



PBII

Pediatric Biomedical
Imaging Initiative

3RD ANNUAL SCIENTIFIC SYMPOSIUM

Imaging Structure and Functions of Hippocampus

February 25, 2022

For more information and to register, please visit www.stjude.org/PBII

St. Jude Children's Research Hospital is accredited by
the Accreditation Council for Continuing Medical Education (ACCME)
to provide continuing medical education for physicians.

Better Imaging. Better Outcomes.

2022 Scientific Symposium

SPEAKERS



PBII
Pediatric Biomedical
Imaging Initiative

Sahaja Acharya, MD

Director
Pediatric Radiation Oncology
Johns Hopkins Medicine

David G. Amaral, PhD

Director, Autism Center of Excellence, the MIND Institute
Distinguished Professor
Department of Psychiatry and Behavioral Sciences
University of California, Davis

Jean Augustinack, PhD

Assistant Professor of Radiology
Director, Histology Laboratory
Athinoula A. Martinos Center for Biomedical Imaging
Massachusetts General Hospital/Harvard Medical School

Asim K. Bag, MD

Associate Member
Co-Chair, Pediatric Biomedical Imaging Initiative
Director, Pediatric Oncologic Imaging Education
Department of Diagnostic Imaging
St. Jude Children's Research Hospital

Heather A. Cameron, PhD

Senior Investigator
Section of Neuroplasticity
National Institute of Mental Health
National Institute of Health

Heather A. Conklin, PhD

Full Faculty Member
Chief, Section of Neuropsychology
Department of Psychology
St. Jude Children's Research Hospital

Das Sandhitsu, PhD

Research Assistant Professor of Neurology
University of Pennsylvania

Ana Daugherty, PhD

Assistant Professor
Institute of Gerontology, Department of Psychology
Department of Psychiatry and Behavioral Neurosciences
Wayne State University
Chair, Steering Committee
Hippocampal Subfields Group

Kevin R. Krull, PhD

Member
Endowed Chair in Cancer Survivorship
St. Jude Children's Research Hospital

Erik H. Middlebrooks, MD

Professor
Radiology
Mayo Clinic, Florida

Michelle L. Monje, MD, PhD

Professor of Neurology
Stanford University
Investigator, Howard Hughes Medical Institute
Stanford University

Kirsten K. Ness, PT, PhD, FAPTA

Member
Department of Epidemiology
and Cancer Control
St. Jude Children's Research Hospital

Zoltán Patay, MD, PhD

Chair
Co-Chair, Pediatric Biomedical Imaging Initiative
Department of Diagnostic Imaging
St. Jude Children's Research Hospital

Craig Stark, PhD

Professor, Neurobiology and Behavior
School of Biological Sciences
University of California, Irvine

Michael A. Yassa, PhD

Professor and Chancellor's Fellow
Director, Center for the Neurobiology of Learning and Memory
Director, UCI Brain Initiative
University of California, Irvine

**Imaging Structure and
Functions of Hippocampus**

2022 Scientific Symposium

SCHEDULE

7:30 AM – 8:00 AM *Check-in and Breakfast*

8:00 AM – 8:05 AM [Welcome](#)
Zoltán Patay, MD, PhD
St. Jude Children's Research Hospital

8:05 AM – 8:50 AM **KEYNOTE LECTURE:**
[Inflammatory Disruption of Hippocampal Neurogenesis in Cancer Therapy-
Related Cognitive Impairment and Beyond](#)
Michelle L. Monje, MD, PhD
Stanford University

STRUCTURE AND FUNCTIONS OF THE HIPPOCAMPUS

8:55 AM – 9:20 AM [Microstructural and Developmental Anatomy of the Hippocampus](#)
David G. Amaral, PhD
University of California, Davis

9:25 AM – 9:50 AM [Role of Neurogenesis in Modulating Hippocampal Functions](#)
Heather A. Cameron, PhD
National Institute of Health

9:50 AM – 10:05 AM **BREAK**

10:05 AM – 10:30 AM [Cognitive Outcome in Childhood Cancer Survivors Related To Disease and
Treatment-Induced Hippocampal Injury](#)
Heather A. Conklin, PhD
St. Jude Children's Research Hospital

10:35 AM – 11:00 AM [Delayed Cognitive Outcome in Childhood Cancer Survivors Related To
Cancer Therapy-Induced Hippocampal Injury](#)
Kevin R. Krull, PhD
St. Jude Children's Research Hospital

IMAGING OF THE HIPPOCAMPUS

11:05 AM – 11:30 AM [Techniques of Segmenting Hippocampal Subfields](#)
Ana Daugherty, PhD
Wayne State University

2022 Scientific Symposium

11:30 AM - 12:00 PM BREAK/LUNCH

12:00 PM - 1:00 PM **DANNY THOMAS LECTURE:**
[Functional Imaging of the Hippocampus](#)
Craig Stark, PhD
University of California, Irvine

1:05 PM - 1:30 PM [Linking Hippocampal Structure and Function to Pathology](#)
Michael A. Yassa, PhD
University of California, Irvine

1:35 PM - 2:00 PM [Imaging Damaged Hippocampus](#)
Asim K. Bag, MD
St. Jude Children's Research Hospital

2:00 PM - 2:15 PM BREAK

ULTRA-HIGH-FIELD IN IMAGING OF THE HIPPOCAMPUS

2:15 PM - 2:40 PM [Imaging Hippocampal Substructure at a Mesoscopic Scale Using Ultra-High-Field MRI](#)
Jean Augustinack, PhD
Martinos Center

2:45 PM - 3:10 PM [Ultra-High-Field MRI of the Hippocampus: Challenges and Opportunities](#)
Sandhitsu Das, PhD
University of Pennsylvania

3:15 PM - 3:40 PM [Ultra-High-Field MRI of the Hippocampus: How it is Changing Management of CNS Disorders](#)
Erik H. Middlebrooks, MD
Mayo Clinic, Florida

AVOIDING HIPPOCAMPAL INJURY AND AUGMENTING HIPPOCAMPAL FUNCTIONING

3:45 PM - 4:10 PM [Radiation Therapy Planning Strategies to Avoid Hippocampal Injury](#)
Sahaja Acharya, MD
Johns Hopkins Medicine

4:15 PM - 4:40 PM [Augmentation of Hippocampal Functions by Environmental Enrichment](#)
Craig Stark, PhD
University of California, Irvine

4:45 PM - 5:10 PM [Strategies to Improve Hippocampal Functions](#)
Kirsten K. Ness, PT, PhD, FAPTA
St. Jude Children's Research Hospital

5:15 PM - 5:20 PM **Closing Remarks**
Asim K. Bag, MD
St. Jude Children's Research Hospital