Richard A. Johnston, Ph.D. is an Assistant Professor in the Department of Pediatrics, who joined the faculty of The University of Texas Medical School at Houston in September of 2009.

In the last fifteen years a number of prospective cohort studies have demonstrated that obesity increases the risk of incident asthma. However, the mechanistic basis underlying the relationship between obesity and asthma is not well understood. Through the utilization of mouse models of obesity, the major goal of Dr. Johnston’s research is to understand how obesity contributes to the development of asthma. Dr. Johnston and his colleagues have previously reported that mice obese because of genetic deficiencies or mice obese because of the consumption of a high fat diet develop increased airway responsiveness to methacholine and/or enhanced airway inflammation following exposure to allergen or ozone (O$_3$), which are two common asthma triggers.

Obesity leads to chronic systemic inflammation, which is characterized by increased serum concentrations of cytokines, chemokines, and hormones. These substances, collectively called adipokines, are largely pro-inflammatory in nature. Dr. Johnston is currently investigating the contribution of two pro-inflammatory adipokines, chemerin and resistin, to the enhanced airway responsiveness and increased airway inflammation to allergen and O$_3$, which are observed in obese mice. Dr. Johnston’s laboratory uses neutralizing antibodies, recombinant proteins, and genetically-altered mice to understand the potential role of these adipokines in the augmented airway responses to various asthma triggers in obese mice. These studies include the measurement of pulmonary mechanics in anesthetized mice by the forced oscillation technique, airway inflammation via biochemical and histological analyses, and lung and adipose tissue gene expression by real-time RT-PCR. Dr. Johnston’s research is currently supported by two grants from the NIH.

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**IMPORTANT DATES**

**NIH DEADLINES:**
- **JULY 5** R01, U01, UM1 (RENEWAL, RESUBMISSIONS AND REVISIONS)
- **JULY 12** K SERIES (RENEWAL, RESUBMISSIONS AND REVISIONS)
- **JULY 16** R03, R21, R33, R21/33, R34, R36 (RENEWAL, RESUBMISSIONS AND REVISIONS)
- **OCT 5** R01, U01, UM1 (NEW)
- **OCT 12** K SERIES (NEW)
- **OCT 16** R03, R21, R33, R21/33, R34, R36 (NEW)
- **OCT 25** R15 (NEW, RENEWAL, RESUBMISSIONS AND REVISIONS)
- **NOV 5** R01, U01, UM1 (RENEWAL, RESUBMISSIONS AND REVISIONS)
- **NOV 12** K SERIES (RENEWAL, RESUBMISSIONS AND REVISIONS)
- **NOV 16** R03, R21, R33, R21/33, R34, R36 (RENEWAL, RESUBMISSIONS AND REVISIONS)

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**NEW FUNDING AWARDS**

<table>
<thead>
<tr>
<th>Liaw</th>
<th>Texas Children’s Hospital Subcontract</th>
<th>STARMHAC</th>
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<tr>
<td>Samuel</td>
<td>CCTS KL2 Career Development Award</td>
<td>Individualizing the treatment of essential hypertension in children using n-of-1 trials</td>
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**AWARDS**

Yoshihiro Komatsu, Ph.D., Pediatric Research Center; Research Study Grand Prize; 17th International Congress for Developmental Biology

Nicole Hayde, M.D., M.S., Nephrology; Young Investigator Award from American Transplant Congress “Increased Gene Transcripts Related to Immune Activation in Allografts but Not in Peripheral Blood of Patients with Donor-Specific Anti-HLA Antibodies Despite Lack of Histopathologic Findings of Rejection”

Tharak Yarrabolu, M.D., Cardiology; First Place Single or Multiple Case Presentation “Importance of Color Doppler Imaging in the Diagnosis of Anomalous Coronary Artery Origin From Pulmonary Artery” Texas Pediatric Society

Arpna Doshi, M.D., Cardiology; Honorable Mention Single or Multiple Case Presentation “Preemptive Liver Transplant To Prevent Cardiovascular Complications of Homozygous Familial Hypercholesterolemia” Texas Pediatric Society

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**PRESENTATIONS**

Cindy Jon, M.D., Pulmonary Medicine; Platform Presentation “Sleep disordered breathing in children with mitochondrial disease” at United Mitochondrial Disease Foundation (UMDF) Medicine 2013

Ricardo Mosquera, M.D., Pulmonary Medicine; Poster Presentation “Decreased exhaled nitric oxide levels in patients with mitochondrial disorders” at UMDF Medicine 2013

Mohammed Numan, M.D., Cardiology; Poster Presentation “Mitochondrial insufficiency is associated with Autonomic nervous system dysfunction as confirmed by physiologic Head up Tilt table test (HUTT)” at UMDF Medicine 2013

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**Pediatrics Seminar Series**

Will resume in September 2013

Have a great summer!