

# DEVELOPING BRAIN INSTITUTE AT PAS 2025

APR  
24-28

## HONOLULU, HAWAII

This year, research-scientists affiliated with the Developing Brain Institute at Children's National had nine oral abstracts and 17 posters accepted for the Pediatric Academic Societies (PAS) 2025 meeting. That includes two oral abstracts that scored in the Top 5% of all abstracts submitted to #PAS2025: "Disrupted Motor Networks in Neonates With Complex Congenital Heart Disease," led by Jung-Hoon Kim, Ph.D.; and "Neonatal Hippocampal Volumes Are Associated With Toddler Behavior in Children Born During the COVID-19 Pandemic," led by Susan Weiner, Ph.D.



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<https://developingbrainresearchlab.org/pas-2025/>



# FIRST AUTHORS



**Nickie Andescavage**  
M.D.



**Kevin M. Cook**  
Ph.D.



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



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



**Diedtra Henderson**  
BA



**Steve C.N. Hui**  
Ph.D.



**Jung-Hoon Kim**  
Ph.D.



**Kristen Kocher**  
Ph.D.



**Catherine  
Limperopoulos, Ph.D.**



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



**María G. Mora Álvarez**  
Ph.D.



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



**Katherine M. Ottolini**  
M.D.



**Anola J. Stage**  
M.D., IBCLC



**Susan Weiner**  
Ph.D.



**Yao Wu**  
Ph.D.



# DEVELOPING BRAIN INSTITUTE PAS 2025 PRESENTER SCHEDULE

## FRIDAY, APRIL 25

**Regan Andringa-Seed/Laura Calderon | 5:30-7:45 p.m. | Location No. 730**  
**Poster:** Social and Environmental Influences on the Cognitive and Social-Emotional Developmental Outcomes of Rural and Urban Colombian Children at Early School Age



**Srikanth Damera, M.D., Ph.D. | 5:30-7:45 p.m.**  
**| Abstract ID: 1981465 | Location No. 143**

**Poster:** Tensor-Based Morphometry Identifies Impaired Growth of Novel Brain Areas in Fetuses With Congenital Heart Disease



**Josepheen De Asis-Cruz, M.D., Ph.D. | 5:30-7:45 p.m.**  
**| Abstract ID: 1979368**

**Poster:** Disrupted Preoperative White Matter Brain Microstructure in Newborns With Complex Congenital Heart Disease



**Sarah B. Mulkey, M.D., Ph.D. | 5:30-7:45 p.m. | Location: No. 744**

**Poster:** Neurodevelopmental Outcomes of Colombian Children With Antenatal Zika Virus Exposure at School Age During the COVID-19 Pandemic



**Anola J. Stage, M.D., IBCLC | 5:30-7:45 p.m. | Location No. 341**

**Poster:** Altered Maturation Trajectory of Cerebral Metabolites in Preterm Infants

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## SATURDAY, APRIL 26



**Yao Wu, Ph.D. | 7:45-8 a.m. | Abstract ID: 1976339**

**Oral Abstract:** Altered Cerebral Cortical Maturation in Newborns Exposed to Antenatal Opioids



**Kevin M. Cook, Ph.D. | 10-10:15 a.m. | Abstract ID: 1969086**

**Oral Abstract:** Experience of Neighborhood Disadvantage Is Associated With Altered Structural Brain Development Even Before Birth



# DEVELOPING BRAIN INSTITUTE PAS 2025 PRESENTER SCHEDULE (CONT.)

## SATURDAY, APRIL 26 (CONT.)

**Caroline Wambach, M.D. | 10:15-10:30 a.m. | Abstract ID: 1977048**

**Oral Abstract:** Prenatal Maternal Psychological Distress and Functional Brain Development in Neonates



**María G. Mora Álvarez, Ph.D. | 10:30-10:45 a.m. | Abstract ID: 1975707**

**Oral Abstract:** Disrupted White Matter Microstructure in Newborns With Antenatal Opioid Exposure



**Jung-Hoon Kim, Ph.D. | 10:45-11 a.m. | Abstract ID: 1952688**

**High-Scoring Oral Abstract:** Disrupted Motor Networks in Neonates With Complex Congenital Heart Disease



**Kristen Kocher, Ph.D./Katherine M. Ottolini, M.D.**

**| 2-2:15 p.m. | Abstract ID: 1984944 | Location: Room 327**

**Oral abstract:** Early Epigenetic Biomarkers of Deaccelerated Aging in Preterm Infants With Extrauterine Growth Failure



**Katherine M. Ottolini, M.D. | 2:30-4:45 p.m. | Location No. 669**

**Poster:** Influence of Maternal NICU Visitation on Human Milk Feeding in Preterm Infants



**Steve C.N. Hui, Ph.D. | 2:30-4:45 p.m. | Location No. 150**

**Poster:** Brain Metabolite Concentrations in Neonates of Mothers With COVID-19 Exposure During Pregnancy: A Case-Control Study



**Diedtra Henderson, BA | 2:30-4:45 p.m. | Abstract ID: 1970651**

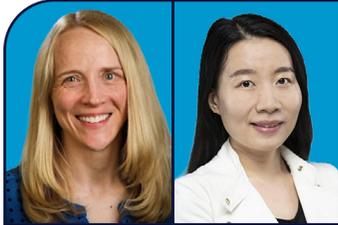
**| Location No. 432**

**Poster:** Mommy&Me: Enrolling Black Moms and Babies in Clinical Research



# DEVELOPING BRAIN INSTITUTE PAS 2025 PRESENTER SCHEDULE (CONT.)

**SUNDAY, APRIL 27**



**Stephanie L. Merhar, M.D., MS/Yao Wu, Ph.D.**  
| 8:30-10:45 a.m. | Location No. 668

**Poster:** Pharmacologic Treatment for Neonatal Opioid Withdrawal Syndrome (NOWS) Is Associated With Smaller Neonatal Brain Volumes



**Josepheen De Asis-Cruz, M.D., Ph.D.** | 8:30-10:45 a.m.  
| Abstract ID: 1951642 | Location No. 667

**Poster:** Brain Functional Connectivity Correlates With Neurobehavioral Impairments in Opioid-Exposed Neonates

**Manuela Iglesias** | 8:30-10:45 a.m. | Location No. 742

**Poster:** Exploring the Relationship Between Child Opportunity Index and Bayley-III Scores in Young Children



**Jung-Hoon Kim, Ph.D.** | 8:30-10:45 a.m. | Abstract ID: 1979444 | Location No. 671

**Poster:** Optimizing Hyperparameters of U-Net-Based Brain Segmentation Algorithms for Late 2nd and Early 3rd Trimester Fetuses



**Josepheen De Asis-Cruz, M.D., Ph.D./Sarah B. Mulkey, M.D., Ph.D.; Regan Andringa-Seed** | 8:30-10:45 a.m.  
| Abstract ID: 1977311 | Location No. 676

**Poster:** Disrupted Ventral Striatal Functional Connectivity in Colombian School-Age Children Exposed in Utero to the Zika Virus



**María G. Mora Álvarez, Ph.D./ Sarah B. Mulkey, M.D., Ph.D./Regan Andringa-Seed** | 8:30-10:45 a.m.  
| Abstract ID: 1980851 | Location No. 677

**Poster:** White Matter Microstructural Disruptions in Zika Virus-Exposed Children Without Congenital Zika Syndrome



# DEVELOPING BRAIN INSTITUTE PAS 2025 PRESENTER SCHEDULE (CONT.)

## SUNDAY, APRIL 27 (CONT.)

**Elizabeth Yen | 8:30-10:45 a.m. | Location No. 666**

**Poster:** Characteristics of Maternal Opioid Use and Early Brain Changes in Offspring



**Nickie Andescavage, M.D. | 2:30-2:45 p.m. | Abstract ID: 1985049**

**Oral Abstract:** Impaired Third Trimester Placental Function in Pregnant Women Living With HIV

## MONDAY, APRIL 28

**Carla M. Bann | 7-9:15 a.m. | Abstract ID: 1958963 | Location No. 054**

**Poster:** Relationship Between Sleep Problems and Social-Emotional Development at 12 Months of Age Among Infants With Antenatal Opioid Exposure and Unexposed Controls

**Daniella McCausland | 7-9:15 a.m. | Location No. 063**

**Poster:** Differences in Early Child Neurodevelopment Following Symptomatic and Asymptomatic Maternal SARS-CoV-2 Infection in Pregnancy



**Susan Weiner, Ph.D./Nickie Andescavage, M.D.**

**| 9:30-9:45 a.m. | Abstract ID: 1985857**

**High-Scoring Oral Abstract:** Neonatal Hippocampal Volumes Are Associated With Toddler Behavior in Children Born During the COVID-19 Pandemic



**Yao Wu, Ph.D. | 9:45-10 a.m. | Abstract ID: 1976391**

**Oral Abstract:** Reduced Brain Volumes in Normocephalic Children With Prenatal Zika Virus Exposure



# DEVELOPING BRAIN INSTITUTE PAS 2025 PRESENTERS



**Top 5% of  
PAS 2025 abstracts**



**Jung-Hoon Kim, Ph.D.**  
Research Faculty



**Susan Weiner, Ph.D.**  
Research Postdoctoral Fellow

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