MONDAY, JANUARY 23
Arrival and Registration

TUESDAY, JANUARY 24
Welcome and Keynote Address
Georg Terstappen, Cambrian Biopharma, USA
Drug Delivery to the Brain: History, Strategies, Needs, & Opportunities

CNS Barriers: Categorization and Essential Physiological Considerations for Drug Delivery
Britta Engelhardt, Theodor Kocher Institute/Universität Bern, Switzerland
The BBB and Beyond: Regulatory Barriers between the CNS and Blood
Maria Lehtinen, Harvard Medical School, USA
Physiology and Dynamics of the Cerebrospinal Fluid and Adjacent Interfaces
Andrew Yang, University of California, San Francisco, USA
A Molecular Map of the Human Brain Vasculature: Implications for CNS Drug Delivery

Short Talk(s) Chosen from Abstracts

Workshop: Imaging, Big Data & Systems Pharmacology
Meredithe EK Calvert, Denali Therapeutics, USA
State-of-the-Art Imaging and Analysis for Studies Focused on CNS Delivery
Patrick Ronaldson, University of Arizona, USA
Predictive Network Analysis for Identification of Therapeutics Targeting SLC Transporters: Relevance to the Treatment of Neurological Diseases
Kapil Gadkar, Denali Therapeutics, USA
Utilizing Quantitative Systems Pharmacology to deconvolute complex PK/PD relationships in CNS Delivery Studies
Elizabeth Kathleen Neumann, UC-Davis, USA
Diversity Matters: Developing Multimodal Imaging Approaches for Assesing the Cellular and Molecular Architecture of Complex Biological Systems

Delivery to the Brain: PK/PD, Imaging and Emerging Methods
Tetsuya Terasaki, University of Eastern Finland, Tohoku University, Japan
Transporter Proteomics of the CNS Barriers for the Understanding of Rational Drug Delivery to the Brain
Stina Syvänen, Uppsala University, Sweden
PET Imaging Approaches for Assessing CNS Drug Delivery and Discovery
James Gorman, Wyss Institute, USA
In Vitro-In Vivo Correlation of BBB Transport Assays

Short Talk(s) Chosen from Abstracts

Poster Session 1

WEDNESDAY, JANUARY 25
Crossing Barriers from the Bloodstream
Reina Bendayan, University of Toronto, Canada
Regulation of Folate Transport into the Brain
Allan Jensen, Lundbeck, Denmark
Antibody Transport into the Brain from the Bloodstream: Insights from Imaging
Danica Stanimirovic, National Research Council of Canada, Canada
Receptor-Mediated Transcytosis Systems at the BBB: Many Potential Targets for CNS Drug Delivery?
Dionna W. Williams, Johns Hopkins University, USA
Learning from Virus and White Cell Transmigration Across the BBB: Therapeutic Insights

Short Talk(s) Chosen from Abstracts

Career Roundtable
Bypassing the Barriers: Central Approaches for CNS Delivery
Holly Kordasiewicz, Ionis Pharmaceuticals, USA
Delivering Antisense Oligonucleotide Therapeutics to the CNS for the Treatment of Neurodegenerative Diseases
Ghasal Naseri Kouzehgarani, AbbVie Inc., USA
Harnessing CSF Circulation for CNS Drug Delivery: Physiological Considerations
Krzysztof Bankiewicz, Ohio State University, USA
Neurosurgical Approaches for CNS Drug Delivery: The Intraparenchymal and Intraventricular Routes

Short Talk(s) Chosen from Abstracts

Poster Session 2

THURSDAY, JANUARY 26
CNS Gene Therapy, Orphan Disorders & Neuro-Oncology
Kullervo Hynynen, Sunnybrook Health Sciences Centre, Canada
Application of Focused Ultrasound in the Clinical Treatment and Detection of Brain Disorders
Robert Bell, Ascidian Therapeutics, USA
Delivering Novel RNA Exon Editing Therapies for Rare Diseases of the Eye and CNS
Sadhana Jackson, NINDS, National Institutes of Health, USA
The Blood-Tumor Barrier: New Perspectives on Drug Delivery and Clinical Relevance
Benjamin E. Deverman, Broad Institute of MIT and Harvard, USA
Talk Title to be Announced

Short Talk(s) Chosen from Abstracts

Challenges and Opportunities in CNS Drug Delivery and Development: Academic, Biotech, Foundation, Pharma and Venture Capital Perspectives
Matthew S. Gentry, University of Florida, USA
Inca Dieterich, ARCH Venture Partners, USA
Norman Matthew Ellinwood, National MPS Society, USA

* Session Chair † Invited but not yet accepted     Program current as of November 17, 2022 Meal formats are based on meeting venue.
For the most up-to-date details, visit https://www.keystonesymposia.org.
From CNS Drug Delivery to CNS Drug Development: Methodologies & Perspectives for the Future

Ryan J. Watts, Denali Therapeutics Inc, USA
*Engineering Brain Delivery to Treat Neurodegenerative Diseases*

Martin Lauritzen, University of Copenhagen, Denmark
*Real-Time in vivo Imaging of Transport Across the BBB using Multiphoton Microscopy*

Short Talk(s) Chosen from Abstracts

Closing Keynote Address

Viviana Gradinaru, California Institute of Technology, USA
*Imaging Targeted Expression with CNS Gene Therapy: Cutting Edge Approaches and Future Directions*

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

FRIDAY, JANUARY 27

Departure