

The Developing Brain Institute *at* PAS 2026

April 24-27
in
Boston

This year, research-scientists affiliated with the *Developing Brain Institute (DBI)* at Children's National had 10 Oral Abstracts and 14 Posters accepted for *Pediatric Academic Societies (PAS) 2026*. "The Newborn Connectome in Antenatal Opioid Exposure," a poster led by **Josepheen De Asis-Cruz, M.D., Ph.D.**, scored in the Top 5% of all abstracts submitted. And **Srikanth Damera, M.D., Ph.D.**, was honored with a PAS 2026 Trainee Travel Grant for the high quality of an Oral Abstract that he led, "Fetal Subplate Dysmaturation Predicts Early Motor Outcomes in Congenital Heart Disease," as well as the SPR House Officer Research Award for a poster he led, "Fetal Brain Shape Predicts Gestational Age and Early Dysmaturation in Congenital Heart Disease." **Katherine M. Ottolini, M.D.**, will moderate "Neonatal Fetal Nutrition & Metabolism 1" on April 25 from 8-9:30 a.m., while **Kevin M. Cook Ph.D.**, will moderate "Neonatal Neurology 4: Clinical-Prenatal" on April 26 from 2:30-4 p.m. Collaborating researcher, **Sarah B. Mulkey, M.D., Ph.D.**, will moderate "Global Neonatal & Children's Health 1" on April 25 from 2-3:30 p.m. And **Josepheen De Asis-Cruz, M.D., Ph.D.** is a panelist in a Basic-Translational-Clinical Roundtable on April 27 from 10-11:30 a.m. All presentations will be at the Convention Center. Additional details follow.



Presenters



Sudeepta K. Basu, M.D.



Kevin M. Cook, Ph.D.



Srikanth Damera, M.D., Ph.D.



Josepheen De Asis-Cruz, M.D., Ph.D.



Elan Donnellan, Ph.D.



Grace Hoover, MD Student



Jung-Hoon Kim, Ph.D.



Stephanie L. Merhar, M.D., MS



Sarah B. Mulkey, M.D., Ph.D.



Katherine M. Ottolini, M.D.



Anola J. Stage, M.D., IBCLC



Caroline Wambach



Yao Wu, Ph.D.

PAS 2026 Presenter Schedule

FRIDAY

April 24



Stephanie L.
Merhar,
M.D., MS



Yao Wu,
Ph.D.

Poster Presentations

5:30-8 p.m. /

**Stephanie L.
Merhar, M.D., MS**

Presenter

Merhar S, et al. “Prenatal Opioid Exposure Is Associated With Cognitive Outcomes at 12 Months of Age After Adjustment for Covariates.” Poster. — **Exhibit Hall. Poster No.: 69**

Yao Wu, Ph.D.

Presenter

Wu Y, De Asis-Cruz J, Kapse K, Merhar SL, Bann CM, Newman JE, Davis JM, Ambalavanan N, De Mauro SB, Lorch SA, Wilson-Costello D, Poindexter BB, Mack N, Peralta-Carcelen M, Limperopoulos C. “Associations Between Maternal Mental Health and Amygdala and Hippocampus Volumes in Newborns With Antenatal Opioid Exposure.” Poster. — **Exhibit Hall. Poster No.: 123**

— SATURDAY —
April 25



Katherine M. Ottolini, M.D.



Sarah B. Mulkey, M.D., Ph.D.



Sudeepta K. Basu, M.D.



Josepheen De Asis-Cruz, M.D., Ph.D.

Moderated Sessions

8-9:30 a.m. — Room 209 West
Katherine M. Ottolini, M.D.
Moderator

“Neonatal Fetal Nutrition & Metabolism 1.” Oral Abstract.

2-3:30 p.m. — Room 212 West
Sarah B. Mulkey, M.D., Ph.D.
Moderator

“Global Neonatal & Children’s Health 1.” Oral Abstract.

Poster Presentations

3:30-5:45 p.m. /

Sudeepta K. Basu, M.D.

Presenter

Basu S, Govindan RB, Kapse K, du Plessis AJ, Ottolini K, Murnick J, Ngwa J, Limperopoulos C. “Active Sleep During Extrauterine Third Trimester Is Associated With Neurophysiologic Maturation in Preterm Infants.” Poster. —**Exhibit Hall. Poster No.: 655**

Basu S, Govindan RB, Kapse K, du Plessis AJ, Ottolini K, Murnick J, Ngwa J, Limperopoulos C. “Active Sleep During Extrauterine Third Trimester Is Positively Associated With Brain White Matter Volume in Preterm Infants.” Poster.

—**Exhibit Hall. Poster No.: 656**

Josepheen De Asis-Cruz, M.D., Ph.D.

Presenter

De Asis-Cruz J, Wu Y, Kim DY, Kapse K, Merhar SL, Bann CM, Newman JE, Mack N, DeMauro SB, Ambalavanan N, Lorch SA, Wilson-Costello D, Poindexter BB, Peralta-Carcelen M, Davis JM, Limperopoulos C. “The Newborn Connectome in Antenatal Opioid Exposure.” †Poster that scored in the Top 5% of all abstracts submitted. —**Exhibit Hall. Poster No.: 677**

— SATURDAY —
April 25
— CONTINUED —



Josepheen De Asis-Cruz, M.D., Ph.D.



Jung-Hoon Kim, Ph.D.



Anola J. Stage, M.D., IBCLC



Yao Wu, Ph.D.

Poster Presentations

3:30-5:45 p.m. /

Josepheen De Asis-Cruz, M.D., Ph.D.

Co-Senior Author

Leonard A, Chow M, Rasmussen J, Madan N, Salih K, Kapse K, Limperopoulos C, Davis JM, **De Asis-Cruz J**, Yen E. “Brain-Growth Connection: Impact of Maternal Opioid Use on Neonatal Hypothalamic Changes and Anthropometric Measurements.” Poster. — **Exhibit Hall. Poster No.: 678**

Jung-Hoon Kim, Ph.D.

Presenter

Kim JH, De Asis-Cruz J, Kapse K, Wu Y, Merhar SL, Bann CM, Newman JE, Mack N, DeMauro SB, Ambalavanan N, Lorch SA, Wilson-Costello D, Poindexter BB, Peralta-Carcelen M, Davis JM, Limperopoulos C. “Nonlinear Brain Network Disruption in Opioid-Exposed Neonates Revealed by Deep Generative Modeling.” Poster. — **Exhibit Hall. Poster No.: 676**

Nicole Mack, MS

Presenter

Mack N, Divaris K, Bann CM, Newman JE, DeMauro S, Ambalavanan N, Lorch SA, Wilson-Costello D, Poindexter B, Peralta-Carcelen M, Davis JM, Limperopoulos C, Merhar SL. “Early Childhood Caries Risk Factors Differ Between Children With Prenatal Opioid Exposure and Unexposed Controls.” Poster. — **Exhibit Hall. Poster No.: 182**

Anola J. Stage, M.D., IBCLC

Presenter

Stage A, Hui SCN, Kapse K, Andescavage N, Ottolini K, Basu S, Ngwa J, Murnick J, Limperopoulos C. “Relationship of Clinical Co-Morbidities With the Altered maturational Trajectory of Cerebral Metabolites in Preterm Infants.” Poster. — **Exhibit Hall. Poster No.: 672**

Yao Wu, Ph.D.

Presenter

Wu Y, Merhar SL, Bann CM, Newman JE, Kapse K, De Asis-Cruz J, Davis JM, Ambalavanan N, De Mauro SB, Lorch SA, Wilson-Costello D, Poindexter BB, Mack N, Peralta-Carcelen M, Limperopoulos C. “Neonatal Brain Volumes Differ Across Neurobehavioral Profiles and Vary by Antenatal Opioid Exposure.” Poster. — **Exhibit Hall. Poster No.: 675**

SUNDAY
April 26



Srikanth Damera,
M.D., Ph.D.



Caroline
Wambach



Josepheen
De Asis-Cruz,
M.D., Ph.D.



Kevin M. Cook,
Ph.D.



Katherine M.
Ottolini, M.D.



Sarah B. Mulkey,
M.D., Ph.D.

Platform and Poster Presentations

9:30-11:30 a.m. /

Srikanth Damera,
M.D., Ph.D.

Presenter

Damera S, Andescavage N, Limperopoulos C. “Fetal Brain Shape Predicts Gestational Age and Early Dysmaturation in Congenital Heart Disease.” 8 Poster honored with an SPR House Officer Research Award. — **Exhibit Hall. Poster No.: 408**

Caroline
Wambach

Presenter

Wambach C, De Asis-Cruz J, Ngwa JS, Weiner S, Limperopoulos C, Andescavage N. “Social-Emotional Development and Functional Connectivity in Neonates.” Poster. — **Exhibit Hall. Poster No.: 601**

12:30-12:45 p.m. /

Josepheen
De Asis-Cruz,
M.D., Ph.D.

Presenter

De Asis-Cruz J, Andescavage N, Limperopoulos C. “Altered Hypothalamic Structure and Functional Connectivity in Neonates Exposed to Maternal Diabetes.” Oral Abstract. — **Room 101 West**

Moderated Session

2:30-4 p.m. — **Room 204 West**
Kevin M. Cook, Ph.D.

Moderator

“Neonatal Neurology 4: Clinical – Prenatal.” Oral Abstract.

2:30-2:45 p.m. /

Katherine M. Ottolini, M.D.

Presenter

Ottolini K, Ngwa J, Basu S, Kapse K, Cook KM, Wu Y, Murnick J, du Plessis AJ, Andescavage N, Limperopoulos C. “Impaired *Ex Utero* Brain Growth of Preterm Infants Compared to *In Utero* Healthy Fetuses.” Oral Abstract. → **Room 204 West**

2:45-3 p.m. /

Kevin M. Cook, Ph.D.

Presenter

Cook KM, De Asis-Cruz J, Murnick J, Ottolini K, Basu S, Andescavage N, du Plessis AJ, Limperopoulos C. “Maturation of Functional Brain Connectivity in Preterm Infants Differs From Fetal Development and Based on Age at Birth.” Oral Abstract. → **Room 204 West**

3:45-4 p.m. /

Sarah B. Mulkey, M.D., Ph.D.

Presenter

Mulkey S, et al. “Normocephalic Colombian Children With Antenatal Zika Virus Exposure Have Differences in Neurodevelopmental Trajectories and on Brain MRI at 7 Years of Age.” Oral Abstract. → **Room 204 West**

MONDAY
April 27



Elan Donnellan,
Ph.D.



Grace Hoover,
MD Student



Josepheen
De Asis-Cruz,
M.D., Ph.D.



Srikanth Damera,
M.D., Ph.D.



Katherine M.
Ottolini, M.D.

8-10 a.m. /

Elan Donnellan, Ph.D.

Presenter

Donnellan E, Ngwa JS, Liggett MO, Andescavage N, Limperopoulos C, du Plessis AJ, Govindan RB. “Neurobehavioral Stress Linked to the Central Nervous System Is Associated With Heart Rate Variability Differences in Preterm Infants.” Poster. → **Exhibit Hall. Poster No.: 632**

Grace Hoover, MD Student

Presenter

Hoover G, Ottolini KM, Cook KM, Basu S, Aokalani MC, Andescavage N, Limperopoulos C. “Social Drivers of Parental Bedside Presence and Mother’s Own Milk Provision for Preterm Infants in the Neonatal Intensive Care Unit.” Poster. → **Exhibit Hall. Poster No.: 645**

10-11:30 a.m. /

Josepheen De Asis-Cruz, M.D., Ph.D.

Presenter

Davis J, Oei J, Jantzie L, Yen E, **De Asis-Cruz J**, Bada H. “Babies, Opioids, & Brains (BOB): Novel Approaches to Improving Developmental and Health Outcomes Following Prenatal Opioid Exposure—Time for Action!” Basic-Translational-Clinical Roundtable. → **Grand Ballroom West (Level 3)**

11:04-11:16 a.m. “Imaging the Developing Brain: Uncovering the Effects of Prenatal Opioid Exposure.”

10:15-10:30 a.m. /

Srikanth Damera, M.D., Ph.D.

Presenter

Damera S, Andescavage N, Limperopoulos C. “Fetal Subplate Dysmaturation Predicts Early Motor Outcomes in Congenital Heart Disease.” 8 Oral Abstract honored with a PAS 2026 Trainee Travel Grant. → **Room 104C West**

10:30-10:45 a.m. /

Katherine M. Ottolini, M.D.

Presenter

Ottolini K, Chirumamilla VC, Basu S, Andescavage N, Ngwa J, du Plessis AJ, Limperopoulos C, Govindan R. “Nutritional Factors Associated With Autonomic Nervous System Maturation in Preterm Infants.” Oral Abstract. → **Room 211 West**



Top
5%
of Abstracts
Accepted
for PAS 2026

Oral Abstract
honored with a
**PAS 2026
Trainee Travel
Grant**

