SUNDAY, DECEMBER 15, 2024

2:30 PM-5:30 PM Registration Grand Promenade Foyer

5:45 PM-6:55 PM Welcome Reception Halona Kai

EVENING PLENARY SESSION Monarchy 4

7:00 PM-7:05 PM- Introduction: Robert Langer and Yasuhiko Tabata

Discussion Leaders: Susan Langer and Ali Khademhosseini

7:05 PM-7:40 PM - Vadim Dudkin, Founding CTO

Souffle Therapeutics

Cell and tissue specific delivery of therapeutic payloads

7:40 PM-8:15 PM - Yizhou Dong, Professor

Icahn School of Medicine at Mount Sinai Lipid nanoparticles enabled mRNA therapeutics

8:15 PM-8:30 PM - Refreshment Break

8:30 PM-9:05 PM - Maureen Chlopik Chief of Staff & VP of Commercial & Portfolio Strategy

Lyndra Inc.

Drug delivery in the 4th dimension: Time and long-acting oral (LAO) products

9:05 PM-9:40 PM- Hideyuki Okano, MD, PhD Distinguished Professor

Keio University

iPSCs-based regenerative therapy for subacute complete spinal cord injury, the interim report of the first-in-human (FIH) trial.

9:40 PM-10:15 PM— Joseph DeSimone, Sanjiv Sam Gambhir Professor of Translational Medicine and Chemical Engineering, Director, Canary Center

Stanford University

Drug delivery and biomarker collection devices fabricated using high resolution (in all three cartesian coordinates) 3D printing

MONDAY, DECEMBER 16, 2024

MORNING PLENARY SESSION

Discussion Leader: Nicholas Peppas

8:00 AM-8:35 AM - Kenji Hyodo, Ph.D. Senior Director, Head of Advanced Drug Delivery

Eisai Co., Ltd.

Optimization of drug release from liposomes for cancer therapy

8:35 AM-9:10 AM -Hiroshi Kikuchi, Ph.D. President

DDS Strategy Firm LLC

Usefulness of active release of liposomal cytotoxic drug by irradiation of near-infrared light

9:10 AM - 9:45 AM - Avi Domb

Hebrew University of Jerusalem

Injectable biodegradable polymers for drug delivery and tissue separation – from the bench to the clinic

9:45 AM-10:15 AM - Refreshment Break

10:15 AM-10:50 AM— Hirohide Saito, Ph.D. Professor

Institute for Quantitative Biosciences, The University of Tokyo; Center for iPS Cell Research and Application, Kyoto University RNA synthetic biology approaches to program gene expression and cell-fate

10:50 AM-11:25 AM- Aaron Anselmo, Chief Scientific Officer

VitaKey Inc.

VitaKey Inc.: Unlocking the science of nutrition

11:25 AM-12:00 PM- Henry Brem, Professor and Director of Neurosurgery

John Hopkins University

Brain tumor treatments

12:00 PM-12:35 PM- Masavo Takahashi, President

Vision Care, Inc.

AI robotics and retinal cell therapy

AFTERNOON UNSCHEDULED

EVENING PLENARY SESSION

Discussion Leaders: Rodney Pearlman and Aimee Hamilton

7:00 PM-7:35 PM—Kristi Anseth, Distinguished Professor and Tisone Professor of Chemical and Biological Engineering

University of Colorado - Boulder

Adaptable and responsive hydrogels to develop tissue models for drug screening

7:35 PM-8:10 PM - Kerry Benenato, Chief Platform Officer

Sail Biomedicines

Developing of fully programmable medicines to expand the therapeutic potential of RNA

8:10 PM-8: 35 PM- Refreshment Break

8:35 PM-9:10 PM — Chae-OK Yun, Professor

Hanyang University

Nanomaterial-based intranasal brain delivery

9:10 PM-9:45 PM - Masahiro Yasunaga, MD, PhD. Director

National Cancer Center, Exploratory Oncology Research & Clinical Trial Center

Development of next-generation antibody therapeutics utilizing DDS, molecular imaging, and cell biology

9:45 PM-10:20 PM - John Patton Senior Strategic Advisor

Kindeva Drug Delivery

Eliminate the syringe with epithelial delivery: Inhaled/nasal and intradermal delivery systems

TUESDAY, DECEMBER 17, 2024

MORNING PLENARY SESSION

Discussion Leaders: Rebecca Carrier and Oljora Rezhdo

8:00 AM-8:35 AM- Cato Laurencin, University Professor and CEO, The Cato T. Laurencin Institute

University of Connecticut Regenerative engineering

8:35 AM-9:10 AM- Kathryn Whitehead Professor

Carnegie Mellon University

Amine chemistry dictates innate and adaptive immune responses to lipid nanoparticles

9:10 AM-9:45 AM - Tetsuya Nagata, MD. Ph.D. Professor

NucleoTIDE and PepTIDE Drug Discovery Center, Department of Neurology and Neurological Science, Tokyo Medical and Dental University

Development of ligand conjugated nucleic acids therapy

9:45 AM-10:15 AM - Refreshment Break

10:15 AM-10:50 AM- Shimpei Gotoh, MD, Ph.D. Professor

Center for iPS Cell Research and Application, (CiRA), Kyoto University Implementing pluripotent stem cells for human lung disease modeling

10:50 AM-11:25 AM- Upma Sharma President & CEO

Arsenal Medical

Innovative biomaterials: Transformative medicine

11:25 AM-12:00 PM- Wei Zhu, PhD Chief Technology Officer

CELLINK Bioprinting AB

Light-based bioprinting: The next frontier in biofabrication

AFTERNOON UNSCHEDULED

EVENING POSTER SESSION 1

Discussion Leaders: Shelley Weinstock and Howie Rosen

7:30 PM - 10:00 PM Oral Presentation of Posters - Selected from Poster Session #1

Refreshment Break: 8:30 PM

Session ends at approximately 10:00 PM

WEDNESDAY, DECEMBER 18, 2024

MORNING PLENARY SESSION

Discussion Leaders: Bruce Zetter and Alex Denner

8:00 AM-8:35 AM – Sabrina Martucci Johnson, CEO

Daré Biosciences

Optimizing drug delivery that prioritizes women's health and well-being, expands treatment options, and improves outcomes

8:35 AM-9:10 AM – Patrick Anguetil, CEO

Portal Instruments

Transforming the patient experience with modern drug delivery systems

9:10 AM-9:45 AM- Shaoyi Jiang, Robert Langer '70 Family and Friends Professor

Cornell University

Zwitterionic materials and drug delivery systems.

9:45 AM-10:15 AM - Refreshment Break

10:15 AM-10:50 AM — Chad Mirkin, Director, International Institute for Nanotechnology; George B. Rathmann Professor of Chemistry, Chemical and Biological Engineering, Biomedical Engineering, Materials Science & Engineering,

Northwestern University

Structural nanomedicine: Repurposing the blueprint of life for through spherical nucleic acids

10:50 AM-11:25 AM -Katsuto Tamai MD Ph.D. Guest Professor

Osaka University Graduate School of Medicine

Development of tissue regeneration-inducing medicine (TRIM) for regenerating tissue stem cells in severely injured tissues

11:25 AM-12:00 PM - Badriprasad (Badri) Ananthanarayanan, Vice President of Platform

Earli, Inc

Teaching old lipids new tricks: Engineering LNP composition for extrahepatic delivery of DNA for lung cancer imaging and treatment

AFTERNOON UNSCHEDULED

EVENING PLENARY SESSION

Discussion Leader: Dan Hartman

7:00 PM-7:35 PM - Niva Bowers, Senior Program Officer

Bill and Melinda Gates Foundation

Advances in long-acting injectable (LAI) formulations for tuberculosis treatment with applications in LMICs

7:35 PM-8:10 PM - Ana Jaklenec, Principal Research Scientist

Massachusetts Institute of Technology

Innovations in vaccine delivery for global health

8:10 PM-8:35 PM - Refreshment Break

8:35 PM-9:10 PM - John Walker, Senior Program Officer

Bill and Melinda Gates Foundation

Long acting delivery of ARVs for HIV PrEP

9:10 PM-9:45 PM - Giancarlo Francese, Senior Program Officer

Bill and Melinda Gates Foundation

End-to-end development to address the needs of women in low- and middle-income countries: A holistic approach

9:45 PM-10:20 PM - Gregg Redeker, Senior Program Officer

Bill and Melinda Gates Foundation

Stabilizing and delivering live biotherapeutics for global health

THURSDAY, DECEMBER 19, 2024

MORNING PLENARY SESSION

Discussion Leader: Gio Traverso

8:00 AM-8:35 AM - Michael Sefton University Professor and Scientific Director, Medicine by Design

University of Toronto

Regenerative biomaterial for cell delivery in Type 1 Diabetes

8:35 AM-9:10 AM - David Edwards- Adjunct Professor/Founder Sensory Cloud Inc.

John Hopkins Medical Center/Sensory Cloud Inc.

Controlled-release hydration of the airways to prevent the rise of chronic respiratory diseases with global warming

9:10 AM-9:45 AM - Asim Siddiqui Senior Vice President, Research

Seer Bio

Discoveries in the dirt: How nanoparticle biofouling led to the creation of a revolutionary proteomics product

9:45 AM-10:15 AM - Refreshment Break

10:15 AM-10:50 AM - Takanori Takebe, MD, Ph.D., Professor

Osaka University, Tokyo Medical and Dental University, Cincinnati Children's Promise and impact of organoid medicine

10:50 AM-11:25 AM - Daniel G. Anderson, Joseph R. Mares (1924) Professor of Chemical Engineering

Massachusetts Institute of Technology

Non-viral delivery of nucleic acids for gene therapy and editing

11:25 AM-12:00 PM— Jeff Haley Senior Manager and Product Specialist

Celanese

Extruded long-acting polymer implants for macromolecules

AFTERNOON UNSCHEDULED

EVENING POSTER SESSION 2

Discussion Leader: Michael Langer

7:30 PM Oral Presentation of Posters - Selected from Poster Session #2

Refreshment Break: 8:30 PM

Session ends at approximately 10:00 PM