Contact Us

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Research:
• To better understand to what degree and how early life factors can exert lasting effects on health across lifespan and generations.
• To identify critical developmental windows and modifiable early life risk and protective factors for health promotion, primary and secondary prevention of common pediatric and adult diseases.
• To translate new scientific knowledge in clinical and public health practice.

Education and Training: The Center is fully committed to educate and train a new generation of maternal and child health professionals to become leading trans-disciplinary investigators and future leaders.
Ongoing Research

• Preterm birth: 12% of babies
• Obesity: 20 to 40% of children
• Asthma: 10 to 20% of children
• Food allergy: 5 to 10% of children
• Autism: 1 to 3% of children

• Early life precursors of pediatric and adult diseases:
  • Obesity, Diabetes
  • Hypertension, stroke,
### Prospective Study Cohorts

<table>
<thead>
<tr>
<th>Boston Birth Cohort</th>
<th>Chinese Twin Cohort</th>
<th>Chicago Family Cohort</th>
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</thead>
<tbody>
<tr>
<td>8,500 mother-infant pairs (~2,500 preterm)</td>
<td>2,000 twin pairs MZ: DZ ratio 1:1 6 years and older</td>
<td>Over 1,000 families Biological parents and children 0-21 yr</td>
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<tr>
<td>Enrolled at Birth F/U at pediatric primary care visits</td>
<td>Baseline 6 yr follow-up</td>
<td>Baseline study completed</td>
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<td>Inner city, minority (65% blacks) in Boston</td>
<td>Homogeneous Rural Chinese</td>
<td>White, suburb In Chicago</td>
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<tr>
<td>8 NIH grants 3 MOD, 1 DOD, 1MCHB</td>
<td>3 NIH grants philanthropy</td>
<td>5 NIH grants 2 foundation, philanthropy</td>
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Explore the Biological Mechanisms Underlying Early Life Origins of Pediatric and Adult Diseases

- Genetics
- Environment
- Epigenetics
PhD Thesis
Preterm Birth and Childhood Asthma: A Life Course Analysis of a Prospective Birth Cohort

Publication from the Thesis


Huan He, MHS, MA
Successfully defended PhD thesis in July
PFRH

[SCI, Impact Factor: 13]
Maternal Health, Nutrition, and Pregnancy Outcomes

Awards
• Apgar/Bromley/Clifford Scholarship
• HRSA Trainee Fellowship

Research Project

For submission to AJE

Bolanle Ajao MD MSPH CPH
PhD candidate
PFRH
Early Life Determinants of Autism Spectrum Disorders

• Departmental award:
  – Bernard and Jane Guyer Scholarship Fund, AY 2014-2015
  – Chenoweth Pate Scholarship, AY 2015-2016

• Two lead author manuscripts based on the Boston Birth Cohort:
  1. Combined effects of maternal obesity and diabetes on developmental disabilities including autism. Pediatrics (in revision)
  2. Effect of preterm birth on autism spectrum disorder: does chorioamnionitis play a role?
     For submission to JAMA Pediatrics

Mengying Li, MSPH
PhD candidate
PFRH
Maternal Nutrition and Autism Spectrum Disorders

Project:
Relationship between maternal plasma folate, vitamin B12 levels and risk of autism spectrum disorders in offspring

Awards:
• Wendy Klag Center Student Award
• John & Alice Chenoweth-Pate award

Kripa Raghavan, MPH
DrPH candidate
PFRH
Longitudinal Growth Patterns in Typical vs. Autistic Children

Jing Zhang
MSPH candidate
Dept of Epidemiology

• Award
Charlotte Ferencz Scholarship
Department of Epidemiology, 2015

• Research Project:
The Physical Growth Pattern from Birth to Age 10 years of Children with Autism Spectrum Disorder in the Boston Birth Cohort.
Integration of Biomarkers in Maternal and Child Health Research

Jerry (Yuelong) Ji, MSPH
PhD candidate
PFRH

1. Distribution and Determinants of Plasma Homocysteine Levels in Rural Chinese Twins across the Lifespan

2. Preterm Birth and Random Plasma Insulin Levels at Birth and in Early Childhood

3. Placental transfer and concentrations of cadmium, mercury, lead, and selenium in mothers, newborns, and young children
Wish you all a very happy, healthy and successful academic year!