Neuroscience Center
6001 Executive Blvd.
Room C/D
Bethesda, MD

AGENDA

MONDAY, June 23rd

7:30–8:00 am  Registration

8:00 am  Opening and Welcome:
8:00–8:10 am  Story Landis, Director, NINDS
8:10–8:20 am  Jill Morris, Program Director, NINDS, Overview of NIH efforts

8:20 am  Session 1: Classifications: Purpose and Problems (Chair: Jim Barkovich)

8:20–8:50 am  Dan Doherty, University of Washington: Advances in midbrain-hindbrain malformation diagnosis

8:50–9:20 am  Dave Limbrick, Washington University School of Medicine: Hydrocephalus: A Clinician’s Perspective

9:20–9:50 am  Jim Barkovich, University of California, San Francisco: MBHB Malformations: a classification

9:50–10:05 am  BREAK

10:05–10:35 am  Francis Brunelle and Nathalie Boddaert, Necker Hospital: Midbrain-hindbrain malformation. A practical genetic imaging algorithm: from MRI to genes
10:35–11:05 am
Charles Raybaud, The Hospital for Sick Children: Fetal hydrocephalus with mid/hindbrain malformation: what do we understand?

11:05–11:35 am
Hannah Tully, Seattle Children’s Research Institute: A new approach to the classification of developmental hydrocephalus

11:35 – 1:15 pm
WORKING LUNCH: PANEL DISCUSSION
Panel Discussion of Objective 1:
- Classifications and Diagnosis: Purpose and Problems
  a. Pre-natal malformation detection: Is it predictive?
  b. Structural features: Correlation with natural history, outcomes

1:15 pm
Session 2: Genetics of Midbrain/Hindbrain Malformations and Congenital Hydrocephalus: common biology? (Chair: Bill Dobyns)

1:15-1:45 pm
Bill Dobyns, Seattle Children’s Research Institute: A new approach to the genetics of developmental hydrocephalus

1:45–2:15 pm
Naiara Akizu, University of California, San Diego: Unveiling mechanism and treatment of cerebellar disorders from disease gene discovery

2:15–2:45 pm
Colin Johnson, University of Leeds: Insights into the complex disease mechanisms of severe ciliopathies: from genes to mouse models

2:45 –3:00 pm
BREAK

3:00–3:30 pm
Viktor Chizhikov, The University of Tennessee Health Science Center: Misspecification of cerebellar neurons into brain stem fates leads to cerebellar agenesis in the absence of Ptf1a function

3:30–4:00 pm
Tamara Caspary, Emory University: Interpreting signaling through the primary cilium

4:00–4:30 pm
Allison Ashley-Koch, Duke University School of Medicine: Genetics of Chiari Malformations: Current findings
Russell J. Ferland, Albany Medical College: *Mutations in CSPP1 cause primary cilia defects and Joubert syndrome*

**5:00 – 6:00 pm**

**PANEL DISCUSSION**

**Discussion of Objective 2:**
- Genetics of Midbrain/Hindbrain Malformations and Hydrocephalus: Common biology?

**6:30 pm**

**Dinner and Presentations by the Sponsors**

Dinner is sponsored by the Hydrocephalus Association, Chiari & Syringomyelia Foundation and the Dandy Walker Alliance

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**TUESDAY, June 24th:**

**8:00 am**

**Session 3: Animal Models of Midbrain/Hindbrain Malformations and Hydrocephalus: What can we learn? (Chair: Kathleen J. Millen)**

8:00–8:30 am

Roy Sillitoe, Baylor College of Medicine: *Mapping cerebellar circuits: development and dysfunction*

8:30–9:00 am

Alexandra Joyner, Sloan-Kettering Institute: *Regulating the production of input neurons and target fields to form normal cerebellar circuits*

9:00–9:30 am

Eva Anton, University of North Carolina at Chapel Hill School of Medicine: *Arl13b, Primary Cilia, and the Formation of Cerebral Cortex*

**9:30–9:45 am**

**BREAK**

**9:45–10:15 am**

Kathleen Millen, U of Washington: *Head mesenchyme influences very early choroid plexus and cerebellar development*

**10:15 – 10:45 am**

Tim Vogel, Cincinnati Children’s Hospital: *Ciliopathy mouse models to study the genesis of hydrocephalus*

**10:45 – 11:15 am**

Jennifer Schmidt, University of Illinois at Chicago: *Abnormal ciliary microtubule organization and juvenile hydrocephalus in Jhylac2 mice*
11:15 – 11:45 am
James P. (Pat) McAllister, University of Utah: *Critical comparisons between genetic and acquired models of hydrocephalus*

11:45 – 1:00 pm  WORKING LUNCH: PANEL DISCUSSION
Panel Discussion of Objective 3:
- Animal models of Midbrain/Hindbrain Malformations and Hydrocephalus: What can we learn?

1:00 pm  Session 4: New Models for Thinking about Midbrain/Hindbrain Malformations and Hydrocephalus and Potential Treatments (Chair: Dave Limbrick)

1:00–1:30 pm
Bonnie Blazer-Yost, Indiana University-Purdue University: *TRP channels in hydrocephalus*

1:30–2:00 pm
Jerold Chun, Scripps Research Institute: *Lysophospholipid signaling in post-hemorrhagic hydrocephalus*

2:00-2:30 pm
Dave Limbrick, Washington University School of Medicine: *CSF Markers of Hydrocephalus: Progress Towards Improving Clinical Management and Outcomes*

2:30-2:45 pm  BREAK

2:45-3:15 pm
Anthony Wynshaw-Boris, Case Western University School of Medicine: *The Wnt/PCP pathway, ependymal cilia polarity and hydrocephalus*

3:15-3:45 pm
Gregory Heuer, The Children’s Hospital of Philadelphia: *Impact of Fetal Myelomeningocele Closure on Chiari Malformation and Hydrocephalus*

3:45-4:45 pm  FINAL PANEL DISCUSSION
Discussion of Mission Aim 4:
- New Models for Thinking about Midbrain/Hindbrain Malformations and Hydrocephalus and Potential Treatments

4:45-5:30 pm  SUMMARY AND MOVING FORWARD