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Schedule

7:30–8:15 REGISTRATION & CONTINENTAL BREAKFAST

8:15–8:20 WELCOME, Timothy J. Kamp, M.D., Ph.D.

SESSION 1: MECHANISMS GOVERNING HEMATOPOIETIC STEM/PROGENITOR CELL DEVELOPMENT & FUNCTION

Moderators: Jing Zhang, Ph.D., Marjorie Brand, Ph.D.

8:20–9:00 Understanding & Targeting Stem Cell Transcription Dynamics & Heterogeneity, Ulrich G. Steidl, M.D., Ph.D.

9:00–9:40 Characterization of Multi-cellular Niches Supporting Hematopoietic Stem Cells in Distinct Zones, Linheng Li, Ph.D.

9:40–10:00 Reprogramming of Stem Cells during Contact with the Niche, Owen Tamplin, Ph.D.

10:00–10:20 BREAK

10:20–10:40 Macrophage Transfer to Hematopoietic Stem Cells Assigns Residence in Bone Marrow, Xin Gao, Ph.D.

10:40–11:20 Regulation of Innate Immune Signaling by RUNX1, Nancy Speck, Ph.D.

11:20–11:40 Gata2 Noncoding Genetic Variation as a Determinant of Hematopoietic Stem/Progenitor Cell, Alexandra Soukup, Ph.D.

11:40–12:10 Rapid-Fire Poster Session

12:10–1:30 LUNCH, POSTER SESSION & SPONSOR EXHIBITS

SESSION 2: SYSTEMS AND STRATEGIES TO ENGINEER STEM CELLS

Moderators: Igor Slukvin, Ph.D., Jenny Gumperz, Ph.D.

1:30–2:10 Blood Stem Cell Expansion: Technology to Biology, Adam Wilkinson, Ph.D.

2:10–2:50 Differentiation & Characterisation of Multilineage Repopulating Cells from Human Pluripotent Stem Cells, Andrew Elefanty, Ph.D. & Elizabeth Ng, Ph.D.

2:50–3:10 BREAK

3:10–3:50 Separating & Uniting Genetic & Non-genetic Hierarchies in Human AML, Erini Papapetrou, M.D., Ph.D.

3:50–4:30 Genome Editing of Hematopoietic Stem Cells: Technology Improvements & Applications, Matthew Porteus, M.D., Ph.D.

4:30–4:45 POSTER CONTEST AWARDS & CLOSING REMARKS

4:45–5:45 RECEPTION

18th Wisconsin Stem Cell Symposium

Blood Stem Cells: Mechanisms, Pathogenesis, & Genome Editing

April 17, 2024 | Madison, WI

Image courtesy of Xin Gao group, University of Wisconsin-Madison

Key Topics

This year's Symposium is coordinated by the University of Wisconsin–Madison Stem Cell & Regenerative Medicine Center, the Wisconsin Blood Cancer Research Institute and the BTC Institute.

Though blood stem cells were the first adult stem cells to be isolated and defined, there has been considerable recent progress in mechanisms endowing these stem cells with unique activity, establishing their complex cellular landscapes, engineering systems to generate stem cells, and innovating stem cell-based therapeutics.

Speakers will address mechanisms of hematopoietic stem cell and progenitor cell development and function and systems and strategies to engineer stem cells.

Poster Judges

Randolph Ashton, Ph.D.

Associate Professor, Biomedical Engineering & Wisconsin Institute for Discovery; Associate Director, Stem Cell & Regenerative Medicine Center, University of Wisconsin–Madison, Madison, WI

Sean Palecek, Ph.D.

Milton J. and A. Maude Shoemaker Professor, Department of Chemical & Biological Engineering, University of Wisconsin-Madison, Madison, WI

Xuan Pan, VMD, Ph.D.

Associate Professor, School of Veterinary Medicine, University of Wisconsin-Madison, Madison, WI

Lixin Rui, Ph.D.

Associate Professor, Hematology, Medical Oncology and Palliative Care, Department of Medicine, School of Medicine and Public Health, University of Wisconsin-Madison, Madison, WI

stemcells.wisc.edu
www.btc.org

Speakers

Andrew Elefanty, Ph.D.

Professor Emeritus, Philosophy and Religious Studies; Group Leader of the Blood Diseases Laboratory; Murdoch Children's Research Institute, Royal Children's Hospital, Flemington Road, Parkville Victoria, Australia

Elizabeth Ng, Ph.D.

Team Leader, Blood Development Laboratory; Murdoch Children's Research Institute, Royal Children's Hospital, Flemington Road, Parkville Victoria, Australia

Xin Gao, Ph.D.

Assistant Professor of Pathology; Wisconsin Blood Cancer Research Institute, University of Wisconsin-Madison, Madison, WI

Lingheng Li, Ph.D.

Investigator, Stowers Institute for Medical Research; Professor, The Graduate School of the Stowers Institute; Co-leader, Cancer Biology, The University of Kansas Cancer Center; Professor; Department of Pathology & Laboratory Medicine, University of Kansas School of Medicine; Kansas City, MO

Eirini Papapetrou, M.D., Ph.D.

Director of the Center for Advancement of Blood Cancer Therapies (CABCT); Professor, Departments of Oncological Sciences, and Medicine, Hematology and Medical Oncology, Icahn School of Medicine at Mount Sinai, New York, NY

Matthew Porteus, M.D., Ph.D.

Principal Investigator, Stanford Medicine, Division of Stem Cell Transplantation and Regenerative Medicine, Stanford University, Stanford, CA

Alexandra Soukup, Ph.D.

Scientist I, Bresnick Laboratory, Blood Cancer Research Institute, University of Wisconsin – Madison, Madison, WI

Nancy Speck, Ph.D.

Professor and Chair, Department of Cell and Developmental Biology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA

Ulrich G. Steidl, M.D., Ph.D.

Professor and Department Chair, Cell Biology; involved in cancer research at Albert Einstein College of Medicine, Bronx, NY

Owen Tamplin, Ph.D.

Assistant Professor, Cell and Regenerative Biology. University of Wisconsin – Madison, Madison, WI

Adam Wilkinson, Ph.D.

Associate Professor of Stem Cell Biology, Radcliffe School of Medicine, Medical Sciences Division, University of Oxford, Oxford, United Kingdom

Organizing Committee

Marjorie Brand, Ph.D.

Professor of Cell and Regenerative Biology, Wisconsin Blood Cancer Research Institute, University of Wisconsin-Madison, Madison, WI

Emery Bresnick, Ph.D.

Gary Felsenfeld Professor of Cell and Regenerative Biology; Lowell and Gwendolyn Smythe Endowed Professor; Director, UW-Madison Blood Cancer Research Program, University of Wisconsin–Madison, Madison, WI

Jane Churpek, M.D., M.S.

Associate Professor of Medicine, Wisconsin Blood Cancer Research Institute, University of Wisconsin-Madison, Madison, WI

Xin Gao, Ph.D.

Assistant Professor of Pathology, Wisconsin Blood Cancer Research Institute, 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

Igor Slukvin, M.D., Ph.D.

Henry Pitot Professor of Pathology and Laboratory Medicine, Wisconsin Blood Cancer Research Institute, University of Wisconsin-Madison, Madison, WI

Owen Tamplin, Ph.D.

Assistant Professor of Cell and Regenerative Biology, Wisconsin Blood Cancer Research Institute, University of Wisconsin-Madison, Madison, WI

Moderators

Marjorie Brand, Ph.D.

Professor of Cell and Regenerative Biology, Wisconsin Blood Cancer Research Institute, University of Wisconsin-Madison, Madison, WI

Jenny Gumperz, Ph.D.

Professor of Medical Microbiology & Immunology, University of Wisconsin School of Medicine and Public Health, Madison, WI

Igor Slukvin, M.D., Ph.D.

Henry Pitot Professor of Pathology and Laboratory Medicine, Wisconsin Blood Cancer Research Institute, University of Wisconsin-Madison, Madison, WI

Jing Zhang, Ph.D.

Professor of Oncology, McArdle Laboratory for Cancer Research, Department of Oncology, University of Wisconsin-Madison, Madison, WI