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2026 KALAS INTERNATIONAL SYMPOSIUM

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JEJU

실험동물연구장학생(그룹 I) Poster Session

July 15 (Wed) 13:30-14:30 / ICC JEJU Lobby 3F

PS-R-01 (Cancer Biology)	장자시 (경북대학교)
PS-R-02 (Aging & Related Disease)	절자야 (충북대학교)
PS-R-03 (Metabolism & Metabolic Disease)	김도현 (서울대학교)
PS-R-04 (New Approach Methods)	김병석 (건국대학교)
PS-R-05 (Immunology & Inflammatory Disease)	김인정 (충북대학교)
PS-R-06 (Anatomy, Physiology & Histopathology)	김주희 (건국대학교)
PS-R-07 (Cancer Biology)	박예찬 (연세대학교)
PS-R-08 (Preclinical Pharmacology & Toxicology)	박철진 (충남대학교)
PS-R-09 (Metabolism & Metabolic Disease)	이광우 (KAIST)
PS-R-10 (Immunology & Inflammatory Disease)	이채민 (연세대학교)

1. 실험동물연구장학생(그룹 I) 포스터 발표 안내

발표 시간	July 15 (Wed) 13:30 – 14:30	
발표 장소	ICC JEJU Lobby 3F (제주 국제컨벤션센터 3층 로비)	
포스터 번호	PS-R-01 (Cancer Biology) PS-R-02 (Aging & Related Disease) PS-R-03 (Metabolism & Metabolic Disease) PS-R-04 (New Approach Methods) PS-R-05 (Immunology & Inflammatory Disease)	PS-R-06 (Anatomy, Physiology & Histopathology) PS-R-07 (Cancer Biology) PS-R-08 (Preclinical Pharmacology & Toxicology) PS-R-09 Metabolism & Metabolic Disease) PS-R-10 (Immunology & Inflammatory Disease)
	총 10개	
부착 시간	July 15 (Wed) 09:00 – 11:00	
철거 시간	July 15 (Wed) 17:00 – 17:30	

※실험동물장학생 포스터 전시는 학술대회 기간 중 7월 15일(수) 하루동안 진행됩니다.
※부착은 7월 15일(수) 부착 시간 내에 반드시 진행하여야 하며, 미부착시 제재가 주어집니다.
※철거는 7월 15일(수) 17시 00분 이후부터만 가능하며, 반드시 17시 30분까지 철거해주시기 바랍니다.
철거하지 않은 포스터는 학회에서 보관하지 않고 임의로 철거한 후 폐기됩니다.

2. 포스터 발표 시상

- 포스터 발표: 포스터 발표는 좌장의 진행에 따라 포스터당 7분(5분 발표 + 2분 질의응답)으로 진행되며, 반드시 발표시간에 포스터 앞에 대기하여 주시기 바랍니다.
- 실험동물연구장학생 시상: July 15 (Wed) 17:20 - 19:30 /
  Tamna Hall (5F) General Meeting & Welcome Reception
- 실험동물연구장학생 발표자는 총회 및 환영만찬에서 진행되는 시상식에 반드시 참석해야 합니다. (대리 수상 불가)

3. 포스터 작성 안내

- 포스터 보드의 크기는 95cm(가로) X 210cm(세로)이며, 특히 제목이 가로 너비를 초과하지 않도록 준비하여야 합니다.
- 모든 포스터는 지정된 날짜, 기간 동안에 지정된 보드에 부착하여야 합니다.
- 포스터 내용은 abstract, purpose, results(figures and tables), conclusions, references의 순서로 작성합니다.
- 전방 2m 위치에서 쉽게 읽을 수 있도록 굵고 명확한 글씨체를 이용하여 제작합니다.
- 모든 부처의 부착 및 철거는 당일 지정된 시간에 발표자가 수행해주시기 바랍니다.

실험동물연구장학생 포스터 발표 안내

Poster no.	Title	Speaker
PS-R-01	Epidemiological Trends and Shared Molecular Signatures of Pancreatic Ductal Adenocarcinoma and Diabetes: An Integrative Analysis Based on Global Burden of Disease and Gene Expression Omnibus Datasets	Jiaxi Zhang
PS-R-02	Hypoxia-Conditioned Extracellular Vesicles from Human Amniotic Membrane Stem Cells Attenuate D-Galactose-Induced Aging in Mice	Zolzaya Bavuu
PS-R-03	UCP2 KO Mice Exhibit Ameliorated Obesity and Inflammation Induced by High-Fat Diet Feeding	Do Hyun Kim
PS-R-04	Fibroblast Subtypes and Signaling Pathways Specific to Postpartum Uterine Remodeling	Byeongseok Kim
PS-R-05	Pyrogallol Contributes to the Anti-Allergic and Anti-Inflammatory Activities of Rosebud Extracts of Newly Crossbred Roses	In-Jeong Kim
PS-R-06	Sustained Uterine IL-36α Expression Compromises Receptivity via Chemokine Induction	Joohee Kim
PS-R-07	Metabolic Reprogramming in Intermediate Exhausted T Cells Mitigates Immune Checkpoint Blockade Response by Triggering Exhausted T Cells Repopulation	Yechan Park
PS-R-08	6PPD and 6PPD-Quinone Impair Human Trophoblast Syncytialization in BeWo Cells	Cheoljin Park
PS-R-09	Transient Opening of the Mitochondrial mPTP Promotes Pathological Glutamatergic Signaling in ASH	Kwangwoo Lee
PS-R-10	Sphingosine-1-Phosphate Signaling as a Potential Regulator of Fibrotic Remodeling in Idiopathic Pulmonary Fibrosis	Chae Min Lee

PS-R-01

Epidemiological Trends and Shared Molecular Signatures of Pancreatic Ductal Adenocarcinoma and Diabetes: An Integrative Analysis Based on Global Burden of Disease and Gene Expression Omnibus Datasets

Jiaxi Zhang[1], Myoung Ok Kim[1*]

Department of Animal Science and Biotechnology, Research Institute for Innovative Animal Science, Kyungpook National University, Daegu 37224, Republic of Korea

Background: Pancreatic ductal adenocarcinoma (PDAC) is one of the most lethal malignancies worldwide, and diabetes mellitus has been recognized as both a risk factor for and a potential consequence of PDAC. However, the epidemiological trends and shared molecular mechanisms underlying this association are not completely understood.

Methods: We conducted an integrative analysis combining population-level epidemiological data and transcriptomic datasets. Global trends in PDAC incidence, PDAC-related mortality, and diabetes incidence from 2013 to 2023 were obtained from the Global Burden of Disease (GBD) database. A meta-analysis was performed to quantify the association between diabetes and PDAC risk. In addition, gene expression datasets focusing on PDAC (GSE15471) and type 2 diabetes mellitus (T2DM; GSE20966) were obtained from the Gene Expression Omnibus database, differentially expressed genes were identified, and upregulated genes associated with both PDAC and T2DM were examined using heatmaps.

Results: Continuous increases in global PDAC incidence, mortality due to PDAC, and the incidence of diabetes were identified in the GBD data. The meta-analysis of eight studies demonstrated that diabetes was significantly associated with an increased risk of PDAC (pooled relative risk = 1.94, 95% CI: 1.78-2.11). Transcriptomic analyses identified five genes —*FXYD3, LAMC1, MDFIC, SOCS3,* and *TREM2*—that were consistently upregulated in both PDAC and T2DM-affected tissues.

Conclusion: This integrative epidemiological and transcriptomic analysis demonstrates that diabetes and PDAC share not only similar global disease trends but also a significant epidemiological association and common molecular alterations. The identified shared genes may represent molecular links between diabetes and PDAC, providing new insights applicable to risk stratification and mechanistic studies.

Corresponding author : Myoung Ok Kim

Keywords : Pancreatic ductal adenocarcinoma, Diabetes mellitus, Global burden of disease, Gene expression omnibus, Integrative analysis

PS-R-02

Hypoxia-Conditioned Extracellular Vesicles from Human Amniotic Membrane Stem Cells Attenuate D-Galactose-Induced Aging in Mice

Zolzaya Bavuu[1], Khan-Erdene Tsolmon[1], Hyun-Soo Kim[2], Byeong Gwan Park[2], Solar Sora Kim[2], Yun-Bae Kim[1*]

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[2]Regenerative Smartsome R&D Center, ThanEver Inc., Daejeon, Korea

In the super-aging society, anti-aging for the preservation and recovery of physical and brain functions may be a major topic of regenerative medicine. We aimed to investigate whether extracellular vesicles (EVs) from amniotic membrane stem cells (AMSCs) enhance physical activity, including stamina, and cognitive function in an animal model of facilitated brain-aging, and to elucidate underlying mechanisms. EVs were collected from conditioned media of AMSCs after hypoxic (2% O_2, 5% CO_2) cultivation for 3 days. The size and composition of EVs was analyzed via nanoparticle-tracking analysis and proteome/lipidome profiles, and functional molecules such as growth factors (GFs) and neurotrophic factors (NFs) were analyzed via ELISA. Male ICR mice were subcutaneously administered with D-galactose (300 mg/kg) for 6 weeks to induce facilitated aging, during which intravenously injected with EVs (6×10^8 exosome particles/body) at weeks 0, 2, 4, and 6. Physical activity and cognitive function were assessed through rota-rod, forced swimming and passive avoidance performances, respectively. To clarify underlying mechanisms, acetylcholine (ACh), brain-derived neurotrophic factor (BDNF), SIRTUIN1 (SIRT1), glial fibrillary acid protein (GFAP), glycogen, and thiobarbituric acid-reactive substances (TBARS) were analyzed in the brain and muscles. Six-week injection of D-galactose decreased physical activity and impaired learning and memory function, along with reduced ACh, BDNF, SIRT1, and glycogen in the brain and muscles, whereas brain GFAP and muscular TBARS increased. However, treatment with EVs recovered the D-galactose-induced neurobehavioral deficits not only by increasing BDNF and SIRT1 regulating neuro-muscular adaptation and function, but also by enhancing brain ACh governing memory acquisition. In addition, EVs restored muscular glycogen, an energy source, and attenuated brain GFAP and muscular TBARS, the inflammatory and oxidative injury responses. EVs from AMSCs restored cognitive function of mice with facilitated brain-aging by increasing ACh, BDNF, and SIRT1. EVs also enhanced stamina not only by attenuating tissue injury, but also by strengthening the muscles through the production of glycogen and BDNF.

Corresponding author : Yun-Bae Kim

Keywords : Aging, Physical activity, Cognitive function, Amniotic membrane stem cell, Extracellular vesicle

PS-R-03

UCP2 KO Mice Exhibit Ameliorated Obesity and Inflammation Induced by High-Fat Diet Feeding

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[2]Korea Model animal Priority Center, Seoul National University, Seoul, Republic of Korea
[3]Interdisciplinary Program in Bioinformatics, Seoul National University, Seoul, Republic of Korea
[4]Interdisciplinary Program of Cancer Biology, Seoul National University Cancer Research Institute, Seoul, Republic of Korea
[5]BIO MAX/N-Bio Institute, Seoul National University, Seoul, Republic of Korea

Uncoupling protein 2 (UCP2) is a mitochondrial carrier protein broadly expressed across metabolic tissues and has been implicated in the regulation of reactive oxygen species production and energy metabolism. However, its functional role in adipose tissue remodeling under diet-induced obesity remains incompletely understood. In this study, we investigated the effects of UCP2 deficiency on high-fat diet (HFD)-induced obesity, adipose tissue inflammation, adipocyte apoptosis, and white adipose tissue browning. Wild-type and UCP2 knockout mice were fed either a normal chow diet or HFD, and metabolic phenotypes were assessed together with histological and molecular analyses of adipose tissues. Under HFD feeding, UCP2 knockout mice exhibited attenuated body weight gain, reduced fat mass, decreased white adipose tissue weight, and smaller adipocyte size compared with wild-type mice. In epididymal white adipose tissue, HFD-induced macrophage infiltration and crown-like structure formation were markedly reduced in UCP2 knockout mice. Consistently, the expression of pro-inflammatory markers, including Ccl2, Tnfα, Ifnγ, and Il1β, was decreased by UCP2 deficiency. Notably, apoptotic signaling was also reduced in the adipose tissue of HFD-fed UCP2 knockout mice, as indicated by lower expression of Caspase 3, Caspase 9, and Bax/Bcl2, suggesting that reduced adipocyte apoptosis may contribute to the attenuation of macrophage recruitment and inflammation. In contrast, UCP2 deficiency did not alter the browning capacity of inguinal white adipose tissue in response to β3-adrenergic stimulation or cold exposure. These findings suggest that UCP2 deficiency protects against HFD-induced obesity and adipose inflammation, potentially through suppression of adipocyte apoptosis, without affecting white adipose tissue browning.

Corresponding author : Je Kyung Seong
Keywords : Adipose, High fat diet, Inflammation, Obeisty, Ucp2

PS-R-04

Fibroblast Subtypes and Signaling Pathways Specific to Postpartum Uterine Remodeling

Byeongseok Kim[1], Joohee Kim[1], Jimin Lee[1], Sangok Park[1], Sooyeon Lee[1], Seuyoung Yoo[1], Soohyung Lee[1], Youngsok Choi[1*]

[1]Major in Stem Cell and Regenerative Biotechnology, School of Advanced Biotechnology, Konkuk University, Seoul 05029, Republic of Korea

Following parturition, the uterus undergoes dynamic regeneration and tissue remodeling driven by injury and subsequent repair. In the postpartum uterus, this remodeling is essential for restoring tissue homeostasis; when it is disrupted by postpartum infection or inflammation, reproductive function can be impaired, and the risk of pathological conditions rises. Although implantation and pregnancy have been studied extensively, the biological events that follow delivery remain largely unexplored. To resolve cellular dynamics and injury responses in the postpartum uterus, we performed single-cell RNA sequencing (scRNA-seq) in a murine model, profiling uterine tissue at postpartum days (PPD) 0, 2, 3, and 5. An injury model was generated by pelvic irradiation at PPD3, the peak of regenerative activity defined by Ki67 immunostaining, with collection at PPD5. Temporal analysis revealed marked compositional shifts: immune and endothelial populations declined after parturition, whereas stromal and smooth-muscle populations progressively expanded. Within the fibroblast compartment we resolved two transcriptionally distinct states, deep and superficial fibroblasts; superficial fibroblasts increased prominently during normal regeneration, and PPD2/PPD3-specific deep-fibroblast subclusters displayed wound-healing marker genes and signaling. To test whether these states are spatially organized, we profiled the postpartum uterus by spatial transcriptomics (Stereo-seq) at single-cell resolution. This independent platform resolved the two states in situ and revealed their zonation: superficial fibroblasts localized adjacent to the luminal epithelium, whereas deep fibroblasts occupied the deep stroma near smooth muscle. In irradiated uteri, superficial fibroblasts, closely linked to epithelial survival and differentiation, were reduced, while deep fibroblasts and endothelial cells were relatively expanded. Together, these findings indicate that spatially defined fibroblast subtypes drive postpartum uterine regeneration, and that their disruption may promote fibrosis and impair reproductive recovery.

Corresponding author : Youngsok Choi
Keywords : Postpartum, Uterus, Single cell rna seq, Regeneration, Fibroblast

PS-R-05

Pyrogallol Contributes to the Anti-Allergic and Anti-Inflammatory Activities of Rosebud Extracts of Newly Crossbred Roses

In-Jeong Kim[1], Khan-Erdene Tsolmon[1], Zolzaya Bavuu[1], Hyun-Soo Kim[2], Byeong Gwan Park[2], Solar Sora Kim[2], Heon-Sang Jeong[3], Yun Bae Kim[1*]

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Since chemical anti-allergic compounds have adverse effects, many investigators pay attention to relatively safe natural products. Twenty-four newly crossbred rosebuds were extracted with 80% ethanol and analyzed for polyphenols, flavonoids, tannins, proanthocyanidins, and pyrogallol (1,2,3-benzenetriol). The extracts' antioxidative, anti-allergic, and anti-inflammatory activities were assessed in vitro and in vivo. Among candidates, Lover Shy, Pretty Velvet, Ice Wing, Red Perfume, Onnuri, Jaemina Red, and Hanggina were found to possess high concentrations of antioxidant compo-nents and antioxidative activity. By comparison, Pretty Velvet, Red Perfume, Jaemina Red, Hanggina, Onnuri, and Ice Wing were highly effective in anti-allergic and an-ti-inflammatory activities in vitro, in parallel with their concentrations of pyrogallol. Their anti-allergic effects were confirmed in mice: The six extracts protected against Compound 48/80-induced mortality and scratching behaviors in a dose-dependent manner. The allergen-induced increases in serum IgE and histamine, as well as in-flammatory cytokines, tumor-necrosis factor-α, and interleukin-1β, were remarkably attenuated following treatment with the rosebud extracts. These findings suggest that the extracts and active ingredients from cross-bred rosebuds exert anti-allergic and anti-inflammatory activities through their high levels of pyrogallol and antioxidants, and that they could be promising candidates to overcome allergic responses such as atopic dermatitis.

Corresponding author: Yun Bae Kim
Keywords: Rosebud extract, antioxidant; pyrogallol (1, 2, 3-benzenetriol), antioxidative activity, anti-allergic activity, anti-inflammatory activity

PS-R-06

Sustained Uterine IL-36α Expression Compromises Receptivity via Chemokine Induction

Joohee Kim[1], Byeongseok Kim[1], Jimin Lee[1], Sangok Park[1], Sooyeon Lee[1], Seoyoung Yoo[1], Soohyung Lee[1], Youngsok Choi[1,2*]

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[2] *The Institute of Advanced Regenerative Scienced, Konkuk University, Seoul, Republic of Korea*

The uterus undergoes cyclical remodeling regulated by ovarian steroid hormones, primarily estrogen and progesterone. Around gestation day (GD) 3.5, the implantation window, a precise immune-endocrine balance is especially critical to allow embryo invasion while preventing excessive inflammation. Dysregulation of this interface contributes to reproductive diseases and implantation failure. We identified Interleukin-36 alpha (IL-36a), a pro-inflammatory cytokine from the IL-1 family, as an estrogen-responsive gene expressed specifically in mouse uterine epithelial cells. Uterine IL-36a expression is strictly spatiotemporally controlled within the luminal epithelium. It peaks at the estrus stage but becomes rapidly suppressed by progesterone, showing a marked decrease by GD3.5. Utilizing single-cell RNA sequencing data from a progesterone-resistant Mig6-knockout mouse model, we observed an abnormal persistence of IL-36a expression during the critical window of implantation, a stage where it is normally silenced in wild-type mice. Notably, this prolonged IL-36a expression strongly corelates with the robust co-expression of the NF-kB pathway marker (*Nfkbia*) and neutrophil-attracting chemokines, *Cxcl1* and *Cxcl2*. Furthermore, our in vivo studies demonstrate that local exposure to recombinant IL-36a directly provokes a massive induction of *Cxcl1* and *Cxcl2* in the uterus, bypassing normal immune tolerance. Based on these findings, we propose that the physiological silencing of IL-36a is vital for restraining chemokine-driven excessive neutrophil infiltration and maintaining uterine receptivity. We are currently actively investigating whether this hyper-inflammatory microenvironment ultimately leads to complete pregnancy failure in mouse models. Ultimately, understanding the role of aberrant IL-36a signaling could provide critical insights into implantation biology and offer potential therapeutic strategies for immune-related uterine disorders.

Corresponding author: Youngsok Choi
Keywords: Implantation, Interleukin-36 alpha, Chemokine, NF-kB, Endometrium

PS-R-07

Metabolic Reprogramming in Intermediate Exhausted T Cells Mitigates Immune Checkpoint Blockade Response by Triggering Exhausted T Cells Repopulation

Yechan Park[1], Sungsoon Fang[1,2*]

[1] *Department of Biomedical Science, Graduate School of Medical Science, Brain Korea 21 Project, Yonsei University College of Medicine, Seoul, 03722, Republic of Korea*
[2] *Department of Biomedical Sciences, Gangnam Severance Hospital, Yonsei University College of Medicine, Seoul, 06273, Republic of Korea*

Immune checkpoint blockade (ICB) is one of the most successful therapeutic strategies in immunotherapy. However, several challenges still remain unclear, including a low response rate and the absence of relevant biomarkers for prognosis prediction. As a potential breakthrough, recent studies have been focused on the molecular mechanisms and metabolic reprogramming in the process of T cell exhaustion. In this study, we analyzed bulk RNA-seq and scRNA-seq data sets and demonstrated that metabolic reprogramming of T cells—particularly alterations in one-carbon metabolism (1CM)—promotes the repopulation of exhausted T cells (Tex), thereby compromising the therapeutic efficacy of ICB. In the results, 1CM gene profiles are significantly enriched in a specific subset of T cells, compared to other cell types. Intriguingly, these 1CM-high T cells are identified as proliferative intermediate exhausted T cells (Tex^{int}). Furthermore, these proliferative Tex^{int} received the most robust CD137 signaling. Consistently, proliferative Tex^{int} exhibited higher 1CM scores and increased CD137 signaling, in LUAD patients received anti-PD1 therapy. Interestingly, the 1CM-high Tex^{int} population was significantly expanded in non-responders for immunotherapy, and this 1CM-CD137 axis was exclusively observed in them. We further established that 1CM is a prominent signaling pathway in proliferative Tex^{int} in patients resistant to immunotherapy across multiple cancer types, including glioblastoma, renal cell carcinoma, colorectal cancer, and triple negative breast cancer. These findings propose that targeting 1CM may represent a novel therapeutic strategy to enhance the efficacy of immunotherapy by mitigating Tex^{int} proliferation and Tex repopulation in diverse cancers.

Corresponding author: Sungsoon Fang
Keywords: One-carbon metabolism, Immunotherapy, Cancer immunology, T cell exhaustion, Single cell RNA-seq

PS-R-08

6PPD and 6PPD-Quinone Impair Human Trophoblast Syncytialization in BeWo Cells

Cheoljin Park[1], Jeong Hwan Kim[1], Donghee Kim[1], Wonjun Jeong[1], Sungjoon Choi[1], Jinsoo Lee[1*]

[1] *Laboratory Animal Medicine, College of Veterinary Medicine, Chungnam National University, Daejeon, Republic of Korea*

The tire-rubber antioxidant N-(1,3-dimethylbutyl)-N′-phenyl-p-phenylenediamine (6PPD) and its transformation product, 6PPD-quinone (6PPDQ), are emerging environmental contaminants, yet their potential reproductive and developmental toxicity remains poorly defined. The syncytiotrophoblast is the primary maternal–fetal exchange interface and endocrine layer of the placenta, and impaired syncytialization has been associated with adverse pregnancy outcomes. In the present study, the effects of 6PPD and 6PPDQ on trophoblast syncytialization were evaluated using forskolin (FSK)-stimulated BeWo cells as an in vitro model of villous trophoblast differentiation. Non-cytotoxic concentrations were selected based on MTT assay results and used for all subsequent analyses. FSK induced syncytialization, increasing the fusion index and promoting the loss of junctional E-cadherin and ZO-1 staining. Exposure to 6PPD (25 and 50 μM) or 6PPDQ (0.5 and 1 μM) reduced FSK-induced fusion in a concentration-dependent manner and was accompanied by partial restoration of junctional E-cadherin and ZO-1 staining. Secretion of β-hCG, a hormonal marker of syncytiotrophoblast function, also showed a decreasing trend, particularly following 6PPD exposure. These findings indicate that 6PPD and 6PPDQ impair trophoblast syncytialization and suggest that the syncytiotrophoblast may represent a sensitive placental target of tire-derived contaminants, supporting further assessment of their reproductive and developmental risks.

Corresponding author: Jinsoo Lee
Keywords: 6PPDQ, Placenta, Syncytiotrophoblast, Developmental toxicity

PS-R-9

Transient Opening of the Mitochondrial mPTP Promotes Pathological Glutamatergic Signaling in ASH

PS-R-10

Sphingosine-1-Phosphate Signaling as a Potential Regulator of Fibrotic Remodeling in Idiopathic Pulmonary Fibrosis

Chae Min Lee[1,2], Yun Ju Lee[1,2], Bo Kyung Yoon[1,3,4*], Sungsoon Fang[1,2*]

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[2]Department of Biomedical Sciences, Gangnam Severance Hospital, Yonsei University College of Medicine, Seoul, Republic of Korea
[3]Institute for Immunology and Immunological Diseases, Yonsei University College of Medicine, Seoul, Republic of Korea
[4]Department of Microbiology and Immunology, Institute for Immunology and Immunological Diseases, Yonsei University College of Medicine, Seoul, Republic of Korea.

Idiopathic pulmonary fibrosis (IPF) is a progressive and fatal interstitial lung disease characterized by irreversible fibrotic remodeling of the lung parenchyma, for which effective mechanism-based therapeutic strategies remain limited. Given that the alveolar niche is highly enriched in surfactant lipids, disruption of lipid metabolic homeostasis may critically influence epithelial injury activation and fibroblast-driven extracellular matrix deposition during IPF progression. To identify lipid-related molecular programs associated with fibrotic disease, machine-learning-based analyses of UK Biobank multi-omics data were performed, nominating members of the GDF family as candidate biomarkers linked to lipid-associated fibrotic phenotypes. Integrative analysis of human IPF single-cell transcriptomic datasets further revealed dysregulated sphingolipid metabolism and enhanced sphingosine-1-phosphate (S1P) signaling, with S1PR2 expression enriched in fibroblast populations, suggesting a potential mechanistic connection between GDF family-associated fibrotic remodeling and the S1P-S1PR2 axis. To further investigate the functional relevance of this axis in vivo, experimental mouse models of lung fibrosis were used to evaluate how modulation of S1P-related signaling influences fibrotic remodeling. Building on these findings, this study aims to define how lipid-associated signaling pathways, particularly S1P-mediated signaling, regulate fibroblast activation, tissue remodeling, and spatial organization of the fibrotic niche. Through genetic and pharmacologic perturbation in experimental lung fibrosis models, fibroblast-based functional assays, transcriptomic profiling, and spatial transcriptomic analysis, this work seeks to clarify the pathogenic role of sphingolipid metabolism in IPF and evaluate the therapeutic potential of targeting S1P-related signaling in fibrotic lung disease.

Corresponding author : Bo Kyung Yoon, Sungsoon Fang
Keywords : Idiopathic Pulmonary Fibrosis, Lipid Signaling, Sphingosine-1-phosphate signaling

Poster Presentation

ICC JEJU Lobby 3F

Poster Presentation 1 July 15 (Wed) 13:30-14:30	Poster Presentation 2 July 16 (Thu) 13:30-14:30
PS-A-01 ~ 12 (Animal Welfare, 3R & Facility)	PS-A-13 ~ 24 (Animal Welfare, 3R & Facility)
PS-B-01 ~ 12 (New Approach Methods)	PS-B-13 ~ 23 (New Approach Methods)
PS-C-01 ~ 10 (Anatomy, Physiology & Histopathology)	PS-C-11 ~ 27 (Anatomy, Physiology & Histopathology)
PS-D-01 ~ 11 (Preclinical Pharmacology & Toxicology)	PS-D-12 ~ 33 (Preclinical Pharmacology & Toxicology)
PS-E-01 ~ 18 (Metabolism & Metabolic Disease)	PS-E-19 ~ 28 (Metabolism & Metabolic Disease)
PS-F-01 ~ 11 (Neuroscience & Related Disease)	PS-F-12 ~ 23 (Neuroscience & Related Disease)
PS-G-01 ~ 11 (Immunology & Inflammatory Disease)	PS-G-12 ~ 33 (Immunology & Inflammatory Disease)
PS-H-01 ~ 10 (Cancer Biology)	PS-H-11 ~ 20 (Cancer Biology)
PS-I-01 ~ 18 (Microbiology & Infectious Disease)	PS-I-19 ~ 27 (Microbiology & Infectious Disease)
PS-J-01 ~ 09 (Aging & Related Disease)	PS-J-10 ~ 17 (Aging & Related Disease)

1. 포스터 초록 (Poster Session) 발표

발표 시간	Poster Presentation 1	Poster Presentation 2
	July 15 (Wed) 13:30 – 14:30	July 16 (Thu) 13:30 – 14:30
발표 장소	ICC JEJU Lobby 3F (제주 국제컨벤션센터 3층 로비)	
포스터 번호	PS-A-01 ~ 12 PS-B-01 ~ 12 PS-C-01 ~ 10 PS-D-01 ~ 11 PS-E-01 ~ 18 PS-F-01 ~ 11 PS-G-01 ~ 11 PS-H-01 ~ 10 PS-I-01 ~ 18 PS-J-01 ~ 09	PS-A-13 ~ 24 PS-B-13 ~ 23 PS-C-11 ~ 27 PS-D-12 ~ 33 PS-E-19 ~ 28 PS-F-12 ~ 23 PS-G-12 ~ 33 PS-H-11 ~ 20 PS-I-19 ~ 27 PS-J-10 ~ 17
	총 122개	총 133개
부착 시간	July 15 (Wed) 09:00 – 11:00	July 16 (Thu) 09:00 – 11:00
철거 시간	July 15 (Wed) 17:00 – 17:30	July 16 (Thu)

※ 포스터 전시는 학술대회 기간인 7월 15일(수) – 16일(목) 이틀간 진행됩니다.

※ 부착은 각 날짜별 부착 시간 내에 반드시 진행하여야 하며, 미부착 시 제재가 주어집니다.

※ 철거는 각 날짜별 17시 00분 이후부터만 가능하며, 반드시 17시 30분까지 철거해주시기 바랍니다.
철거하지 않은 포스터는 학회에서 보관하지 않고 임의로 철거한 후 폐기됩니다.

2. 포스터 발표 시상

- 포스터 발표: 포스터 발표는 좌장의 진행에 따라 포스터당 4분(3분 발표 + 1분 질의응답)으로 진행되며, 반드시 발표시간에 포스터 앞에 대기하여 주시기 바랍니다.
- 우수포스터상 시상: July 16 (Thu) 16:30 - 17:00 / Halla A (3F) Closing Ceremony
- 우수포스터의 경우 폐회식에서 선정자를 호명합니다. 호명 시, 자리에 없으면 다음 우수자에게 상이 수여되오니 학술대회 종료일까지 학술대회에 꼭 참석해주시기 바랍니다. (상장과 상금 수여, 대리 수상 불가)
- 미부착 포스터: 포스터 보드에 2회 이상(개수로 적용) 미부착 시, 교신저자(연구책임자)에게 향후 1년간 포스터 제출 불가의 제재가 주어집니다.

3. 포스터 작성 안내

- 포스터 보드의 크기는 95cm(가로) X 210cm(세로)이며, 특히 제목이 가로 너비를 초과하지 않도록 준비하여야 합니다.
- 모든 포스터는 지정된 날짜, 기간 동안에 지정된 보드에 부착하여야 합니다.
- 포스터 내용은 abstract, purpose, results(figures and tables), conclusions, references의 순서로 작성합니다.
- 전방 2m 위치에서 쉽게 읽을 수 있도록 굵고 명확한 글씨체를 이용하여 제작합니다.
- 모든 부처의 부착 및 철거는 당일 지정된 시간에 발표자가 수행해주시기 바랍니다.

1. Animal Welfare, 3R & Facility

Poster no.	Title	Speaker
PS-A-01	Occupational Stress, Ethical Conflicts, and Job Satisfaction in the Environment of Laboratory Animal Research in Korea	Na Ann
PS-A-02	Developmental Consequences of Battery Cage Rearing on Social Vocal Behavior in Japanese Quail: Toward Evidence-Based Welfare Standards in Commercial Production	Goun Park
PS-A-03	Housing Environment and Resource Allocation as Determinants of Animal Welfare in Korean Shelters: A Panel Data Analysis of 977,677 Stray Animals across 263 Facilities (2021-2025)	Seeun Park
PS-A-04	Ethical Perspectives Enhance Researchers' Perceived Contribution to Conducting Animal Experimentation	Daehyun Han
PS-A-05	Maximizing the 3Rs and Fostering a Culture of Care: Institutional Framework for Sharing Animal-Derived Resources at LARC, The Catholic University of Korea	Young-Shin Joo
PS-A-06	An Advanced Primate Cage System Customized for Precision Video Analysis of Fine Motor Hand Function During Brinkman Board Tasks	Hee-Ho Song
PS-A-07	Evaluation of Food Preferences in Crab-Eating Macaques for Positive Reinforcement Training and Health Management	Ji Woon Kim
PS-A-08	Research and Educational Activities Aimed at Improving Animal Welfare	Chae Eun Chun
PS-A-09	Routine Health Screening in Laboratory-Housed Macaca Fascicularis : A Practical Approach to Animal Welfare	Yeon su Hong
PS-A-10	Case Study on 3R (Reduction) and Litter Management of Genetically Modified Rodents via a Computerized System and Regular Training	Hyejin IM
PS-A-11	Advancing 3R Practices in SPF Mouse Facilities through Environmental Monitoring and Environmental Enrichment	Gayeong Lee
PS-A-12	Development of Guidance for the Care and Management of Non-Human Primates in Nonclinical Research	Jaeeun Gwak
PS-A-13	Laboratory Animal Welfare through Species-Specific Husbandry Management	Yongsub Byun
PS-A-14	Reconsidering Laboratory Animal Governance in South Korea: Comparative Insights from Karolinska Institutet	Soovin Lee
PS-A-15	Evaluation of Clinical Pathology Changes Associated with Procedural Burden During Nonclinical Studies in Cynomolgus Monkeys (Macaca fascicularis)	Ji Ae Jeong
PS-A-16	Integrating Animal Welfare Practices within a GLP Framework: Microenvironment, Enrichment, and Social Housing	Hwang Jin Jeon
PS-A-17	Effect of Spatial Arrangement of Environmental Enrichment Devices on Cage Utilization in C57BL/6 Mice	Donghun Jeong
PS-A-18	Development of a VR-Based Educational Simulator for Laboratory Animal Research	Hae-Jin Yoon
PS-A-19	Stepwise Environmental Refinement of Non-Human Primate Housing: Transitioning from Individual to Group Housing	Young-Su Yang
PS-A-20	Birth of Rat Offspring Following Transfer of Cryopreserved Sperm-Derived IVF Zygotes into Artificially-Induced Pseudopregnant Recipients	Tae Min Kim
PS-A-21	Practical Refinement Strategies in Avison Biomedical Research Center: A One Welfare Approach to Diet Optimization, Environmental Enrichment, and Advanced Euthanasia Systems	Insook Yang
PS-A-22	Moonshot for NAMs in Korea: National NAMs Funding Strategy Roadmap	Woojin Song
PS-A-23	Litter size and Maternal Parity as Risk Factors for Post-Neonatal Death in Common Marmosets (Callithrix jacchus): A 7-Year Retrospective Analysis	Do Been Choi
PS-A-24	Primate Resources Center (PRC): A National Non-Human Primate Resource Platform for Biomedical Research in Korea	Dong-Ho Lee

2. New Approach Methods

Poster no.	Title	Speaker
PS-B-01	A Translational Framework for Longitudinal Gait Analysis: CLSI-Based Subject-Specific Reference Ranges in Minipigs	Ig Jun Cho
PS-B-02	Establishment of a Multi-View DeepLabCut Framework for a Fine Fotor Behavioral Test in Non-Human Primates	Jae-Min Park
PS-B-03	Current Status of New Approach Methodologies (NAMs) Regulatory Policies in the Advance Countries for Establishing Utilization Strategies for Disease Model Animal	Hee Jin Song
PS-B-04	Development of a Multimodal Awake Mouse MRI Platform for Functional, Physiological, and Structural Brain Mapping	Sang-Han Choi
PS-B-05	Tissue-Derived Extracellular Matrix Promotes Cellular Fitness and Migration in Cynomolgus Monkey Primary Cells	Hyoyun Cho
PS-B-06	Organoid-Based Injury Models Reveal Conserved Epithelial Regeneration Programs across Organs	Yoojin Seo
PS-B-07	TEER-based Quality Control for Variance Reduction in Gut-on-a-Chip IBD Models	Siwan Park
PS-B-08	Non-Destructive Electrical Quality Control to Accelerate Translation of New Approach Methodologies	Sungjae Ha
PS-B-09	Brain Conductivity Changes after Sleep Deprivation under Mn Administration	Bup Kyung Choi
PS-B-10	Generation of Cynomolgus Embryonic Stem Cell Line from Blastocysts Produced by Intracellular Sperm Injection	Jae-hwan Hyeon
PS-B-11	Tissue-Derived Extracellular Matrix from Cynomolgus Macaqaue Supports Lung Fibroblast Proliferation	Ju-A Lim
PS-B-12	Simple Gene Knockout by Single Gene-Directed Multiplex CRISPR-Cpf1	Yeon Ju Jeong
PS-B-13	CRISPR-Cas9 Screening Identifies Genetic Regulators of iPSC-Derived HSPC Generation and Hematopoietic Competence	Sueyeon Jee
PS-B-14	Chronic Kidney Disease Patient-Derived Extracellular Vesicles Induce Cardiac Stress and Suppress Wnt/β-Catenin Signaling in Human Cardiac Organoids	Jin Lee
PS-B-15	Evaluation of 4-Week Fusion Efficacy of a Putty-Type rhBMP2/Allograft Composite Using a Rabbit Posterolateral Lumbar Fusion Model	Raehyung Ryu
PS-B-16	CRISPR-Cas9 Screening of iPSC-Derived HSPCs for Enhanced Erythroblastic Island Macrophage Differentiation and Ex Vivo Erythropoietic Niche Reconstitution	Dahyun Ye
PS-B-17	Establishment of a Human iPSC-Derived Cortical-Spinal Cord Assembloid Model for Spinal Cord Injury and Evaluation of the Neurogenic Effects of Ginsenoside Rg1	Yugyeong Kim
PS-B-18	Development of a Multimodal Imaging-Based Evaluation Platform for Antibody Therapeutics Using Orthotopic Lung and Colon Tumor Models	Eun Hee Kim
PS-B-19	Single-Cell Transcriptomic Evaluation of a Mouse Thyroid Organoid for MIE-Based Thyroid Toxicity Using Public Data	Ji-Eun Kim
PS-B-20	Development of a Humanized Immune Mouse Model for the Generation of RSV Antigen-Specific Human Antibodies	Chan Woo Kim
PS-B-21	AI-Assisted Development of a Web-Based Clinical Chart System for Common Marmosets (Callithrix jacchus)	Jina Kwak
PS-B-22	Fibroblast-Derived Tenascin-C Promotes Epithelial Migration via Integrin-Mediated Crosstalk in the Postpartum Uterus	Sangok Park
PS-B-23	AI-Enabled Label Free Monitoring of Fibrotic Remodeling in iPSC-Derived Alveolar Organoids	Jooyeon Lee

3. Anatomy, Physiology & Histopathology

Poster no.	Title	Speaker
PS-C-01	Histopathological Evaluation as an Objective and Supplementary Tool for Anti-Hemorrhagic Potency Testing of Gloydius Antivenom in a Rabbit Model	Hong Kyu Lee
PS-C-02	Astragaloside IV from Astragalus Membranaceus Fisch. ex Bunge Mitigates DSS-Induced Colitis via Anti-Inflammatory and Antioxidant Modulation of the Gut-Liver-Brain Axis	Byung Joo Kim
PS-C-03	Vaginal Lipoma in a Dog	Gye-Hyeong Woo
PS-C-04	A Rare Case of Lingual Chondrolipoma in a Dog	Gye-Hyeong Woo
PS-C-05	Effects of Mitochondria-Targeted Antioxidant SkQ1 on Preimplantation Embryo Development in Pigs	Yeonjoo Lee
PS-C-06	Kynurenic Acid Supplementation Enhances Porcine Oocyte Maturation by Reducing Oxidative Stress	Gyeonghyeon Kim
PS-C-07	Beneficial Effects of Urolithin A on Porcine Oocyte Maturation are Diminished by the Inhibition of SIRT1 by EX-527	Seunghyun Choi
PS-C-08	Protective Effects of Chronic ENA Actimineral Resource A Treatment on Skeletal Muscle in mdx Mice	Hyun Ho Yun
PS-C-09	Temporal Characterization of Renal Injury in an Adriamycin-Induced Proteinuric Nephropathy Rat Model	Yudam Ha
PS-C-10	Establishment of a Standardized Preclinical Evaluation Platform for Diabetic Kidney Disease in db/db Mice	Heekyoung Yang
PS-C-11	Phosphatidylserine-Axl Signaling Regulates Myoblast Fusion and Skeletal Muscle Regeneration	Jinuk Han
PS-C-12	NEK2 Regulates the Spindle Assembly Checkpoint and Cytoskeletal Organization during Porcine Oocyte Maturation	Se-Been Jeon
PS-C-13	Spontaneous Inguinal Hernia Mimicking Testicular Disease in a Cynomolgus Monkey	Ji Min Park
PS-C-14	Egfl7 Deficiency Impedes Early Vascular Development in Embryonic and Tumor Environments	Seunghun Han
PS-C-15	Germ-Free Mouse Model Uncovers a Slow-Cycling LGR5+ Stem-Cell Population Resistant to Chemical and Radiation-Induced Intestinal Injury	Kyungrae Cho
PS-C-16	Effects of Acupuncture at SI5 on Morphine Tolerance through Modulation of the Lateral Habenula in Rats	Su Yeong Jin
PS-C-17	Collagen Supplementation via ECM-Derived Powder Accelerates Wound Healing	Ui-Jin Bae
PS-C-18	Studies of the Basic Data of KwlGbg:ICR Mice: Body Weight, Organ Wight, Hematology, Serum Biochmistry	Kyu Hyuk Cho
PS-C-19	Lrig1 Marks a Novel Renal Quiescent Stem Cell Population that Maintains and Repairs Proximal Tubules	Yura Lee
PS-C-20	Artificial Intelligence-Based Mast Cell Detection and Error Pattern Analysis in Rat Skin Tissue	Jin Uk Jang
PS-C-21	Comparative Biological Effectiveness of γ-rays and X-rays in Standardized Preclinical Models for Low-LET Radiation	Sangmi Park
PS-C-22	Functional Analysis of RNA Binding Protein DDX17 in Mouse Spermiogenesis	Madoka Aoki
PS-C-23	Tiron Enhances Post-Thaw Functional Integrity of Boar Sperm by Attenuating Cryopreservation-Induced Oxidative Stress	Seongju Lee
PS-C-24	Cephalotocin Exhibits Antidiuretic Activity Following Oral Administration in Mice	Seonmi Jo
PS-C-25	Characteristics of In Vitro Ischemia Models Depending on the Anatomical Origin of Cardiomyocytes	Kyoung Ho Lee, Ryounghoon Jeon, Sanghyun An
PS-C-26	Effects of Repeated Ovum Pick-Up (OPU) on Number of Aspirated Oocytes and Ovarian Reserve in Common Marmosets: Role of Anti-Müllerian Hormone (AMH) and Pelvic Adhesion	Hee Jin Choi
PS-C-27	Comparative Assessment of Acute Inflammatory Responses Induced by Inhaled Δ9-THC and CBD in Mice	Joo Hyung Park

4. Preclinical Pharmacology & Toxicology

Poster no.	Title	Speaker
PS-D-01	Comprehensive Preclinical Safety Evaluation of Clinical-Grade hESC-Derived Multipotent Mesenchymal Stem Cells for Interstitial Cystitis	Jeong Min Shin, Dong Seol Gwak
PS-D-02	Neuroprotective Effects of Modafinil against Sleep Deprivation-Induced Cognitive Impairment and Cortical Oxidative Stress in ICR Mice	Ming Chen Hsieh
PS-D-03	Methodological Constraints of PBMC-Engrafted Humanized Mice in Gemcitabine-Based Immuno-Oncology Combination Studies	Ga Eun Bae
PS-D-04	Neuroprotective Effects of Rice Bran Oil Against Cerebral Ischemia-Reperfusion Injury in a Rat Middle Cerebral Artery Occlusion and Reperfusion Model	Chae won Lim
PS-D-05	Maternal Exposure to Jujube Modulates Fetal Brain Protein Expression without Causing Developmental Toxicity	Dongsun Park
PS-D-06	Melatonin Supplementation during Porcine Oocyte Maturation Alleviates Oxidative Stress Induced by Sterigmatocystin Exposure	Yumin Lee
PS-D-07	Comparative Analysis of Carcinogenicity Assessment Cases for Pharmaceuticals Approved by Foreign Regulatory Agencies	Jun Soo Park
PS-D-08	Development and Validation of an ELISA Method for the Quantification of Lokivetmab in Dog Serum for Pharmacokinetic Studies	Jongman Kim, Yura Heo, Youbin Kim
PS-D-09	Multi-Omics Profiling Reveals Pulmonary Molecular Response to Non-Asbestos Organic Brake Wear Particles in Mice	Somi Yoon
PS-D-10	Omics-Based Analysis of Pulmonary Responses to Diesel Exhaust Particulate Matter in Mice	Soyoung Jang
PS-D-11	In Vitro and In Vivo Biocompatibility Assessment of Conducting Hydrogel for Non-Invasive Bioelectrical Signal Monitoring Devices	Ga-Young Lee
PS-D-12	Vigna Radiata (L.) Wilczek Attenuates Copper Oxide Nanoparticle-Induced Airway Inflammation in Mice	Ba Reun Jin
PS-D-13	Protective Effects of Camellia Sinensis (L.) against Copper Oxide Nanoparticle-Induced Airway Inflammation	Sin-Hyang Park
PS-D-14	Tetrabromobisphenol A Induces Female Reproductive Toxicity and Compromises Early Pregnancy in Mice	Changsic Youn
PS-D-15	A Multi-Step Screening Platform for Identifying Small-Molecule Alternatives to G-CSF for Acute Radiation Syndrome	Narae Kim
PS-D-16	Respiratory Toxicity of 34 Ingredients in Household Chemical Products	Jeongbin Kim
PS-D-17	Pretreatment-Dependent Cytotoxicity of Cream-Type Dedical Devices: Role of Lipid-Rich Dispersed Phases in In Vitro Extract Testing	Un-yul Jeong
PS-D-18	Large-Scale Profiling of Coding and Noncoding RNAs in Mouse Lungs after Acute Exposure to Vaporized CBD or THC	Jeong-Hyeon Heo
PS-D-19	Establishment of Administration Route-Dependent Reference Data for Vehicle Control in Alternative Developmental Toxicity Screening Methods Using Chick Embryo-Based Models	Jeong Hwan Kim
PS-D-20	Intravaginal Developmental and Reproductive Toxicity Screening of the Common Preservative Potassium Sorbate in Rats	Yeonjin Lim
PS-D-21	Transcriptomic Changes in the Mouse Liver Acutely Exposed to Vaporized CBD or THC	Jihun Kim
PS-D-22	Temporal Profiling in Coding and Long Noncoding Transcriptomes in Mouse Lung Following Acute Exposure to Vaporized THC	Chaeeun Park
PS-D-23	Caffeoylpomolic Acid Ameliorates Folic Acid-Induced Kidney Injury Through Modulation of Ferroptosis-Related Pathways	Jeong-Pin Ahn
PS-D-24	A Novel Marine Antioxidant Peptide as a Multifunctional Biomaterial: Dual Therapeutic Efficacy against Oxidative Stress-Induced Disorders In Vivo	Haebin Kim

Poster no.	Title	Speaker
PS-D-25	A Novel Marine Peptide as a Targeted Therapeutic for Wilson's Disease: Rescuing Copper-Induced Multi-Organ Damage In Vivo	Haebin Kim
PS-D-26	Subacute 28-Day Repeated Inhalation Study of Heated Tobacco Product (HTP) Emissions in Sprague-Dawley Rats	Jinhee Kim
PS-D-27	Quantitative Application of the Multiple-Path Particle Dosimetry (MPPD) Model for Inhalation Toxicity Assessment: Impact of Species-Specific Respiratory Anatomy on Aerosol Deposition	Ji-Hun Jang
PS-D-28	Protective Effects of Shogaol-Enriched Steamed Ginger Extract against Ethanol-Induced Hepatocellular Injury and Alcohol-Induced Liver Injury in Mice	Yong Jae Jeon
PS-D-29	Validation of a Combined Telemetry System for Cardiovascular Safety Assessment in Conscious Cynomolgus Monkeys	Yang-Ji Cha
PS-D-30	Evaluation of Tumorigenicity and Drug Efficacy in Patient-Derived Cholangiocarcinoma Organoid Xenograft Models	Hyerin Lee
PS-D-31	Establishment of a Preclinical Mouse Model for the Assessment of Low-Dose-Rate Radiation Toxicity	Min Ji Bae
PS-D-32	Long-Term Effects of SARS-CoV-2 mRNA Vaccination on T Cell Cytokine Responses in Juvenile Sprague-Dawley Rats	Hee-Jin Bae
PS-D-33	An Atypical Spontaneous Thymic T-Cell Lymphoblastic Lymphoma in a Young Adult ICR Mouse	Minkyoung Sung

5. Metabolism & Metabolic Disease

Poster no.	Title	Speaker
PS-E-01	Leveraging IGF Signaling to Improve the Spatial Organization and Regenerative Potential of iPSC-Derived Vascularized Liver Organoids	Da-Hyun Kim
PS-E-02	FGF10 Drives Obesity Susceptibility Through Epigenetic Reprogramming of Adipocyte Maturation	Jong Kyu Woo
PS-E-03	Regulation of Hepatic Ethanol Metabolism by Liver Receptor Homolog-1 through Aldehyde Dehydrogenase 1 Family Member B1	Min-Hee Seo
PS-E-04	Establishment of a Streptozotocin-Induced Type 1 Diabetic Pig Model	Tae-Jun Kwon
PS-E-05	GluCEST Imaging of Hippocampal Glutamate Elevation and Its Reversal by Dexamethasone in LPS-Induced Neuroinflammation	Do-Wan Lee
PS-E-06	Psychological Stress-Induced Catecholamine Improved Insulin Sensitivity By Modulating Immune Cell Population in Gonadal White Adipose Tissue	Sooyeon Jang
PS-E-07	18F-FDS PET as a Functional Biomarker of Sorbitol-Associated Microbiome Dysbiosis	Euijeong Jo
PS-E-08	Unsaturated Fatty Acid Metabolism Enhances Osteogenic Differentiation under Osteoporotic and Obesity-Related Conditions	Da-Hye Kim, Jin-Ho Park
PS-E-09	Therapeutic Modulation of Diabetic Skeletal Muscle by C-Peptide: An Integrative Molecular and Transcriptomic Study	Ji-Young Choi
PS-E-10	Identifying the Functional Role of MLK3 in the Pathogenesis and Disease Progression of NAFLD	Bum Suk Kim
PS-E-11	Ameliorative Effects of Green Pine Cone (Pinus Densiflora) as a Novel Natural Therapeutics in db/db Model	Su Jeong Lim
PS-E-12	A Systems Genetics Framework Implicates Hepatic Ptprk and Microbial Metabolic Rewiring in Atherosclerosis Susceptibility	Yang-ji Shin
PS-E-13	Fecal Microbiota Transplantation from Duodenal Light Stimulation-Conditioned Donors Enhances Glucose Tolerance and GLP-1 Responses in Diabetic Goto-Kakizaki Rats	Jisong Ahn

Poster no.	Title	Speaker
PS-E-14	WFDC2 Deficiency Attenuates Hepatic Injury and Fibrosis in Cholestatic and Hepatotoxic Mouse Models	Heeju Oh
PS-E-15	Cell State-Specific Metabolic Remodeling of Foamy Macrophages in MASLD-to-MASH Progression	Minjin Sung
PS-E-16	Type II Interferon Reprograms Hepatic Lipid Metabolism as an Immunometabolic Regulator	Jaewoo Oh
PS-E-17	Phosphodiesterase 5 Inhibitor Improves Insulin Sensitivity by Regulating Adipose Tissue Macrophage Polarization in Diet-Induced Obese Mice	Dan-Gyeong Song
PS-E-18	A Refined MASH-HCC Model Identifies Macrophage Gadd45b as a Key Orchestrator of Inflammation-Driven Neoplastic Progression	Hyunmi Kim
PS-E-19	Hepatic Mettl14 Deficiency Drives Depot-Specific Adipose Adaptations and Improves Metabolic Homeostasis in Obese Mice	Sumin Son
PS-E-20	Hepatic B Cells Interact with Invariant Natural Killer T Cells via CD40 to Stimulate Hepatic Stellate Cells	Jihyo Byun
PS-E-21	Leptin Deficiency Inhibits Nonalcoholic Steatohepatitis-Associated Liver Tumorigenesis in Mice	Seungwoo Lee
PS-E-22	Leptin Receptor Deficiency Enhances Carbon Tetrachloride-Induced Liver Tumor Development in Mice	Seungwoo Lee
PS-E-23	PCSK9 Regulates Macrophage-Hepatic Stellate Cell Crosstalk through Hippo/YAP Signaling during MASLD Progression	Che Yeon Jeong
PS-E-24	Hepatocyte-Derived PCSK9 as a SASP Factor Includes LSEC Dysfunction and Promotes MASLD Progression	Min Young Lee
PS-E-25	Generation of Naa10 235 Isoform Knockout Mice Using CRISPR/Cas9	Dong-Hyuk Lee
PS-E-26	Strain-Dependent Differences in Ketone Metabolism Promote Thermogenic Adaptation	Seung Yeon Oh
PS-E-27	Heterozygous Loss of Ppp1r3b Attenuates High-Fat Diet-Induced Hepatic Steatosis and Inflammation in Mice	Kyuri Bae
PS-E-28	Ring Finger Protein 125 Regulates TCF7L2 Protein Degradation in Metabolic Dysfunction-Associated Steatotic Liver Disease	Da-Yeon Yang

6. Neuroscience & Related Disease

Poster no.	Title	Speaker
PS-F-01	Translational Reprogramming of Dentate Gyrus Peptidergic Circuitry Gates Antidepressant Efficacy	Seo-Jin Oh
PS-F-02	Brain Age and Gender Prediction from Structural MRI-Based Brain Volumetry Using Variational Quantum Circuits	Ji-Yeon Suh
PS-F-03	Improving Brain Metabolite Detection Using a Hybrid Low-Rank Approximation and Denoising Diffusion Probabilistic Model Approach	Ji-Yeon Suh
PS-F-04	Zona Incerta's GABAergic Neurons Modulate Effector Coordination during Feeding	Seo Jin Jung
PS-F-05	A Zebrafish Model of Refsum Disease for Investigating PHYH Function and Central Nervous System Pathology	Jaehyuk Kim
PS-F-06	Oral Porphyromonas Gingivalis Infection Promotes Sex-Dependent Alzheimer's Disease-like Neuropathology through the Oral-Gut-Brain Axis Mediated by the Vagus Nerve	Lee Ya Kim
PS-F-07	Observational Social Fear Learning Induces Social Context-Specific Avoidance in Adolescent Mice	Seon-Ju Jeong

Poster no.	Title	Speaker
PS-F-08	Long-Term KBN2202 Treatment Enhances Lysosomal Engagement with Amyloid Pathology and Preserves Neuronal Integrity in Aged 5xFAD Mice	Youjin Lee
PS-F-09	Long-Term KBN2201 Treatment Attenuates Amyloid Pathology and Enhances Microglial Phagolysosomal Responses in Aged 5xFAD Mice	Ha neul Yun
PS-F-10	Multidimensional Neuroplasticity Mechanisms of Constrained Induced Movement Therapy (CIMT) after Ischemic Stroke: Focusing on the Experimental MCAO Model	Bo Hyun Jung
PS-F-11	Trichostatin A Improves Neurovascular Pathology in CSVD and MCAO Models	Dae-Chul Shin
PS-F-12	Localized Neural Activity Changes in Vestibular Nuclei Following Utricular Damage Suggest Compensatory Plasticity in Larval Zebrafish	SeJin Bae
PS-F-13	Neuromuscular Expression of 15-PGDH and Its Role in Neuromuscular Junction Function	Jeongmin Han
PS-F-14	PDE5 Inhibition Restores Glymphatic Function to Reduce α-Synuclein Pathology and Neurodegeneration in Parkinson's Disease	Yejin Park
PS-F-15	Saffron-Derived Antioxidant and Passiflora incarnata Preserve Cerebellar Purkinje Cell Integrity and Fetuin-A in Experimental Parkinson's Disease	Chae Young Kim
PS-F-16	In Vivo Mitochondrial Base Editing Restores Genotype and Visual Function in a Mouse Model of LHON	Sanghun Kim
PS-F-17	Meta-Omics Analysis Reveals the Disrupted Gut-Brain Axis in the Mouse Model of Multiple Sclerosis	Junbum Lee
PS-F-18	Enhanced Recapitulation of Human Alzheimer's Disease Pathology in a Novel MT-ND5-Deficient 5xFAD Mouse Model	Ye In Lee
PS-F-19	Metformin Attenuates Streptozotocin-Induced Orofacial Mechanical Allodynia Associated with AMPK and p-p38 Signaling in Trigeminal Ganglion Neurons	Ji-Hee Yeo
PS-F-20	Generation of the Mouse Models Carrying Human NAA10 Syndrome Pathogenic Mutation	Jiyoung Yoon
PS-F-21	GLP-1 Receptor Activation Attenuates GABAergic Action in Hypothalamic GnRH Neurons in Female Mice	Seon Ah Park, Dong Hyu Cho, Seong Kyu Han
PS-F-22	Therapeutic Potential of Nortriptyline in TNBS-Induced Burning Mouth Syndrome Mouse Model	Seon Hui Jang, Seon Ah Park
PS-F-23	Evidence for 2,5-Hexanedione as a Central Neurotoxicant Associated with Cognitive Dysfunction	Won Hee Jo

7. Immunology & Inflammatory Disease

Poster no.	Title	Speaker
PS-G-01	CD47 as a Regulatory Link between Efferocytosis and Myoblast Fusion	Eojin Hwang
PS-G-02	Molecular Mechanisms Underlying the Efferocytosis-Promoting Effect of 73-D8	Seo Jin Hwang
PS-G-03	Efficacy and Molecular Mechanisms of Lotus Leaf Extract in the Treatment of Respiratory Inflammation	Seung Hyung Kim
PS-G-04	Estrogen-Driven PGLYRP1 Expression in the Endometrium: ERα-Dependent Regulation and Induction during Endometritis	Jimin Lee
PS-G-05	Scutellaria Baicalensis Georgi Extract Attenuates Allergic Airway Inflammation via Modulation of Nrf-2/HO-1 and AMPK/NF-κB Signaling Pathways	Na young Kim
PS-G-06	Sigesbeckia Orientalis Extract: A Potential Natural Therapeutic Candidate for Allergic Asthma	Kwan Hoo Kim
PS-G-07	Gut-Derived Interleukin-22 Enhances GLP-1 Production via STAT3 Activation to Ameliorate Glucose Dysregulation in Diet-Induced Obesity	Bo-Ra Lee

Poster no.	Title	Speaker
PS-G-08	Integrative-Omics Analysis Reveals Pulmonary Toxicity Induced by Low Metallic Brake Pad Derived Particulate Matter in Mice	Jae-Jun Kim
PS-G-09	Drug X Enhances Efferocytosis via Lysosomal Biogenesis and Reduces Atherosclerosis Progression	Eunhye Oh, Byeongjin Moon
PS-G-10	Subchronic Toxicity of Dust Collected in Homes: Potential Effects of Iron Lung Burden	Wonkyun Jung
PS-G-11	Anti-Inflammatory and Anti-Edema Effects of Renocidin F50, a Phosphorylated Hesperetin Derivative	Yong Jae Jeon
PS-G-12	Real-Time Intravital Two-Photon Imaging Reveals the Therapeutic Effects of IL-17 Blockade on Neutrophil Dynamics and Vascular Remodeling in Psoriatic Skin	Junyoung Park
PS-G-13	EF-2001 Alleviates High-Fat Diet-Induced Nonalcoholic Fatty Liver Disease by Attenuating Gut Inflammation in C57BL/6 Mice	Jin-ho Lee
PS-G-14	Dynamic Changes in Lung ILC3 Frequency during Bacterial Clearance in Murine Acinetobacter Baumannii Pneumonia	Kiyoung Kim
PS-G-15	Evaluation of Chronic DSS-Induced Colitis Using L-012 Bioluminescence Imaging	Minjung Cho
PS-G-16	Tim-4 Internalizes Apoptotic Cells through Axl Mediated Signal Transduction	Byeongjin Moon
PS-G-17	Salmonella-Primed Extracellular Vesicles Enhance Context-Dependent Macrophage Defense for Antibiotic-Reduced Control of Poultry Salmonellosis	Keonwoo Cho
PS-G-18	Siglec-Engineered Extracellular Vesicles for Targeted Drug Delivery to Lung Epithelial Cells	Jihye Park
PS-G-19	NET-Associated Responses in the Lungs during Acute Acinetobacter Baumannii Infection	Heejin Kim
PS-G-20	DLK1 Remodels the Tumor Immune Microenvironment to Suppress Tumor Growth	Yejin Lee
PS-G-21	WFDC2 Promotes Fibrotic Remodeling in Experimental Pulmonary Fibrosis	Seongyu Choi
PS-G-22	Engineered Extracellular Vesicles Reprogram T Cells by Targeting PD-1 and PHB1 Signaling in Inflammatory Bowel Disease	Jae Han Park
PS-G-23	Therapeutic ESC-MSC Exosomes Drive Pulmonary Tissue Repair and Prevent Fibrotic Remodeling	Minseo Choo
PS-G-24	Anti-Inflammatory and Hepatoprotective Effects of Agrimonia Pilosa Extract in LPS-Stimulated RAW264.7 Cells and LPS/D-GalN-Induced Acute Liver Injury	Bum Suk Kim
PS-G-25	Cleavage of Interleukin-33 by Mast Cell Protease Promotes DMP-777 Induced Transdifferentiation of Chief Cells	Donghun Jeon
PS-G-26	Metformin Modulates Intestinal Responses in DSS-Induced Colitis	Jong Sun Lee
PS-G-27	Immunoregulatory Features of Porcine Bone Marrow-Derived Mesenchymal Stem Cells in a Xenogeneic Inflammatory Model	Young Kyu Kim,
PS-G-28	Macrophages Derived from Mobilized Peripheral Blood HSPCs Exhibit Immunomodulatory and Anti-Fibrotic Activity in Pulmonary Fibrosis.	Dong-hoon Chae
PS-G-29	Loss of PHAD2 Confers Protection against Acute and Chronic Kidney Injury via Epithelial PI3K/AKT-FOXO Signaling	Min Ji Cho
PS-G-30	Antioxidant and Anti-inflammatory Effects of Gynostemma pentaphyllum Leaf Extracts in RAW 264.7 Macrophages	Yishan Tang
PS-G-31	Evaluation of the Bioactivities of Acanthopanax henryi Extracts as Functional Cosmetic Ingredients	Chae Eun Woo
PS-G-32	Evaluation of Antioxidant Activity and Functional Potential of Silybum marianum Extracts	Eun Yeong Kim
PS-G-33	An Extract of Endarachne binghamiae Inhibits Inflammatory Bowel Disease by Suppressing NLRP3 Inflammasome Activation and Oxidative Stress	Sang-Seop Lee

8. Cancer Biology

Poster no.	Title	Speaker
PS-H-01	DCLK1 Drives Lipid Metabolic Plasticity and Ferroptosis Resistance through LIPG in Colorectal Cancer	So-El Jeon
PS-H-02	Targeting Dysadherin Suppresses Hepatocellular Carcinoma Progression and Enhances Sorafenib Efficacy	Hyeon-Ji Yun
PS-H-03	CXCL12 from Cancer-Associated Fibroblasts Drives ASCT2-Dependent Glutamine Metabolism to Sustain Stemness and Chemoresistance in $CD44^{+}$ HNSCC	Chang-Whan Yoon
PS-H-04	Selective Targeting of ERRβ/γ by ND1 Suppresses Colorectal Cancer Progression and Enhances Anti-PD-1 Immunotherapy	Jae-Eon Lee
PS-H-05	PPARG Agonist Mediated Lipid Metabolism Reprogramming Selectively Represses Growth of Intestinal Type Gastric Cancer	Yun Ju Lee
PS-H-06	Gastric Cancer-Selective Antitumor Efficacy of Myricone C via ER Stress-Driven Apoptosis in a Murine Xenograft Model	Jihyeon Jeon
PS-H-07	Evaluation of Stereoselective Amino Acid-Based PSMA-Binding Radioligands in the LNCaP Xenograft Model	Mei Ying Jin
PS-H-08	Targeting Innate Immunity: Unveiling the Functional Roles of Honeybee-Derived Lactic Acid Bacteria	In Su Seo
PS-H-09	Rab25 acts as an Oncogene in Luminal B Type Breast Cancer Through Endosomal Recycling	Chanyang Uhm
PS-H-10	Patient-Derived Colorectal Cancer Organoid Xenografts Better Recapitulate Tumor Heterogeneity and Drug Response than Conventional Cell Line Xenografts	Chan Ho Jang
PS-H-11	Maged1 Knockdown Suppresses Cell Cycle Progression and Induces Cell Death in Mouse Embryonic Stem Cells	Nangwon Yee
PS-H-12	Gastric Microbiota Inhibits the Development of Gastric Neoplasia by Regulating Cholesterol Synthesis	Jiseon Kim
PS-H-13	Evaluating the Anti-Cancer Efficacy of Albizia julibrissin in Human Pancreatic Cancer	Sungeun Bae
PS-H-14	Anti-Cancer Potential of Boehmeria nivea Leaf Extract in Human Pancreatic Cancer Cells	Nahyeon Yang
PS-H-15	Anti-Tumor Mechanisms of Peptides Derived from Green Algae in Lung Cancer Models	Jeiha Lee
PS-H-16	Paneth Cell Metaplasia Defines a Pre-Neoplastic State that Cooperates with Kras Mutation in Colorectal Cancer	Donghwan Park
PS-H-17	Vemurafenib Leads Apoptosis via JNK Activation and AKT Inhibition in Hepatocellular Carcinoma	Ke Huang
PS-H-18	Isoquercitrin Inhibits Esophageal Squamous Cell Carcinoma by Inducing Apoptosis via AKT/mTOR Signaling Pathway	Zhibin Liu
PS-H-19	Development of a CD47;Rag2;IL2rγ Triple KO Humanized Mouse Platform for Immuno-Oncology Evaluation: Enhanced Leukocyte and PDX Engraftment with Alleviated GvHD.	Kang-Hyun Kim
PS-H-20	Epithelial IL-17 Receptor A Signaling Promotes the Early Metaplastic Stage of Kras-Induced Gastric Tumorigenesis	E-Hyun Kim

9. Microbiology & Infectious Disease

Poster no.	Title	Speaker
PS-I-01	Deep Learning-Based Multi-Task Analysis for Automated Identification of Helminth Eggs and Larva in Microscopic Images	Won Gi Yoo
PS-I-02	Context-Aware Evaluation of B-Cell Epitope Prediction Strategies in Experimentally Characterized Trichomonas sp. Antigens	Minkyung Kim
PS-I-03	Effect of SARS-Cov2 Spike Protein on Human Immune B Cells Exposed to Bisphenol A	Dae Heum Yun
PS-I-04	Acid-Independent Effects of L. Paragasseri-Derived CFS on HeLa Cells	Jiwoo Seo
PS-I-05	Lactobacillus Crispatus-Dominance in the Vaginal Microbiota Associates with HPV Vaccination Status among Women with Cervical Lesions: a Metagenomic Study	Ruvie Pearl Araneta
PS-I-06	Optimization of Conventional PCR Assays for Helicobacter Detection during Routine SPF Health Monitoring in a Mouse Facility	Gayeong Lee
PS-I-07	Protective Effects of a Chrysanthemum Zawadskii and Boswellia Extract Mixture against Lipopolysaccharide-Induced Acute Lung Injury through Regulation of Nrf2/HO-1 and MAPKs/STAT3 Signaling Pathways	Seon Il Jang
PS-I-08	Lactobacillus Xa Fuels Intestinal Epithelial Regeneration by Linking Epithelial and Stromal Responses	Jeong Hyun Yu
PS-I-09	Whole-Genome Characterization of Rodentibacter Ratti Subsp. KRIBB Isolated from a Laboratory Rat in Korea	Sehee Park
PS-I-10	Establishment of Lethal Mouse Models for Hantaan Virus Infection	Chi Ho Yu
PS-I-11	Extracellular Vesicle-Based Amikacin Delivery for Multidrug-Resistant Klebsiella Pneumoniae	Seoyun Lee
PS-I-12	Intranasal Delivery of Bacterial Extracellular Vesicles Enables RNA Cargo Entry into the Brain	Heon-Jin Lee
PS-I-13	Prophylactic Efficacy of an mRNA-Encoded Antibody against Aerosolized Vaccinia Virus in Mice	Young-Jo Song
PS-I-14	Establishment of a Porcine Gut-Immune-Muscle Axis In Vitro Model to Investigate the Systemic Pathogenesis of Porcine Epidemic Diarrhea Virus	Chanwoo Kim
PS-I-15	LPS-Induced Trained Immunity and Tolerance in Respiratory Viral Infection: A Strain-Dependent Study	Eun-Seon Yoo
PS-I-16	Development and Current Status of the Mouse Pathogen Standard Cooperation Center (MPSC) in 2026	Na-Won Kim
PS-I-17	SARS-CoV-2 Infection in Hypertensive Mice can not Only Exacerbate Lung Inflammation but also Affect Blood Pressure and Cardiac Damage	Seulgi Jeon
PS-I-18	Molecular and Phylogenetic Characterization of Mitogenome Assemblies of Five Chicken-Infecting Eimeria Species from Korea	Kwangjae Cho
PS-I-19	A Rodent Biofilm-Caries Model for Recapitulating Spatial Organization of Oral Microbiota	Hee-Young Jung
PS-I-20	Cross-Kingdom Oral Biofilm Recapitulation Reveals Ecological Remodeling during Caries Development	Hongfei Shao
PS-I-21	Development of a Clinically Relevant Multi-Tiered Biofilm Platform for Translational Caries Research	Rajitha Kuthirakkal, Xuan Bach Ho
PS-I-22	Cross-Kingdom Oral Biofilm Recapitulation Reveals Ecological Remodeling during Caries Development	Hongfei Shao
PS-I-23	Systematic Evaluation of Neuro-T training Conditions for Automated Identification of Human Intestinal Parasites	Minkyung Kim
PS-I-24	Identification of Invasive Microbiota Associated with Driver Gene Alterations during Gastric Carcinogenesis	Gyeong Min Yoon

Poster no.	Title	Speaker
PS-I-25	Deep Learning Detects SARS-CoV-2-Specific Histologic Alterations in Extra-Pulmonary Organs of Mouse Models	Hyeon Ah Kim
PS-I-26	Deep Learning-Based Inference of Virus-Associated Histologic Niches and Viral Topography in Murine Respiratory Infection Models	Hyeok-Won An
PS-I-27	Subdistal Appendages are Dispensable for Primary Cilia but Facilitate Basal Body Apical Migration in Multiciliated Cells	Sujeong Kim

10. Aging & Related Disease

Poster no.	Title	Speaker
PS-J-01	Restoring Salivary Function in Menopausal Xerostomia: Therapeutic Potential of SOD3-Enhanced Extracellular Vesicles	Hee-Jeong Park
PS-J-02	Anti-Sarcopenia Effect of Garlic-Derived Single Compound in a Dexamethasone-Induced Model	Ye Ryeong Kim
PS-J-03	Human iMSC-Derived Extracellular Vesicles Alleviate Cisplatin-Induced Renal Cellular Senescence	KangYeon Kim
PS-J-04	Narciclasine Impairs Porcine Blastocyst Development by Disrupting YAP-Mediated Trophectoderm Lineage Specification	Se-Yeon Eom
PS-J-05	OPA1 Knockdown is Associated with Altered OPA1 Distribution and Polar Body Morphology in Mouse Oocytes	Hyori Lee
PS-J-06	Identification and Functional Characterization of AMA-Associated Genes Affecting Preimplantation Embryo Development	Jaehwan Kim
PS-J-07	Investigation of Regional Brain Electrical Conductivity Changes in the APP/PS2 Mouse Model of Alzheimer's Disease Using 9.4T MR	Bup Kyung Choi
PS-J-08	Potental Protective Effects of Eriocitrin against Post-Ovulatory Aging-Associated Oxidative Damage in Mouse Oocytes	Bo-Kyeong Kim
PS-J-09	*A*-Iso-Cubebene Protects the Retina from AMD-like Damage through Nrf2 Activation and Inflammatory Suppression	Ayun Seol
PS-J-10	Identification of Urinary Metabolic Biomarkers Associated with the Deodorizing Effects of Ecklonia cava Extract in Aged Mice Using ^{1}H-NMR-Based Metabolomics	Ye Eun Ryu
PS-J-11	Particulate Matter 2.5 Disrupts Human-Induced Pluripotent Stem Cell-Derived Retinal Organoid Maturation and Induces Premature Senescence	Yung Hyun Choi
PS-J-12	MEGF8 Modulates Craniosynostosis Pathogenesis through Post-Transcriptional Regulation of BMP-SMAD Signaling	Koeun Hwangbo
PS-J-13	Aging Exacerbates PM2.5-Induced Lung Injury and Enhances Inflammatory Responses in Alveolar Macrophages	Nayoung Lee
PS-J-14	Protective Effects of Osteoclast Regulator Inhibition against Respirable Crystalline Silica-Induced Pulmonary Inflammation	Dahee Han
PS-J-15	Protective Effects of EF-2001 on Soleus Muscle and Skeletal Muscle Dysfunction in a High-Fat Diet-Induced Non-Alcoholic Fatty Liver Disease (NAFLD) Mouse Model	Jin-ho Lee
PS-J-16	Myosin II-Driven Chromosome Repositioning Licenses Efficient DNA Repair in Mouse Oocytes	Min Hyeong Seong
PS-J-17	Identification of Naturally Occurring Clonal Hematopoiesis in Aged Companion Dogs as a Translational Model for Human Aging	Da-Hee Lim

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