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Schedule

7:45–8:30	REGISTRATION and CONTINENTAL BREAKFAST
8:30–8:40	**Welcome** Timothy J. Kamp, M.D.
Session 1:	Understanding Neurodevelopment Moderator: Randolph Ashton, Ph.D..
8:40–9:20	**Molecular and cellular evolution of the primate dorsolateral prefrontal cortex** Andre Sousa, Ph.D.
9:20–10:00	**A human stem-cell model of neural tube folding morphogenesis** Eyal Karzbrun, Ph.D.
10:00–10:20	BREAK
Session 2:	Deterring Degeneration: Using Models and Genomics to Decipher and Prevent Neurodegeneration Moderator: Su-Chun Zhang, Ph.D.
10:20–11:00	**Modeling neurodegeneration with iPSCs: challenges and opportunities** Li Gan, Ph.D..
11:00–11:40	**Parkinson cell atlas: Through a spatio-temporal metaverse to precision medicine** Clemens Scherzer, M.D.
11:40–12:20	Rapid Fire Poster Session
12:20–1:30	LUNCH, POSTER SESSION & SPONSOR EXHIBITS
Session 3:	Modeling Molecular Mechanisms – Using Organoids to Understand Disease Moderator: Xinyu Zhao, Ph.D.
1:30–2:10	**Human brain organoids to study neural development and disease** Momoko Watanabe, Ph.D.
2:10–2:50	**Reconciling clinical observations with retinal organoid disease phenotypes** David Gamm, M.D., Ph.D.
2:50–3:10	BREAK
Session 4:	From Bench to Bedside – Translational Advances in Treating Degenerative Neurological Diseases Moderator: David Gamm, M.D., Ph.D.
3:10–3:50	**iPS cell-based therapy for Parkinson's disease** Jun Takahashi, Ph.D.
3:50–4:30	**A phase I/IIA trial to test safety and feasibility of an autologous iPS cell-derived retinal pigment epithelium patch in age-related macular degeneration patients** Kapil Bharti, Ph.D.
4:30–4:40	POSTER CONTEST AWARDS & CLOSING REMARKS
4:40–5:30	RECEPTION

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17th Wisconsin Stem Cell Symposium

Stem Cell Innovations in Building and Rebuilding the Nervous System

April 19, 2023 | Madison, WI

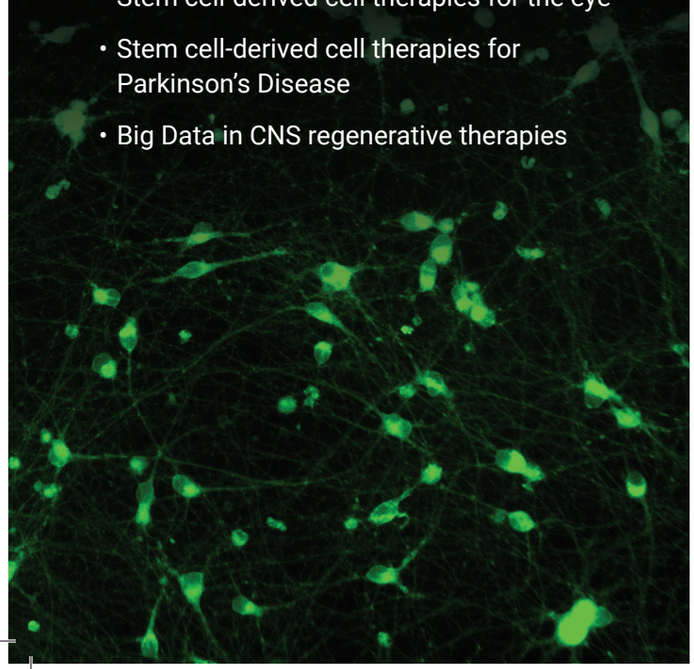
Image courtesy of Carissa Sirois,
Xinyu Zhao Group,
University of Wisconsin–Madison

Overview

This Symposium is coordinated by the University of Wisconsin–Madison Stem Cell & Regenerative Medicine Center and the BTC Institute. Scientists' ability to model CNS morphogenesis, development, and disease and to treat neurodegenerative diseases using human pluripotent stem cell-derived technologies has never been greater. This symposium will bring together world leaders to present and discuss recent advancements, promising strategies, and clinical trials in regenerative technologies for preventing and treating neurological disorders.

Highlighted Topics

- Modeling neurodevelopment and neurodegeneration using iPSCs
- Bioengineering CNS morphogenesis, development, and disease using organoids
- Stem cell-derived cell therapies for the eye
- Stem cell-derived cell therapies for Parkinson's Disease
- Big Data in CNS regenerative therapies



Speakers

Kapil Bharti, Ph.D.
Senior Investigator: Ocular and Stem Cell Translational Research Section, National Eye Institute, Bethesda, MD

David Gamm, M.D., Ph.D.
Professor, Ophthalmology and Visual Sciences; RRF Emmett A. Humble Distinguished Director McPherson Eye Research Institute; Sandra Lemke Trout Chair in Eye Research; Waisman Center, University of Wisconsin – Madison, Madison, WI

Li Gan, Ph.D.
Professor of Neuroscience, Weill Cornell Medicine Helen & Robert Appel Alzheimer's Disease Research Institute, New York, NY

Eyal Karzbrun, Ph.D.
Assistant Professor, Weizmann Institute of Science, Rehovot, Center District, Israel

Clemens Scherzer, M.D.
Professor of Neurology, Harvard Medical School; Director, Precision Neurology Program and Director, Center for Advanced Parkinson Disease Research, Brigham and Women's Hospital, Boston MA

Andre M.M. Sousa, Ph.D.
Assistant Professor, Department of Neuroscience, Department of Neuroscience, School of Medicine and Public Health, University of Wisconsin – Madison, Madison, WI

Jun Takahashi, M.D., Ph.D.
Director and Professor, Center for iPS Cell Research and Application, Kyoto University, Kyoto, Japan

Momoko Watanabe, Ph.D.
Assistant Professor, Department of Anatomy & Neurobiology, Sue & Bill Gross Stem Cell Research Center, School of Medicine, University of California, Irvine, Irvine, CA

Organizing Committee | Moderators

Randolph Ashton, Ph.D.
Associate Professor, Wisconsin Institute of Discovery & Department of Biomedical Engineering; Associate Director, Stem Cell and Regenerative Medicine Center University of Wisconsin – Madison, Madison, WI

David Gamm, M.D., Ph.D.
Professor, Ophthalmology and Visual Sciences, Waisman Center, University of Wisconsin – Madison, Madison, WI

Timothy J. Kamp, M.D., Ph.D.
Professor, Medicine, Cell and Regenerative Biology; Director, Stem Cell and Regenerative Medicine Center, University of Wisconsin – Madison, Madison, WI

Su-Chun Zhang, Ph.D.
Professor, Neuroscience and Neurology, Waisman Center, University of Wisconsin – Madison, Madison, WI

Xinyu Zhao, Ph.D.
Professor, Department of Neuroscience, School of Medicine and Public Health, University of Wisconsin – Madison, Madison, WI

Poster Judges

Randolph Ashton, Ph.D.
Associate Professor, Wisconsin Institute of Discovery & Department of Biomedical Engineering; Associate Director, Stem Cell and Regenerative Medicine Center University of Wisconsin – Madison, Madison, WI(Chair)

Anita Bhattacharyya, Ph.D.
Assistant Professor, Cell and Regenerative Biology, School of Medicine and Public Health; Principal Investigator, Waisman Center, University of Wisconsin – Madison, Madison, WI

Timothy Gomez, Ph.D.
Professor, Department of Neuroscience, School of Medicine and Public Health, University of Wisconsin – Madison, Madison, WI

Xinyu Zhao, Ph.D.
Professor, Department of Neuroscience, School of Medicine and Public Health, University of Wisconsin – Madison, Madison, WI