## 1st Year Neonatal-Perinatal Medicine Fellows

<table>
<thead>
<tr>
<th>Name</th>
<th>Medical School</th>
<th>Pediatric Residency</th>
<th>Research Focus</th>
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| Caty Buck, MD               | University of CT School of Medicine Farmington, CT | Southwestern Children’s Hospital Dallas, TX  
Chief Resident: 2015-16 | Effect of early life environmental chemical exposures during pregnancy and fetal development on infant and child health.  
Mentor: Joseph Braun, PhD |
| Ravi D’Cruz, MD             | Alpert Medical School of Brown University Providence, RI | Hasbro Children’s Hospital Providence, RI | Trained as an architect prior to medical school, Dr. D’Cruz is most interested in the impact of design on health. To this end, he is currently engaged in two primary capacities:  
1. Clinical Director of the "Design + Health" class, studying:  
   • The implications of a multidisciplinary collaboration between Alpert Medical and Rhode Island School of Design students as they work to identify and solve issues in NICU care through design interventions.  
2. "Primary Clinical Course Advisor": Biomedical Engineering Capstone Project for senior Brown Biomedical Engineering students studying:  
   • Current technology, leading to design and fabrication of novel devices in the NICU. Once designed, our intention is the testing of these prototypes to improve care. We are currently gathering background on success rates and barriers to care for current procedures, and will use this data to compare new interventions in the coming years.  
Mentor: Jesse Bender, MD |
| Ashish Gupta, MD            | Netaji Subhash Chandra Bose Medical College Jabalpur, India | St. Peter’s University Hospital New Brunswick, NJ | 1. Survey of ventilation practices in the Neonatal Intensive Care Units of US and Canada.  
2. Using advanced test lung to model the effects of various ventilators.  
Mentor: Martin Keszler, MD |
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| Jamie Fierce, MD [jfierce@wihri.org]      | Tufts University School of Medicine Boston, MA | Hasbro Children’s Hospital Providence, RI | 1. The role of protein aggregation and misfolding in preeclampsia  
2. Early markers of preeclampsia  
Mentor: Surendra Sharma, Ph.D., MD (Hon.) |
| Justin Goldstein, MD [jrgoldstein@wihri.org] | Sackler School of Medicine Tel Aviv, Israel | University of Rochester Rochester, NY | 1. Accurately measuring and delivering consistent tidal volumes during volume-targeted high frequency ventilation.  
2. Evaluating the level and effect of ambient noise produced by high-frequency neonatal ventilators in a single-family room NICU  
3. Using an advanced neonatal test lung to model the physiologic effects of multiple high-frequency ventilators.  
Mentor: Martin Keszler, MD |
| Ed Hurley, MD [ehurley@wihri.org]         | New York Medical College Valhalla, NY | Hasbro Children’s Hospital Providence, RI | 1. Biological impact of perinatal transition to increased oxygen tension  
Mentor: Philip Gruppuso, MD |
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| **Amanda Arsenault, MD**  
aarsenault@wihri.org | Penn State University College of Medicine  
Hershey, PA | Hasbro Children’s Hospital  
Providence, RI | Effect of Dietary Medium Chain Triglyceride Intake on Colonization of Preterm Infants with Candida  
Aims:  
1. Determine frequency, timing, level and dietary risk factors of Candida species colonization in GI tracts of premature infants  
2. Examine whether dietary supplementation with MCT oil reduces GI colonization by Candida species  
Mentor:  
Joseph Bliss, MD, PhD |
| **Adrienne Bingham, MD**  
arbingham@wihri.org | St. George’s University  
St. George’s, Grenada | North Shore Long Island Jewish – Cohen Children’s Medical Center  
New Hyde Park, NY | Placental Abnormalities and Neonatal Encephalopathy  
Determine:  
1. How a proposed categorization of placental abnormalities classifies placental lesions identified among infants with known neonatal encephalopathy  
2. The percent of infants with multiple categories of placental and umbilical cord abnormalities among those with and without neonatal encephalopathy  
3. The extent of overlap among proposed categories & frequency of specific abnormalities within a category.  
Mentor:  
Abbot Laptook, MD |
| **Merline K.V. Benny, MD**  
Mbenny@wihri.org | T.D. Medical College  
Alleppey, India | University of Kansas Medical Center  
Kansas City, KS | Characterization of preterm umbilical cord derived Mesenchymal Stromal Cells (MSCs) for repair of neonatal lung injury  
Aim:  
1. To compare the effect of preterm and term umbilical cord mesenchymal stem cells in amelioration neonatal lung injury and BPD  
Mentor:  
Monique DePaepe, MD |
The following highlights the research conducted by our 2016 graduates.

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<th>Research Focus of 2016 Graduates</th>
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<td>Lauren Ramos, MD</td>
<td>St. George’s University Grenada</td>
<td>Goryeb Children’s Hospital Morristown, NJ</td>
<td>1. The role of mechanical forces promoting fetal lung development by release of soluble growth factors.</td>
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| Khushbu Shukla, MD               | SSR Medical College Belle Rive, Mauritius | Driscoll Children’s Hospital Corpus Christi, TX | 1. Measuring airway resistance at the bedside in a non-invasive manner using a hand held device and it’s clinical applications  
  2. Prediction of extubation readiness in very low birth weight infants – a multi-center study  
  3. Assessing importance of mode of ventilation on successful extubation and spontaneous breathing trial outcome |
| Prasoon Verma, MD                | Government Medical College Nagpur, India | Children’s Hospital at Montefiore Bronx, NY | 1. To explore and develop novel therapeutics against Candida.  
  2. To study the Galectin-3 response in the setting of systemic candidiasis, and it’s utility in limiting candidiasis.  
  3. To explore efficacy of ALS-3 monoclonal antibody against systemic candidiasis in the neonatal mouse model. |

Mentor:  
Juan Sanchez-Esteban, MD  
Martin Keszler, MD  
Joseph Bliss, MD, PhD

Updated: 10.25.16