI) and Beck anxiety inventory (BAI). The total scores and the scores of the domains of the WHOQOL scale in both groups were compared. Correlation analysis and multiple regression analysis were performed to compare with the previous studies.

The total WHOQOL scores and all domain scores, except those of the social relationship domain and environmental domain, of the WHOQOL scale after treatment were higher than those of before treatment group. Scores of PLSI, BDI, BAI were improved after treatment. Similar to previous study, the self reported severity (SRS), PLSI, BDI and BAI showed strong association with QOL of the psoriasis patients.

The quality of life after treatment in psoriasis patients are better than that of before treatment group. Treatment also improved PLSI score, BDI score and BAI score. During the treatment of psoriasis patients, dermatologist should consider the QOL to improve subjective results of treatment and relationship between doctor and patients as well as objective results.

FC-12

# A PILOT OBSERVATIONAL STUDY ON THE OBESITY AND METABOLIC STATUS OF PSORIASIS PATIENTS IN SAMUNG MEDICAL CENTER

KIM Chorok, LEE Joo-Heung

*Department of Dermatology, Sungkyunkwan University School of Medicine, Samsung Medical Center, Seoul, Korea*

Psoriasis had been regarded as a chronic recurrent cutaneous disorder for several decades before it was demonstrated to be associated with joint manifestations in 1960s. Although many non-cutaneous disorders were reported to be concurrent with psoriasis, whether they were coincidental or truly associated with psoriasis remained uncertain until recently.

At the turn of 21st century, more robust epidemiological research in the form of prospective cohort studies or cross-sectional studies involving large sample sizes began to portray psoriasis as a multisystem disorder involving metabolic systems. Obesity was reported to be a risk factor for psoriasis development as well as to be correlated with psoriasis severity. Subsequently, many obesity-related metabolic derangements such as glucose intolerance, hyperlipidemia or hypertension were shown to be related with psoriasis. Since these disorders are risk factors for the development of cardiovascular disorders, it is not surprising to know that patients with psoriasis showed increased frequency of cardiovascular events including acute myocardial infarction. Now psoriasis is not just a quality-of-life-impairment disorder but a quantity-of-life-compromised disorder.

Obesity is a serious health issue not only in terms of individuals but also in terms of societal health agenda. However, many Asian countries such as Japan and Korea have been regarded as a sanctuary for obesity at least in relative sense. As a clinician we have not had a solid perception of association between psoriasis and obesity. This actually prompted our investigation into associations between psoriasis and obesity and psoriasis and metabolic derangements.

We intended to make a retrospective cross-sectional study as a pilot investigation prior to implementing prospective studies or population-based epidemiologic studies. Newly diagnosed psoriasis patients (n=370) in Samsung Medical Center between January 1, 2008 and April 10, 2009 were investigated for BMI, PASI, blood pressure, serum lipid, liver enzymes and compared with non-psoriatic patients. Also response to cyclosporine in terms of BMI ranges was analyzed to see the influence of obesity on the treatment reluctance in psoriasis.

FC-13

# CLINICAL FEATURES OF PSORIATIC ARTHRITIS IN KOREA

SONG Yeong-Wook[1], CHOI Hyo-Jin[2], CHOI Jung-Won[3], YOUN Jai-Il[3]

*[1]Division of Rheumatology, Department of Internal Medicine, Seoul National University College of Medicine,*
*[2]Division of Rheumatology, Department of Internal Medicine, Gachon University of Medicine and Science,*
*[3]Department of Dermatology, Seoul National University College of Medicine*

This study was undertaken to assess the prevalence of psoriatic arthritis (PsA) in Korean psoriasis patients and to evaluate its clinical features. The authors evaluated 504 patients with psoriasis who visited the dermatology clinic at Seoul National University Hospital. Fifty-three of these patients (10.5%) were diagnosed as having PsA. Plaque-type psoriasis was the most common in both the PsA and psoriasis only groups, and pustular psoriasis was more frequent in the PsA group (19.0%) than in the psoriasis only group (4.3%, $p$=0.001). Nail change was more common in the PsA group (54.3% vs 35.3%, respectively; $p$=0.015). Dactylitis and enthesopathy were observed in 8.5% and 9.1% of PsA patients, respectively. Psoriasis was followed by arthritis in 73.6% of PsA patients, with a mean interval of 12.2 ± 10.1 (mean ± SD) years, and spondylitis (43.4%) was the most predominant disease type. HLA-B27 was detected in 21.1% of patients in the PsA group.

In conclusion, plaque-type psoriasis was most common in PsA patients, and nail change was more common in PsA patients than in patients with psoriasis only. Spondylitis was the most predominant form of arthritis.

FC-14

# STUDY ON THE FACIAL INVOLVED AREAS USING OUR NEW DEVISED METHOD, "RULE OF FOURS": COMPARISON BETWEEN THE SUBTYPES OF FACIAL PSORIASIS

KWON In-Ho, YOON Hyun-Sun, CHOI Jung-Won, YOUN Jai-Il

*Department of Dermatology, Seoul National University College of Medicine, Seoul, Korea*

Facial psoriasis gives rise to considerable concern among patients because it is suggested that facial involvement may be a marker of severe psoriasis. We reported that patients with facial psoriasis were classified into three different subtypes based on the distributions of facial lesions: peripherofacial type; centrofacial type; mixed type. The clinical characteristics of each subtype, such as diseas severity are different form those of other subtypes. The purpose of this study was to investigate the facial involved area which is a important factor for disease severity and compare three subtypes according to these area.

A total of 133 patients with facial psoriasis who presented at our psoriasis clinic were enrolled in this study. Using our devised method, “rule of four”, we evaluated the facial lesion of each patient. Accordingly, we could indicate the facial percentage area. Thereafter, the patients in each subtype were categorized into 6 subgroups: 0 < 10%; 10 < 30%; 30 < 50%; 50 < 70%; 70 < 90%; 90 - 100% of the total facial area. In addition, the mean value of the facial lesions in each subtype was obtained.

In peripherofacial and centrofacial types, the facial psoriasis patients are mostly distributed in the subgroup, 0 - 9% (91.7% and 86.2%, respectively). Otherwise, all the 56 patients (pts) in the mixed type are categorized into the subgroups follows: 26 of 56 patients (46.4%) in 0 < 10%; 20 (35.7%) of the patients in 10 < 30%; 8 (14.3%) of the patients in 30 < 50%; 2 (3.6%) of the patients in 50 < 70% of the total facial area. The mean value of facial involved area in the mixed types was 15.8%, which is much higher than 3.8% and 5.8% in peripherofacial and centrofacial subtypes, respectively.

There were the differences among 3 subtypes of facial psoriasis with respect to the involved percentage area obtained by using our new assessing method, “rule of four”. The mixed subtype had the facial involved area which is far larger than others.

# 대한건선학회 임원 및 평의원

<2009년 5월 현재>

| 직 책 | 성 명 | 소 속 | 전 화 | 팩 스 | E-mail |
|---|---|---|---|---|---|
| 회 장 | 최지호 | 울산의대 | 02-3010-3463 | 02-486-7831 | jhchoy@amc.seoul.kr |
| 총무이사 | 이주흥 | 성균관의대 | 02-3410-3542 | 02-3410-3869 | joosoo@skku.edu |
| 학술이사 | 송해준 | 고려의대 | 02-2626-3195 | 02-856-0861 | hjsongmd@gmail.com |
| 재무이사 | 최용범 | 건국의대 | 02-2030-7572 | 02-2030-5179 | cyb@kuh.ac.kr |
| 홍보이사 | 박철종 | 가톨릭의대 | 032-340-2115 | 032-340-2118 | cjpark@yahoo.co.kr |
| 간행이사 | 이주희 | 연세의대 | 02-2228-2089 | 02-393-9157 | juhee@yuhs.ac |
| 감 사 | 이승철 | 전남의대 | 062-220-6698 | 062-222-4058 | schul@jnu.ac.kr |
| | 서성준 | 중앙의대 | 02-748-9900 | 02-6299-1114 | drseo@hanafos.com |
| 운영위원 | 윤재일 | 서울의대 | 02-760-2418 | 02-742-7344 | jaiil@snu.ac.kr |
| | 김광중 | 한림의대 | 031-380-3760 | 031-386-3761 | kkj51818@hallym.or.kr |
| | 김낙인 | 경희의대 | 02-958-8501 | 02-969-6538 | nikim@khmc.or.kr |
| | 김태윤 | 가톨릭의대 | 02-590-1497 | 02-594-3255 | tykimder@catholic.ac.kr |
| 평 의 원 | 계영철 | 고려의대 | 02-920-5349 | 02-928-7540 | yckye@korea.ac.kr |
| | 김기호 | 동아의대 | 051-240-5435 | 051-253-0787 | khkim@mail.donga.ac.kr |
| | 김도원 | 경북의대 | 053-420-5821 | 053-426-0770 | kimdw@mail.knu.ac.kr |
| | 김명남 | 중앙의대 | 02-748-9898 | 02-6359-9573 | mnkim@cau.ac.kr |
| | 김문범 | 부산의대 | 051-240-7337 | 051-245-9467 | drkmp@hanmail.net |
| | 김상태 | 고신의대 | 051-990-6145 | 051-990-3041 | stkim83@hanmail.net |
| | 노영석 | 한양의대 | 031-560-2280 | 031-557-4872 | romio@hanyang.ac.kr |
| | 신용우 | 단국의대 | 041-550-3903 | 041-550-3905 | dkdm2081@dankook.ac.kr |
| | 안규중 | 건국의대 | 02-2030-5170 | 02-2030-5179 | kjahn@kuh.ac.kr |
| | 원영호 | 전남의대 | 062-220-6681 | 062-222-4058 | yhwon@chonnam.ac.kr |
| | 유 욱 | 연세의대 | 02-3497-3360 | 02-3463-6136 | wlewderm@yuhs.ac |
| | 윤석권 | 전북의대 | 063-250-1975 | 063-250-1970 | dermayun@moak.chonbuk.ac.kr |
| | 윤태진 | 경상의대 | 055-750-8187 | 055-758-8106 | yoontj@nongae.gsnu.ac.kr |
| | 이규석 | 계명의대 | 053-250-7624 | 053-250-7626 | franzes@dsmc.or.kr |
| | 이석종 | 경북의대 | 053-420-5821 | 053-426-0770 | seokjong@knu.ac.kr |
| | 이애영 | 동국의대 | 054-770-8268 | 054-773-1581 | lay5103@eulji.or.kr |
| | 이은소 | 아주의대 | 031-219-5190 | 031-219-5189 | esl@ajou.ac.kr |
| | 이증훈 | 충남의대 | 042-220-7700 | 042-255-5098 | jhoon@cnu.ac.kr |
| | 조소연 | 서울의대 | 02-840-2174 | 02-831-2826 | vickycho@hanmail.net |
| | 함정희 | 이화의대 | 02-760-5139 | 02-743-0825 | jhhahm@ewha.ac.kr |
| | 황규왕 | 순천향의대 | 041-570-2270 | 041-578-2270 | snolomas@hosp.sch.ac.kr |