Interesting fact:
90% of a child's brain development happens before age 5

Has your information changed?

If your contact information has changed, please respond to this e-mail and keep us updated. You will receive $25 for providing us your change of address.

Click here to view our study video!

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The Early Prediction Study Fall Newsletter

We hope you all are doing well! Thank you again for being such an important part of this study. Here are the most recent study updates.

Study Goals:

- **Identify the clinical risk factors** for the most common brain abnormality in very preterm infants.
- **Identifying the early brain and developmental abnormalities** that can allow us to predict which infants will develop cerebral palsy, learning problems, or behavioral issues.
- Enroll the infants we identify as high risk for these delays into **early** interventional **therapies** so that they may **have better outcomes**. These programs include physical therapy, occupational therapy and speech therapy.

Study Updates:

- We have already **enrolled over 250** very premature infants! Some of our first study infants have already turned 2 yrs old.
- We recently added **optional** collection of **buccal** (**cheek) swabs** to our consent form to look for **DNA/epigenetic biomarkers**. We want to know how the NICU and home environments affect the function of our genes and if this information can improve our ability to predict later developmental problems. There is no/minimal harm in obtaining these cheek swabs.

Wondering what's next?

- Below is a refresher on when you can expect to be coming in for your next Early Prediction Study appointment:
    - Brain MRI between 39 and 44 weeks 6 days
    - 3 month corrected age appointment
    - 24 Month Visit (motor and cognitive testing)
    - 36 Month Visit (learning, behavioral, & motor testing)

Visit our study website for some helpful resources

Did you know that national guidelines from **Joint Committee on Infant Hearing** recommends repeat hearing testing in high-risk newborns (e.g. very preterm infants). Even milder forms of hearing that go undiagnosed can result in poor language skills and learning.

"Understanding the early stages of language development"

Have questions?

If you have questions or need additional assistance, please contact our study coordinator, Brianne Georg at 513-803-3247 or Brianne.georg@cchmc.org.

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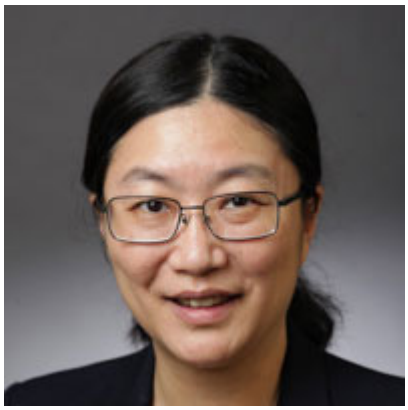
Remember, your developmental appointments are not only essential in tracking your child's development but they are also vital for our study. If you have missed an appointment, be sure to call the clinic and reschedule

Team Member Spotlight:



Lili He, PhD
Assistant Professor

Lili is a computer scientist by training with BS degree in Electronical Engineering from Tsinghua University, Beijing, China, MS in Computer Science from University of Missouri and PhD in Computer Science and Engineering from University of Connecticut. She completed her post-doctoral fellow training at the Massachusetts General Hospital, Harvard Medical School in 2010. Prior coming to Cincinnati, she worked as a senior computer scientist at the Center for Perinatal Research, The Research Institute at Nationwide Children's Hospital. Her long-standing commitment is to improve prediction and prevention of neurodevelopmental outcomes for high risk newborns and infants. Her expertise focuses on the development of objective and quantitative advanced magnetic resonance imaging methods to identify multimodal neuroimaging biomarkers in infants. Her current research emphasizes the development of novel machine learning and deep learning algorithms for early prediction of long-term neurodevelopmental disabilities in preterm infants.

Hailong Li, Ph.D.
Research Associate

Hailong is a research associate in the Parikh Lab. He received his Ph.D. degree in 2013 in Computer Science, University of Cincinnati. He joined the Parikh Lab in 2016. His research focus on applying machine learning algorithms to neonatal brain MRI data for the developmental risk prediction of very preterm neonates. The current studies include structure and functional MRI data analysis with deep neural networks (DNN), deep convolutional neural networks (CNN), and Capsule Networks using advanced machine learning tools such as TensorFlow, Keras, and Python.