

Keynote Speech [A]

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Moderator: Shinn-Zong Lin 林欣榮 (Taiwan)

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|-------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 08:50-09:30 | KS1-1 | Stem Cells Migrate from the Brain to the Periphery via the Lymphatic System and Guided by Inflammation after CNS Injury
<i>Cesar V. Borlongan (U.S.A.)</i> |
| 09:30-10:10 | KS1-2 | Game Changers: Using Cord Blood to Help the Brain
<i>Joanne Kurtzberg (U.S.A.)</i> |

A1

Pluripotent Stem Cells and Mesenchymal Stem Cell: Frontier Research

Moderator: Joanne Kurtzberg (U.S.A.)

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|-------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10:30-11:00 | A1-1 | Current Status and Development of Stem Cell Industry
<i>Kwok-Fai So 蘇國輝 (Hong Kong)</i> |
| 11:00-11:30 | A1-2 | Human Induced Pluripotent Stem Cells as Tools for New Drug Discovery of Amyotrophic Lateral Sclerosis (ALS)
<i>Shih-Ming Weng 翁仕明 (Taiwan)</i> |
| 11:30-12:00 | A1-3 | Application of Down Syndrome iPSC Derived Forebrain Neurons to Alzheimer's Disease in Vitro Modeling and Drug Screening
<i>Chia-Yu Chang 張嘉佑 (Taiwan)</i> |

B1

Engineer T Cell Therapy: CAR-T Strategies in Cancer

Moderator: Cesar V. Borlongan (U.S.A.)

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|-------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13:00-13:30 | B1-1 | Stem Cells for Oral Tissue Regeneration
<i>Min-Huey Chen 陳敏慧 (Taiwan)</i> |
| 13:30-14:00 | B1-2 | Development of Clinical Live-Imaging of Anti-CD19 Chimeric Antigen Receptor T Cells to Predict Anti-Tumor Effect and Toxicity
<i>Yen-Michael Sheng Hsu (U.S.A.)</i> |
| 14:00-14:30 | B1-3 | Therapeutic Benefits of Cord Blood Plasma/Serum in Neurodegeneration
<i>Paul R. Sanberg (U.S.A.)</i> |

C1

Cancer and New Drug Development

Moderator: Akihiro Shimosaka (Japan)

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|-------------|------|--------------------------------------------------------------------------------------------------|
| 14:50-15:20 | C1-1 | New Assembly Factor of Ribosome Biogenesis and Cancer Progression
<i>John Yu 游正博 (Taiwan)</i> |
| 15:20-15:50 | C1-2 | Cancer Immunotherapy Targeting Glycans
<i>Alice L. Yu 陳鈴津 (Taiwan)</i> |
| 15:50-16:20 | C1-3 | Superbug Biocontrol Using Bacteriophage
<i>Li-Kuang Chen 陳立光 (Taiwan)</i> |

Panel Discussion

iPS Cells in Clinical Trials: Progress and Challenges

Moderator: Shinn-Zong Lin 林欣榮 (Taiwan)

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|-------------|-----------|----------------------------------------------------------------------------------------------------------------------|
| 16:20-18:00 | Panelists | <i>Paul R. Sanberg (U.S.A.), Kwok-Fai So 蘇國輝 (Hong Kong), Joanne Kurtzberg (U.S.A.), Shih-Hwa Chiou 邱士華 (Taiwan)</i> |
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A2

Cancer and New Drug Development

Moderator: Yao Chan Chen 陳耀昌 (Taiwan)

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| 10:30-11:00 | A2-1 | Targeting Therapy of Malignant Brain Tumor by a Local Interstitial Delivery System Loading with a Novel Small Molecule IND for Phase I/IIA Approved by FDA (IND 128388)
<i>Hong-Jyh Harn 韓鴻志 (Taiwan)</i> |
| 11:00-11:30 | A2-2 | Development of New Anti-Cancer Strategies for Pancreatic Ductal Adenocarcinoma via Targeting Unique Metabolic Features of Cancer Stem Cells
<i>Chia-Ning Shen 沈家寧 (Taiwan)</i> |
| 11:30-12:00 | A2-3 | Progesterone Prevents High-Grade Serous Ovarian Cancer by Induction Necroptosis of P53-Defective Epithelium in Fallopian Tube
<i>Tang-Yuan Chu 朱堂元 (Taiwan)</i> |

B2

Bioengineering and Biomaterial Application in Neuroscience

Moderator: Rong-Kung Tsai 蔡榮坤 (Taiwan)

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|-------------|------|-----------------------------------------------------------------------------------------------------------------------------|
| 13:00-13:30 | B2-1 | Human Gene Therapy- A Translational Road to Today and Beyond
<i>Guangping Gao 高光坪 (U.S.A.)</i> |
| 13:30-14:00 | B2-2 | Granulocyte Colony Stimulating Factor (G-CSF) Therapy for Parkinson's Disease and Stroke
<i>Jang-Yen Wu 吳政彥 (U.S.A.)</i> |
| 14:00-14:30 | B2-3 | Use of Biomaterials and Neural Stem Cells for Repairing CNS and PNS Injuries
<i>Wutain Wu 吳武田 (Hong Kong)</i> |

C2

Gene Editing for iPS Cell of Disease

Moderator: Avery Posey (U.S.A.)

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| 14:50-15:20 | C2-1 | Exploiting Pluripotency for a Greater Understanding of Human Diseases
<i>Hung-Chih Kuo 郭絃志 (Taiwan)</i> |
| 15:20-15:50 | C2-2 | Development of Human Stem Cell Cultures for Clinical Application
<i>Glyn Stacey (U.K.)</i> |
| 15:50-16:20 | C2-3 | Cancer Gene Somatic Mutagenesis by CRISPR/Cas9
<i>You-Tzung (Bob) Chen 陳佑宗 (Taiwan)</i> |

Keynote Speech [B]

Keynote Speech [B]

Moderator: Tzyy-Wen Chiou 邱紫文 (Taiwan)

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|-------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 09:00-09:40 | KS2-1 | Precise Glycoediting by CRISPR/Cas9-Mediated Gene Disruption Confirming the Specificity of a Chimeric Antigen Receptor for the Globoside SSEA-4
<i>Avery Posey (U.S.A.)</i> |
| 09:40-10:20 | KS2-2 | Toxic Metabolite Pathways in Cancer Cells and Cancer Stem Cells
<i>Dohoon Kim (U.S.A.)</i> |

D1

Cancer and New Drug Development

Moderator: Yen-Michael Sheng Hsu (U.S.A.)

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|-------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10:40-11:10 | D1-1 | Regulation of Therapeutic Hypothermia on Inflammatory Cytokines, Microglia Polarization, Migration and Functional Recovery after Stroke
<i>Shan Ping Yu 余山平 (U.S.A.)</i> |
| 11:10-11:40 | D1-2 | Novel Biologic Nanodrugs for Cancer Treatment
<i>Silke Krol (Italy)</i> |
| 11:40-12:10 | D1-3 | Importance of Cancer Immune Cell Therapy and Regulation
<i>Akihiro Shimosaka (Japan)</i> |

E1

Pluripotent Stem Cells and Mesenchymal Stem Cell: Frontier Research

Moderator: Kwok-Fai So 蘇國輝 (Hong Kong)

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|-------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13:10-13:40 | E1-1 | Human Muse Cells Reconstruct Neuronal Circuitry in Rodent Acute and Subacute Stroke Models
<i>Mari Dezawa (Japan)</i> |
| 13:40-14:10 | E1-2 | Human iPSCs as a source for MSCs: Translational Possibilities for Neurodegenerative Diseases & Immunotherapy
<i>B. Linju Yen 顏伶汝 (Taiwan)</i> |
| 14:10-14:40 | E1-3 | Intranasal Transplantation of Stem cells and Neural Progenitor Cells with Gene Modification Increases Regeneration and Functional Recovery after Ischemic Stroke
<i>Ling Wei 魏玲 (U.S.A.)</i> |

F1

Pluripotent Stem Cells and Mesenchymal Stem Cell: Frontier Research

Moderator: Ling Wei 魏玲 (U.S.A.)

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| 15:00-15:30 | F1-1 | Prenatal Transplantation of Human Amniotic Fluid Stem Cells Could Improve the Clinical Outcome of Type III Spinal Muscular Atrophy
<i>Sheng-Wen Shaw 蕭勝文 (Taiwan)</i> |
| 15:30-16:00 | F1-2 | Translational Research in Stem Cell Therapy: Manufacturing Cord Lining Mesenchymal Stem Cells (CL-MSC) under US-FDA CGMP Standard for Clinical Trials in Diabetic Foot Ulcers
<i>Toan-Thang Phan (Singapore)</i> |
| 16:00-16:30 | F1-3 | Development of Cellular Reprogramming and iPSC Technology as Personalized Medicine-Based Platform: From Bench to Clinic Bedside
<i>Shih-Hwa Chiou 邱士華 (Taiwan)</i> |

G1

Cancer and New Drug Development

Moderator: Shan Ping Yu 余山平 (U.S.A.)

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|-------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16:30-17:00 | G1-1 | Design of Integrin and VEGFR2-Specific Drugs for Cancer
<i>Woei-Jer Chuang 莊偉哲 (Taiwan)</i> |
| 17:00-17:30 | G1-2 | GRO γ Mediates the Immunosuppressive Function of Myeloid Cells through Regulating the Expression of TLRs
<i>Shu-Ching Hsu 許素菁 (Taiwan)</i> |
| 17:30-18:00 | G1-3 | The Anti-Angiogenic and Anti-Cachectic Effects of Fucoidan in Bladder Cancer-Bearing Mice
<i>Tz-Chong Chou 周志中 (Taiwan)</i> |

D2

Bioengineering and Biomaterial Application in Neuroscience

Moderator: Wutain Wu 吳武田 (Hong Kong)

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| 10:40-11:10 | D2-1 | The Role of Blood-Optic Nerve Barrier and Anti-Inflammation to Rescue Retinal Ganglion Cells (RGCs) in Ischemic Optic Neuropathy
<i>Rong-Kung Tsai 蔡榮坤 (Taiwan)</i> |
| 11:10-11:40 | D2-2 | Human CD40L-Activated B Cells as Antigen-Presenting Cells: Potential for Cancer Research
<i>Kuei-Ying Su 蘇桂英 (Taiwan)</i> |
| 11:40-12:10 | D2-3 | Lithium Treatment of Severe Neuropathic Pain in Chronic Spinal Cord Injury
<i>Wise Young (U.S.A.)</i> |

E2

Bioengineering and Biomaterial Application in Neuroscience

Moderator: Sheng-Huang Lin 林聖皇 (Taiwan)

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|-------------|------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 13:10-13:30 | E2-1 | Application of EEG-Based Brain-Computer Interface to Rehabilitation of Stroke Patients
<i>Ming-Shaung Ju 朱銘祥 (Taiwan)</i> |
| 13:30-13:50 | E2-2 | Suppression of Seizures by Photic and Electrical Stimulation
<i>Chou-Ching Lin 林宙晴 (Taiwan)</i> |
| 13:50-14:10 | E2-3 | A Thirty-Years History of Deep Brain Stimulation: Technological Innovation and Clinical Application
<i>Shin-Yuan Chen 陳新源 (Taiwan)</i> |
| 14:10-14:30 | E2-4 | The Altered Patterns of Digit Force Control in Patients with Hand Disorders
<i>Po-Tsun Chen 陳柏村 (Taiwan)</i> |
| 14:30-14:40 | | Discussion |

Oral Presentation

Oral Presentation

Moderator: Kwok-Fai So 蘇國輝 (Hong Kong) / Dah-Ching Ding 丁大清 (Taiwan)

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| 15:00-15:12 | O1 | Efficient Generation of Chemically Induced Mesenchymal Stem Cells from Human Dermal Fibroblasts
<i>Pei-Lun Lai 賴培倫 (Taiwan)</i> |
| 15:12-15:24 | O2 | Positive Regulation of HIF-1A Expression by EBV Oncoprotein LMP1 in Nasopharyngeal Carcinoma Cells
<i>Wei-Wen Sung 宋維文 (Taiwan)</i> |
| 15:24-15:36 | O3 | Tissue Engineered Nerve Graft Modified by BMSCs-Derived Acellular Matrix for Repairing Long Peripheral Nerve Defect
<i>Hui Zhu 朱慧 (China)</i> |
| 15:36-15:48 | O4 | Efficient Conversion of Human Somatic Cells to Functional Multipotent Stem Cells by Small Molecules
<i>Shang-Fu Chen 陳尚甫 (Taiwan)</i> |
| 15:48-16:00 | O5 | Juxtacrine and Paracrine Signaling Involved in Neurovascular Regeneration by Neural Stem Cell-Engineered Sheet Transplantation
<i>Chung-Hsing Chou 周中興 (Taiwan)</i> |
| 16:00-16:12 | O6 | Effects of Fat Stem Cells on Liver and Renal Functions
<i>David C.P. Chen (U.S.A.)</i> |
| 16:12-16:24 | O7 | Transcriptome Analysis of the Induced Pluripotent Stem Cell (iPSC)-Derived Pancreatic B-Like Cell Differentiation
<i>Yan Huang 黃龔 (China)</i> |

G2

Cancer and New Drug Development

Moderator: Dohoon Kim (U.S.A.)

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| 16:30-17:00 | G2-1 | Using p53 Activation as a Strategy to Regulate Skin Pigmentation and Melanoma Growth Control
<i>Chung-Hsing Chang 張中興 (Taiwan)</i> |
| 17:00-17:20 | G2-2 | n-Butylidenephthalide Exhibits Neuroprotection in Spinocerebellar Ataxia Type 3 through Regulation of Tryptophan 2, 3 Dioxygenase
<i>Karthyayani Rajamani (Taiwan)</i> |
| 17:20-17:40 | G2-3 | n-Butylidenephthalide Attenuate Amyotrophic Lateral Sclerosis Symptoms through Down-Regulation Autophagy
<i>Kuo-Wei Hsueh 薛國偉 (Taiwan)</i> |
| 17:40-18:00 | G2-4 | Isochailactone-Induced DDIT3 Causes ER Stress-PERK Independent Apoptosis in Glioblastoma Multiforme Cells
<i>Sheng Feng Tsai 蔡昇峰 (Taiwan)</i> |

April 15 (Saturday)

Gwo Xi Stem Cell Applied Technology Co., Ltd. 國璽幹細胞應用技術股份有限公司

12:00-13:00 L1 Commercial Production of Autologous Stem Cells and Therapeutic Potential for Stroke
Chia-Hsin Lee 李家昕 (Taiwan)

April 16 (Sunday)

StemCyte International, Ltd. 永生生技集團

12:10-13:10 L2 An Innovative Vitamins-Containing Pure Silk facial Mask which Enhances Skin Stem Cells
Regeneration and Effectively Retards the Effects of Aging of the Skin
Jonas CT, Wang 王嘉宗 (U.S.A.)