



Developing[®] Brain Institute

**RESEARCH, EDUCATION AND
INNOVATION WEEK**

2026

WEDNESDAY, APRIL 15

— TO —

THURSDAY, APRIL 16

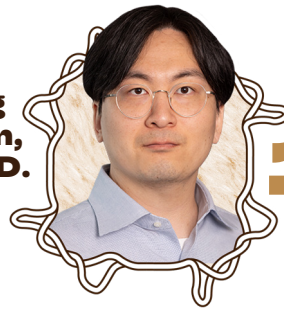
This year, 24 research-scientists, from trainees to clinicians, affiliated with the Developing Brain Institute at Children's National are presenting 32 posters across two days.

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Kim DY, Murnick J, Kim JH, Kapse K, De Asis-Cruz J, Limperopoulos C. "Attention-Augmented ResNet for Fetal Brain-Age Estimation: Application to Brain-Age Gap Prediction in Congenital Heart Disease."

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Hoover G, Ottolini KM, Cook KM, Aokalani MC, Andescavage N, Limperopoulos C. "Analysis of Mother's Own Milk Provision and Parental Presence in NICU Settings Using the Social Vulnerability Index."

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Nahla M.H. Elsaid, Ph.D.

Elsaid NMH, et al. "Brain Microstructural Maturation Trajectories in Preterm Infants Vary by Injury Severity."

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Katherine M. Ottolini, M.D.

Ottolini KM, Ngwa JS, Basu SK, 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."

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Yao Wu, Ph.D.

Wu Y, et al. "Elevated Maternal Anger Is Associated With Reduced Amygdala Volumes in Newborns Exposed to Antenatal Opioids."

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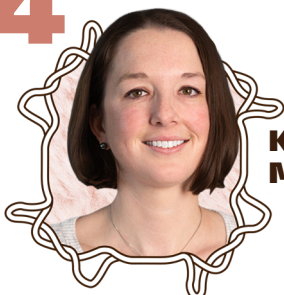
Twohy K, Elsaid NMH, Limperopoulos C, Andescavage N. "Structural Assessment of the ex Vivo Placenta Using Magnetic Resonance Elastography."

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Kevin M. Cook, Ph.D.

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Nahla M.H. Elsaid, Ph.D.

Elsaid NMH, et al. "Robust Diffusion Tensor Imaging of the Moving Fetal Brain Using Phase-Based Motion Detection."

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Kevin M. Cook, Ph.D.

Cook KM, De Asis-Cruz J, Murnick J, Ottolini KM, Basu SK, Andescavage N, du Plessis AJ, Limperopoulos C. "Prematurely Born Infants Exhibit Atypical Functional Brain Development Compared to Fetal Peers and Degree of Prematurity."

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Elsaid NMH, et al. "Validation of Diffusion MRI-Based Thermometry in Preterm Neonates Toward Noninvasive Fetal Temperature Estimation."

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Beilfuss AM, Andescavage N, Ottolini KM, Limperopoulos C, Latif H, Pen R. "Maternal Mental Health and Breastmilk Composition in Mothers of Preterm Infants."

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Isabel "Izzy" Gothelf

Gothelf I, Andescavage N, Limperopoulos C, Kushal K, Pen RG, Liszka L, Widener BR, Cook KM. "Neighborhood Disadvantage Is Associated With Occupational Therapy Uptake in the NICU and Brain Volume Changes by Term Age."

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Elan Donnellan, Ph.D.

Donnellan E, Aokalani MC, Ilori F, Andescavage N, Limperopoulos C. "Exploratory Factor Analysis of the 14-Item Parental Stressor Scale: Neonatal Intensive Care Unit."

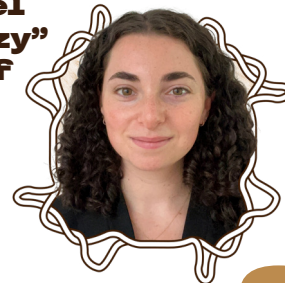
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Hui SCN, Andescavage N, Kapse K, Limperopoulos C. "Brain Metabolite Changes in Fetuses of Mother With Maternal Psychological Distress."

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Hui SCN, Andescavage N, Kapse K, Saleh MG, Edden RAE, Limperopoulos C. "GABA Measurements in the Neonatal Brain With and Without Macromolecule Suppression."

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Hui SCN, Murali-Manohar S, Andescavage N, Kapse K, Edden RAE, Limperopoulos C. "Measures of Metabolite T2 Relaxation Times in the Fetal Brain at 3 Tesla."

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Jessica Harris, BA

Harris J, Cook KM, Pen R, Zeman A, Andescavage N, Limperopoulos C. "Opioid Exposure in the Neonatal Intensive Care Unit Is Associated With Reduced Amygdala and Hippocampal Volumes."

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Jung-Hoon Kim, Ph.D.

Kim JH, et al. "A Unified 3D U-Net Segmentation Framework for Fetus-Neonate-Infant Neuroimaging."

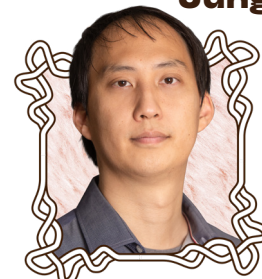
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Lee MM, Kim JH, Stoodley CJ. "Predictors of Individual Behavioral Responses to Transcranial Direct Current Stimulation."

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Rose Haley, B.S.

Haley R, Weiner S, Adegbulugbe E, Henderson D, Andescavage N, Limperopoulos C. "Resilience as a Moderator Between COVID-19-Related Distress and Prenatal Anxiety During the Pandemic."

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Katherine M. Ottolini, M.D.

Ottolini KM, Chirumamilla VC, Basu SK, Andescavage N, Ngwa JS, du Plessis AJ, Limperopoulos C, Govindan RB. "Nutritional Factors Associated With Autonomic Nervous System Maturation in Preterm Infants."

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Anola J. Stage, M.D., IBCLC

Stage AJ, Hui SCN, Ottolini KM, Ngwa J, Murnick J, Basu SK, Kapse K, Andescavage N, Limperopoulos C. "Relationship Between Clinical Comorbidities and Cerebral Metabolic Maturation in Preterm Infants."

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Morozova O, Ruffini L, Brandt A, Elgren R, Liszka L. "Early Detection of High-Risk Cerebral Palsy."

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Liszka L, Christoffel K, Liggett M, Limperopoulos C, Andescavage N. "Exploring Neurobehavioral Outcomes Between Infants of Diabetic Mothers and Full-Term Controls."

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Aokalani M, et al. "Perceived Control in the NICU: Implications for Dyadic Care in the NICU."

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Mariana Cerqueira Aokalani, M.D., Psy.D.

Aokalani M, et al. "PLAYMATES: A Pilot Dyadic Psychotherapeutic Intervention for Families With Medically Fragile Infants."

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Bailey Widener, MSOT, MPH, CNT, NTMTC, SBCS, OTR/L

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Weiner S, et al. "Newborn Posterior Vermis Volume Predictive of Attention and Hyperactivity at Preschool Age."

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Mora Álvarez MG, Cruz J, Kapse K, Vezina G, Donofrio MT, Andescavage N, Limperopoulos C. "Enlarged CSF Spaces Are Associated With Impaired Glymphatic Function in Neonates with Congenital Heart Disease."

299 Yao Wu, Ph.D.

Wu Y, et al. "Brain Volumes and Neurobehavioral Profiles in Neonates With Antenatal Opioid Exposure."

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Tegiacchi RF, Malloy E, Kauffman AM, Walsh KW, Stoodley CJ. "The Relationship Between Lesion Location and Motor and Cognitive Outcomes in Pediatric Cerebellar Patients."

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Weiner S, et al. "Early Brain Growth Trajectories as the Basis of Early Childhood Development in a Normative Healthy Cohort."

425 Bailey Widener, MSOT, MPH, CNT, NTMTC, SBCS, OTR/L

Widener B, et al. "Assessing Developmental and Neuroprotective Care Practices Across the Children's National Medical Center (CNMC) NICU Network."

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