

한국줄기세포학회

2023 동계학술대회

KSSCR 2023 Winter Conference

일자 2023. **1. 16** (월) ~ **18** (수)

장소 소노벨 비발디파크 D



공동 주관: 암세포다양성분자제어연구센터



한국줄기세포학회

KSSCR 2023 Winter Conference Program at a glance

■ Day 1: January 16, 2023 (Mon)

Time	Grand Ballroom I	Grand Ballroom II
14:00-14:10	Opening Remarks President of KSSCR	
14:10-14:50	Plenary Lecture	
	· Chair. 김재호 교수 (부산대학교) · Speaker. 한용만 교수 (KAIST)	
14:50-15:20	R&D 정책 세션 I : 한국연구재단 국책연구본부 신약단	
	· Chair. 장우철 교수 (부산대학교) · Speaker. 오두병 단장 (한국연구재단)	
15:20-15:50	사진 촬영 및 Refreshment	
15:50-17:10	Session I	Young Scientist Session
	Basic research · Chair. 차혁진 교수 (서울대학교) · Speaker. 손미영 박사 (한국생명공학연구원) · Speaker. 이재철 교수 (성균관대학교) · Speaker. 장지원 교수 (POSTECH) · Speaker. 윤기중 교수 (KAIST)	· Chair. 이동성 교수 (서울시립대학교) · Speaker. 김윤희 석박사통합과정 (서울대학교) · Speaker. 김예슬 박사과정 (부산대학교) · Speaker. 김윤정 박사과정 (서울대학교 약학대학) · Speaker. 이승준 석박사통합과정 (연세대학교 치과대학)

■ Day 2: January 17, 2023 (Tue)

Time	Grand Ballroom I	Grand Ballroom II
09:10-09:40	Special Lecture I	
	· Chair. 도정태 교수 (건국대학교) · Speaker. 조쌍구 교수 (건국대학교)	
09:40-10:10	R&D 정책 세션 II	
	범부처재생의료기술개발사업단 · Chair. 문지숙 교수 (차의과학대학교) · Speaker. 최윤혁 본부장 (범부처재생의료기술개발사업단)	
10:10-10:30	Refreshment	
10:30-11:50	Session II	Young Faculty Session
	Translational/clinical research · Chair. 한인보 교수 (차의과학대학교 분당차병원) · Speaker. 정혜원 교수 (건국대학교병원) · Speaker. 문성환 교수 (중앙대학교) · Speaker. 신기철 교수 (서울특별시보라매병원) · Speaker. 한인보 교수 (차의과학대학교 분당차병원)	· Chair. 오요한 교수 (한양대학교) · Speaker. 조중현 교수 (아주대학교) · Speaker. 이기현 교수 (이화여자대학교) · Speaker. 염민규 교수 (KAIST) · Speaker. 박진규 교수 (한림대학교)
11:50-12:50	Luncheon Seminar	
	· Speaker. 김윤희 부장 (이엔셀 주식회사)	
12:50-13:00	Refreshment	
13:00-15:00	Poster Presentation	

■ Day 3: January 18, 2023 (Wed)

Time	Grand Ballroom I	Grand Ballroom II
09:30-10:30	Session III	Session IV
	Focus session: 첨단재생바이오 의약품개발을 위한 오가노이드 모델 · Chair. 정초록 박사 (한국생명공학연구원) · Speaker. 이미옥 박사 (한국생명공학연구원) · Speaker. 강현미 박사 (한국생명공학연구원) · Speaker. 임정화 박사 (한국생명공학연구원)	Industry and Venture capitals · Chair. 김용준 교수 (경희대학교) · Speaker. 유종만 교수 (차의과학대학교) · Speaker. 이승우 상무 (데브시스터스벤처스) · Speaker. 최용진 상무 (주)에피바이오텍
10:30-11:00	Refreshment	
11:00-11:30	Special Lecture II	
	· Chair. 홍석호 교수 (강원대학교) · Speaker. 선웅 교수 (고려대학교)	
11:30-12:00	Closing Remarks	

KSSCR 2023 Winter Conference Program Session Topics

Plenary Lecture

Day 1: January 16, 2023 (Mon) 14:10–14:50 Grand Ballroom I

Studies on Fabry disease using induced pluripotent stem cells

Chair. **김재호** 교수 (부산대학교)

Speaker. **한용만** 교수 (KAIST)

R&D 정책 세션 I

Day 1: January 16, 2023 (Mon) 14:50–15:20 Grand Ballroom I

한국연구재단 국책연구본부 신약단

Stem Cell and Regenerative Medicine R&D Programs Supported by the National Research Foundation of Korea

Chair. **장우철** 교수 (부산대학교)

Speaker. **오두병** 단장 (한국연구재단)

Session I

Day 1: January 16, 2023 (Mon) 15:50–17:10 Grand Ballroom I

Basic Research

Human intestinal organoid as a novel platform for microbiome research

The role of mTOR–S6K1 signal pathway in human brain development

ETV4 is a mechanotransducer linking cell crowding dynamics to multi-lineage derivation

Deciphering the Neural Epitranscriptome: The Roles of mRNA Modification in Neurodevelopment

Chair. **차혁진** 교수 (서울대학교)

Speaker. **손미영** 박사 (한국생명공학연구원)

Speaker. **이재철** 교수 (성균관대학교)

Speaker. **장지원** 교수 (POSTECH)

Speaker. **윤기준** 교수 (KAIST)

Young Scientist Session

Day 1: January 16, 2023 (Mon) 15:50–17:10 Grand Ballroom II

Novel stem cell therapy to control tumor dynamics for the treatment of drug-resistant muscle-invasive bladder cancer

Tomatidine-Stimulated Maturation of Human Embryonic Stem Cell-Derived Cardiomyocytes for Modeling Mitochondrial Dysfunction

TPX2 prompts mitotic survival via the induction of BCL2L1 through YAP1 protein stabilization in human embryonic stem cells

The role of MAST4 on spermatogonial stem cell self-renewal during spermatogenesis

Chair. **이동성** 교수 (서울시립대학교)

Speaker. **김윤희** 석박사통합과정 (서울대학교)

Speaker. **김예슬** 박사과정 (부산대학교)

Speaker. **김윤정** 박사과정
(서울대학교 약학대학)

Speaker. **이승준** 석박사통합과정
(연세대학교 치과대학)

Special Lecture I

Day 2: January 17, 2023 (Tue) 09:10–09:40 Grand Ballroom I

Stem cell-derived extracellular vesicles with high regenerative and immunomodulatory capacities

Chair. **도정태** 교수 (건국대학교)

Speaker. **조쌍구** 교수 (건국대학교)

R&D 정책 세션 II

Day 2: January 17, 2023 (Tue) 09:40–10:10 Grand Ballroom I

범부처재생의료기술개발사업단

Korean Fund for Regenerative Medicine (KFRM): Overview and 2023 direction of KFRM project

Chair. **문지숙** 교수 (차의과학대학교)

Speaker. **최윤혁** 본부장
(범부처재생의료기술개발사업단)

Session II

Day 2: January 17, 2023 (Tue) 10:30–11:50 Grand Ballroom I

Translational/clinical research

Direct conversion of rod- to cone-like photoreceptors

Regeneration of ischemic heart failure with pluripotent stem cells

Challenges in clinical trials of mesenchymal stem cell treatment in rheumatoid arthritis

Stem cell clinical trial for patients with chronic back pain due to intervertebral disc degeneration

Chair. **한인보** 교수 (차의과학대학교 분당차병원)

Speaker. **정혜원** 교수 (건국대학교병원)

Speaker. **문성환** 교수 (중앙대학교)

Speaker. **신기철** 교수
(서울특별시보라매병원)

Speaker. **한인보** 교수 (차의과학대학교 분당차병원)

Young Faculty Session

Day 2: January 17, 2023 (Tue) 10:30–11:50 Grand Ballroom I

Human Brain Organoids Recapitulating Pathophysiological Signatures of Parkinson's Disease

Dissecting Human Diseases with Genetics and Pluripotent Stem cells

Tracing cellular dynamics during intestinal tumorigenesis and tissue repair

Heart Disease Modeling and Regenerative Medicine using human Induced Pluripotent Stem Cells

Chair. **오요한** 교수 (한양대학교)

Speaker. **조중현** 교수 (아주대학교)

Speaker. **이기현** 교수 (이화여자대학교)

Speaker. **염민규** 교수 (KAIST)

Speaker. **박진규** 교수 (한림대학교)

Luncheon Seminar

Day 2: January 17, 2023 (Tue) 11:50–12:50 Grand Ballroom I

ENCell, a leading company in advanced biopharmaceutical development and CMO industry

Speaker. **김윤희** 부장 (이엔셀 주식회사)

Session III

Day 3: January 18, 2023 (Wed) 09:30~10:30 Grand Ballroom I

Focus session: 첨단재생바이오 의약품개발을 위한 오가노이드 모델

- In vitro Organoid Model of Human Lungs from Pluripotent Stem Cells
- Development of human adult and pluripotent stem cell derived kidney organoids for disease modeling and drug assessment
- Development of a new preclinical evaluation platform for Advanced Therapy Medicinal Products (ATMP)

- Chair. 정초록 박사 (한국생명공학연구원)
- Speaker. 이미옥 박사 (한국생명공학연구원)
- Speaker. 강현미 박사 (한국생명공학연구원)
- Speaker. 임정화 박사 (한국생명공학연구원)

Session IV

Day 3: January 18, 2023 (Wed) 09:30~10:30 Grand Ballroom II

Industry and Venture Capitals

- 연구실 창업 사례 소개 및 고려사항
- Recent investment trends in cell therapy
- Next Generation Cell & Gene Therapy for Alopecia

- Chair. 김용준 교수 (경희대학교)
- Speaker. 유종만 교수 (차의과학대학교)
- Speaker. 이승우 상무 (데브시스터스벤처스)
- Speaker. 최용진 상무 (주)에피바이오틱)

Special Lecture II

Day 3: January 18, 2023 (Wed) 11:00~11:30 Grand Ballroom I

- Microsystem-based neural cell patterning in 2D and 3D culture system

- Chair. 홍석호 교수 (강원대학교)
- Speaker. 선 웅 교수 (고려대학교)

Contents

한국줄기세포학회 2023 동계학술대회
KSSCR 2023 Winter Conference



Plenary Lecture

Studies on Fabry disease using induced pluripotent stem cells.....3

R&D 정책 세션 I

Stem Cell and Regenerative Medicine R&D Programs Supported by the National Research Foundation of Korea.....7

Session I

Human intestinal organoid as a novel platform for microbiome research 11

The role of mTOR-S6K1 signal pathway in human brain development 12

ETV4 is a mechanical transducer linking cell crowding dynamics to lineage specification 13

Deciphering the Neural Epitranscriptome: The Roles of mRNA Modification in Neurodevelopment 14

Young Scientist Session

Novel stem cell therapy to control tumor dynamics for the treatment of drug-resistant muscle-invasive bladder cancer 17

Tomatidine-Stimulated Maturation of Human Embryonic Stem Cell-Derived Cardiomyocytes for Modeling Mitochondrial Dysfunction..... 18

TPX2 Prompts Mitotic Survival Via The Induction Of *BCL2L1* Through YAP1 Protein Stabilization In Human Embryonic Stem Cells 19

The role of of MAST4 on spermatogonial stem cell self-renewal during spermatogenesis 20

Special Lecture I

Stem cell-derived extracellular vesicles with high regenerative and immunomodulatory capacities..... 23

R&D 정책 세션 II

Korean Fund for Regenerative Medicine (KFRM): Overview and future direction of 2023 KRFM program..... 27