



Annual Report 2010-2011

Division of Neonatology
Department of Pediatrics
William Maniscalco, M.D., Chief

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I. GENERAL DESCRIPTION

Mission

The Division of Neonatology of the University of Rochester School of Medicine and Dentistry is dedicated to excellence in patient care, to diligent research and to providing outstanding education and training of physicians and scientists. Our values dictate that all colleagues, trainees, patients, and families are treated with respect. The major clinical site is the Neonatal Intensive Care Unit (NICU) at Golisano Children's Hospital, which was selected as one of the top NICUs in the country by *US News and World Report*. The Special Care Nursery (SCN) at Rochester General Hospital is integral to our patient care mission. Our basic research focuses on the molecular and cellular regulation of lung development and injury. Patient-oriented research spans important neonatal diseases, with a focus on treatment of lung, neurological, and retinal disorders. Our faculty members provide clinical education and training to medical students, residents,

postdoctoral fellows, nurse practitioners, and community practitioners. An important part of our mission is training in basic and clinical research at many levels, ranging from undergraduates to doctorates in medicine and the basic sciences.

Primary Faculty

Sanjiv B. Amin, M.B.B.S., M.D., M.S.

Associate Professor of Pediatrics

Kaiser Bijli, Ph.D.

Research Assistant Professor of Pediatrics

Soumyaroop Bhattacharya, M.Ed., M.S.

Senior Associate of Pediatrics

Patricia R. Chess, M.D.

Associate Professor of Pediatrics and of Biomedical Engineering

Director, Neonatal-Perinatal Medicine Fellowship Program

Chair, Department of Pediatrics, Unity Hospital

Medical Director, ECMO Service, Golisano Children's Hospital

Carl T. D'Angio, M.D.

Associate Professor of Pediatrics and Medical Humanities

Director, Pediatric Clinical Research Office

Director, Neonatal Clinical Research

Associate Director, SCRC

Rita Dadiz, D.O.

Assistant Professor of Pediatrics

Associate Director, Neonatal-Perinatal Medicine Fellowship Program

Director, Simulation-Based Emergency and Safety Training Program, Division of Neonatology

David A. Dean, Ph.D.

Professor of Pediatrics and of Biomedical Engineering

Fabeha Fazal, Ph.D.

Assistant Professor of Pediatrics

Jacob N. Finkelstein, Ph.D.

Professor of Pediatrics, of Radiation Oncology, and of Environmental Medicine

Associate Director, Strong Children's Research Center

Director of Research, Division of Neonatology

Ronnie Guillet, M.D., Ph.D.

Professor of Pediatrics

Chief, Department of Pediatrics, Highland Hospital

Sema Hart, M.D.

Associate Professor of Pediatrics

Carl Johnston, Ph.D.

Research Assistant Professor of Pediatrics

Nirupama Laroia, M.D.

Associate Professor of Pediatrics

Medical Director, Special Care Nursery, and Section Chief, Neonatology, Rochester General Hospital

Ruth A. Lawrence, M.D.

Professor of Pediatrics and of Obstetrics and Gynecology
 Director, Newborn Nursery, Golisano Children's Hospital at Strong
 Director, Breastfeeding and Human Lactation Study Center

Alice Lewand-Taylor, M.D.

Senior Instructor of Pediatrics
 Medical Director, Special Care Nursery, Highland Hospital

William M. Maniscalco, M.D.

Professor of Pediatrics
 Chief, Division of Neonatology

Thomas J. Mariani, Ph.D.

Associate Professor of Pediatrics, Medicine and Environmental Medicine

Robert H. Notter, M.D., Ph.D.

Professor of Pediatrics and of Environmental Medicine

Michael A. O'Reilly, Ph.D.

Professor of Pediatrics and of Environmental Medicine
 Associate Director, Neonatology Research
 Director, Perinatal and Pediatric Origins of Disease Program

Dale L. Phelps, M.D.

Professor of Pediatrics

Laura Price, M.D.

Senior Instructor of Pediatrics

Gloria S. Pryhuber, M.D.

Professor of Pediatrics and of Environmental Medicine

Arshad Rahman, Ph.D.

Associate Professor of Pediatrics and of Environmental Medicine

Kristin Scheible, M.D.

Senior Instructor in Pediatrics

Timothy P. Stevens, M.D., M.P.H.

Associate Professor of Pediatrics
 Medical Director, Neonatal Intensive Care Unit, Golisano Children's Hospital

Robert J. Swantz, M.D.

Professor of Pediatrics
 Director, Pediatric Sub-Internship
 Director, Pediatric Clerkship
 Associate Medical Director, Neonatal Intensive Care Unit, Golisano Children's Hospital
 Medical Director, Neonatal Transport Team, Golisano Children's Hospital

Jennifer L. Young, Ph.D.

Research Assistant Professor of Pediatrics

II. Clinical Activities

Golisano Children's Hospital at Strong

Our clinical goal is to provide outstanding care to all ill newborns in the Finger Lakes Region. The neonatal intensive care unit at Golisano Children's Hospital at Strong is a level IV facility that can treat all neonatal medical and surgical illnesses. Our 52-bed NICU has extensive technical capabilities, including ECMO, inhaled nitric oxide, and HFOV. The current NICU will expand to 60 beds; we have started the design phase of a new children's hospital that will have an all new NICU with 64 beds. In academic year 2010-2011 our 11 board-certified neonatologists treated 1094 newborns in the NICU; these patients had the full range of medical, surgical, and cardiac disorders. The average daily census in the NICU, in 2010-2011, was 54 patients, for a total of 19,627 patient days. Of the 2,995 patients born at Strong Memorial Hospital, 867 were admitted to the NICU. An additional 227 patients, who were born at either community hospitals or at other regional hospitals, were transferred to our NICU for advanced care. Our neonatal transport service transferred patients from 19 referring hospitals. Approximately 1 in 12 newborns in our region was treated in the NICU at Golisano Children's Hospital. In 2010-2011, 114 patients were transferred back to their community hospital for convalescent care and to be closer to their families.

Our very busy NICU is the site for training Pediatric and Internal Medicine-Pediatric house officers, postdoctoral fellows, medical students, neonatal nurse practitioners and physician assistant students. The Neonatology Division also supervises the Normal Newborn Nursery at Strong Memorial Hospital. Two board-certified pediatricians establish policy and procedures and care for normal newborns.

Rochester General Hospital, Unity Hospital, Highland Hospital

At Rochester General Hospital, the Neonatology Division cared for 458 patients in the Level II Special Care Nursery in academic year 2010-2011, amounting to 4,228 patient days. The average daily census was 5.8. Rochester General Hospital had 2470 births in 2010-2011. As a community hospital, the Rochester General SCN is an important training site for Pediatric and Family Medicine residents and medical students. Members of the Neonatology Division are medical directors for the nurseries at Rochester General, Highland, and Unity Hospitals, and are responsible for establishing consistent policy and procedures for local hospitals.

Neonatal Continuing Care Program

To provide outstanding medical care, it is essential that we follow the neurodevelopmental outcome of our NICU "graduates." The Neonatal Continuing Care Program follows all patients who are discharged from the NICU, either in the Infant and Toddler Clinic (part of the Strong Center for Developmental Disabilities) or in the Neonatal Tracking Program. In the Infant and Toddler Clinic, patients are evaluated by a developmental pediatrician, social worker, a nurse practitioner and a neonatology fellow; in 2010-2011, the clinic conducted 220 evaluations. The Infant and Toddler Clinic also evaluates patients who were not in the NICU, but referred from the Monroe County Early Intervention Program. The Neonatal Tracking Program follows all NICU graduates to age 10 through periodic questionnaires sent to the patient's family and pediatrician. The NCCC teams review the tracking forms to identify patients who may need formal evaluation and to obtain long-term follow-up data. In 2010-2011, 902 forms were returned by parents and 4,116 forms were returned by pediatricians. To date, over 26,000 patients have been followed by the tracking program.

NICU Quality Improvement Programs / Initiatives (2009-2010)

1. **US News and World Report** – The GCH NICU was selected as one of the top 50 NICUs in the country by US News and World Report, the first clinical area within the Dept of Pediatrics to have earned this honor.
2. **Quality Improvement Programs / Initiatives:**
 - a. NICU expansion

1. Gained final certificate of need (CON) approval for 8 additional NICU beds.
 2. With other NICU leaders, finalized a design to accommodate the 8 new bed spaces.
 3. Expanded NICU clinical service to 3 clinical teams
 4. Implemented helper shifts to maintain acceptable staffing levels during periods of high census
- b. IVH Reduction Bundle
1. In 2010-11 the incidence of hypothermia was further reduced for ELBW infants admitted to the NICU from the Delivery Room.
 2. Reduced use of bicarbonate for treatment of metabolic acidosis through greater use of acetate
- c. Family Satisfaction Bundle
1. In 2010-11, we continued the Family Advisory Council Steering Committee, and implemented the following changes.
 - a. 24 hr parental visitation seven days per week – including uninterrupted parental visitation during morning work rounds and nursing change of shift
 2. Used Press Ganey Satisfaction Survey Tool to track family satisfaction – developed plan to improve family satisfaction, key elements include 3 clinical teams to reduce patient: Attending ratio, mid-level helper shifts, 2 discharge coordinators, orientation video
- d. Patient Safety
1. Taught the Line Safety Course (developed in 2008) to educate NICU mid-level providers on early diagnosis and treatment of cardiac tamponade and sterile technique in line placement.
- e. ROP Bundle
1. Targeted oxygen saturation program (OWL) continued
- f. Improved Nutrition and NEC prevention
1. Worked with breast milk committee to increase use of BM and breastfeeding
 2. Developed a nutrition bundle of potentially better practices
 3. Implemented weekly nutrition rounds
 4. Began work on an electronic audit process to measure progress toward achieving nutritional goals.
- g. BPD Reduction / Improved Pulmonary Care Bundle
1. Continued to develop the collaborative Pulmonary / Neonatology discharge program
 2. Along with Susana Arriagada, Patty Chess and the Division continued Pulmonary Bundle.
- h. Reduced Nosocomial Infection Rates
1. Central Line Associated Blood Stream Infection (CLABSI) Initiative – Our NICU continued the CLABSI initiative and our involvement with the NYS CLABSI Collaborative. In 2010, our NICU achieved a CLABSI rate of 1.4/1,000 catheter days
 2. Reduced primary blood stream infections – For VLBW infants, our NICU is now among the 25% of VON centers with the lowest NI rates

Regional Outreach Activities

The Neonatology Division is the Regional Perinatal Center for the Finger Lakes Region of New York State. Integral to the Division's clinical activities are outreach visits to the 15 referring hospitals in our region. The goals of these visits are to review maternal and neonatal outcomes at the referring hospitals; provide feedback on patients transferred to the NICU at Golisano Children's Hospital; review clinical policies and procedures; and provide outreach education. In addition, the outreach team compares outcome statistics from the referring hospital to region-wide data. Each hospital is visited one to two times a year by a neonatologist, high-risk perinatologist, neonatal nurse practitioner, and obstetrical nurse practitioner. The Neonatology Division and the High Risk Perinatology Division jointly sponsor Perinatal Forums three times per year for our region. These forums draw nurses, physicians, lactation consultants and others for presentations and discussion of region-wide issues.

Outreach Teaching Assignments

Arnot Ogden Medical Center, Elmira, NY	William Maniscalco
Corning Hospital, Corning, NY	William Maniscalco
F.F. Thompson Health System, Canandaigua, NY	Timothy Stevens
Geneva General Hospital, Geneva, NY	Nirupama Laroia
Highland Hospital, Rochester, NY	Rita Dadiz
Jones Memorial Hospital, Wellsville, NY	William Maniscalco
Lakeside Memorial Hospital, Brockport, NY	Gloria Pryhuber
Nicholas Noyes Memorial Hospital, Dansville, NY	Robert Swantz
Unity Hospital, Rochester, NY	Sanjiv Amin
Olean General Hospital, Olean, NY	William Maniscalco
Rochester General Hospital, Rochester, NY	Ronnie Guillet
St. James Mercy Hospital, Hornell, NY	Carl D'Angio
Schuyler Hospital, Montour Falls, NY	William Maniscalco
United Memorial Medical Center, Batavia, NY	Sanjiv Amin
Via Health of Wayne, Newark, NY	Robert Swantz

Perinatal Forum Topics (2010-2011)

Contraception and Family planning;
Obesity in Pregnancy;
Mental Illness and Substance Abuse in Pregnancy;
Delivering Bad News/Prenatal Palliative Care

III. Research and Other Scholarly Activities

Research Projects by Faculty Member

Sanjiv B. Amin, M.B.B.S.,M.D., M.S.

Dr. Amin's research interests include studying the effects of jaundice, nutritional, and environmental toxins on developing nervous system in neonates using auditory brainstem responses. He is NIH-funded to study the level of jaundice that is associated with transient or permanent abnormal changes in auditory nervous system in premature and term neonates. He is also studying the effect of lead and other environmental toxins on a developing auditory nervous system; in addition, he is investigating the role of nutritional and hormonal factors on brain development. Dr. Amin's future interests include long-term neurodevelopmental outcome, including language outcome and central auditory processing disorders of premature and late preterm neonates. In addition, he is interested in studying genetic polymorphism to determine why there are ethnic differences in bilirubin production and susceptibility to bilirubin-induced neurotoxicity. He has been involved in exploring a new technique using fluorescent spectrophotometry to measure free bilirubin levels, a more specific marker of bilirubin-induced neurotoxicity. He is also funded to evaluate dental developmental outcome in premature infants. His work is supported by an NIDCD, National Institute of Neurological Disorders and Stroke, NICHD and NIDCR.

Kaiser M. Bijli, Ph.D.

Dr. Bijli's research seeks to understand how pro-inflammatory mediators such as thrombin and tumor necrosis factor alpha (TNF- α) mediate the activation of NF- κ B, an essential regulator of intercellular adhesion molecule-1 (ICAM-1) in endothelial cells. ICAM-1 is an inducible adhesive protein that serves as a counter-receptor for β_2 -integrins (CD11/CD18) present on the surface of leukocytes. Interaction of ICAM-1 with β_2 -integrins ensures stable adhesion of PMN to the vascular endothelium and subsequently, its migration across the endothelial barrier. PMN trafficking by this mechanism in pulmonary tissue and air spaces contributes to the development of lung vascular injury and tissue edema associated with various disease states including Acute Respiratory Distress Syndrome (ARDS). Despite the appreciation of the central role of NF- κ B in ICAM-1 expression, precise signaling mechanisms controlling NF- κ B activation and thereby ICAM-1 expression in endothelial cells remains largely unknown. The focus of Dr. Bijli's research is to address the mechanisms by which tyrosine kinases, particularly c-Src, Syk and Pyk2, regulate NF- κ B activation and ICAM-1 expression in endothelial cells and to determine the contribution of ICAM-1 in the mechanism of lung PMN sequestration and PMN-dependent lung vascular injury. Recently, Dr. Bijli also started investigating the role of Phospholipase C ϵ , a member of phospholipase C family of isozymes and Transglutaminase 2, in the above phenomena. Dr. Bijli is a PI on a Scientist Development Grant from American Heart Association and participates in an NIH RO1 grant.

Patricia R. Chess, M.D.

Dr. Chess's research is on lung injury and repair in the neonate, focusing on mechanical forces in the lung. Models used include murine ventilation and *in vitro* strain. Mechanisms of cellular signaling in response to mechanical strain are being investigated, concentrating on PKC and ROS signal transduction pathways involved in the stimulation of proliferation and inflammation induced by mechanical strain. Collaborative work on assessing efficacy of a biophysically active phospholipase resistant synthetic surfactant in an LPS-induced injury murine model compliments this work. Clinical areas of investigation include optimal modes of ventilation, use of ECMO in respiratory failure, cardiorespiratory dysfunction in congenital diaphragmatic hernia, omega-3 lipids to treat TPN-induced liver dysfunction, and surfactant replacement therapy. A pulmonary potentially best practices bundle for VLBW infants in the NICU has been developed and implemented, and its effect on acute and chronic lung disease is also being investigated. Dr. Chess is the site PI for the NICHD neonatal network randomized controlled inositol trial to assess efficacy of inositol supplementation on improving ROP and BPD. Dr. Chess participates in grants from NICHD and NHLBI.

Carl T. D'Angio, M.D.

Dr. D'Angio's research focuses on immunizations in the premature infant. In the previous year, he completed and published a multi-center project funded by the National Institute of Child Health and Human Development investigating the responses of premature infants to the conjugate pneumococcal vaccine. He continues work, funded by the National Institute of Allergy and Infectious Diseases, as principal investigator of the Premature Infant Vaccine Collaborative studying influenza vaccine immunogenicity in premature infants. Dr. D'Angio is also involved in research into prevention of catheter-related infections, the effects of parental reading on early literacy skills in former premature infants and clarifying the research consent process. He recently published an evaluation of racial differences in screening for drugs of abuse in newborn infants. Dr. D'Angio was recently awarded an NIH Neonatal Research Network grant.

Rita Dadiz, D.O.

Dr. Dadiz's main interest is to improve postgraduate medical and nursing education and patient care through simulation-based training. She is currently investigating the use of high-fidelity computerized mannequins to improve teamwork and communication between obstetric and neonatal providers during high-risk deliveries. Standardized hand-off and evaluation tools are being developed and tested for reliability and validity. The impact of simulation-based training will be evaluated in the actual delivery room environment. Dr. Dadiz is the recipient of HHS Health Resources and Services Administration award to support her work. She has been recognized as a former Dean's Teaching Fellow at the University of Rochester School of Medicine and Dentistry for her research and interests in education.

Dr. Dadiz also studies the use of inhaled nitric oxide in newborns with persistent pulmonary hypertension. She is the site investigator for a collaborative research project with the University at Buffalo - Women and Children's Hospital of Buffalo investigating the relationship between methemoglobin and response to inhaled nitric oxide in infants with pulmonary hypertension.

David A. Dean, Ph.D.

Dr. Dean's laboratory is focused on the mechanisms of intracellular trafficking of plasmids and DNA-protein complexes as it relates to nonviral gene delivery to the lung. While many aspects of non-viral vector design are being addressed, several critical areas that have not received adequate attention are the cytoplasmic movement and nuclear import of vector DNA. Clearly, without the translocation of plasmid DNA into the nucleus, no gene expression, or "gene therapy" can take place. To this end, the laboratory is studying how plasmids interact with microtubules and microtubule-associated motor proteins to move in a directed fashion through the cytoplasm using a variety of intracellular imaging techniques, biochemical assays, and mass spectrometry approaches. Studies are also underway to understand how plasmids translocate the nuclear pore complex to gain entry into the nucleus in both general and cell-specific situations. Further, new work is aimed at understanding whether and how plasmids move within the nucleus and how this relates to their ability to be expressed. Taken together, these studies will help design improved vectors for gene therapy as well as provide insight into the basic biology of the cell. The second focus of the laboratory is to develop novel treatments for acute lung injury and asthma using electric fields for gene delivery to the lungs of living animals. Dr. Dean's laboratory has shown that genes can be delivered to the lungs of small and large animals by electroporation and that the genes can have significant therapeutic activity. Using this approach, they have been able to prevent and treat acute lung injury in an endotoxin-induced mouse model of lung injury as airway hyperreactivity in an ovalbumin-sensitization model of asthma. Current studies assess safety and efficacy in a large animal preclinical model in hopes of one day taking this to the clinic. Dr. Dean's research is supported by several NIH RO1 and R21 grants.

Fabeha Fazal, Ph.D.

Dr. Fazal's research seeks to understand the role and regulation of cytoskeletal dynamics in lung vascular inflammation and injury. Intracellular adhesion molecule ICAM-1 plays a key role in the adhesion and transendothelial migration of polymorphonuclear leukocytes (PMN) - a key event in the pathogenesis of acute lung injury. The basis of ICAM-1 expression involves activation of RelA/p65 subunit of the transcription factor NF- κ B. Activation of RelA/p65 in turn requires its release from the inhibitory protein I κ Ba in the cytoplasm and subsequently, its translocation to the nucleus. Whereas the mechanisms of its release have been elucidated, the cytoplasmic events regulating the translocation of RelA/p65 to the nucleus remain elusive. The research focuses on how changes in actin dynamics induced by proinflammatory mediators such as thrombin and TNF α , facilitate RelA/p65 nuclear translocation, ICAM-1 expression, lung PMN infiltration and PMN-mediated lung vascular injury in mice. The overall goal of these studies is to develop strategies for interfering with specific signaling events controlling ICAM-1 expression and thereby preventing or limiting lung PMN uptake and lung vascular injury associated with inflammatory diseases such as Acute Respiratory Distress Syndrome (ARDS). This work is funded by an NIH RO1 grant.

Jacob N. Finkelstein, Ph.D.

Dr. Finkelstein's laboratory research emphasizes the role of cell-cell interactions in modulating the pulmonary injury response to physiological and toxicological stimuli. This work includes studies of oxidant-induced signaling in the pulmonary epithelium and macrophages and epithelial and inflammatory cell production of cytokines and chemokines in the regulation of the inflammatory response. Previous research focused on basic cell and molecular biology of the pulmonary alveolar type II cell as the site of pulmonary surfactant system and how oxidant injury can alter key regulatory processes. In addition, the type II cell also plays an important role as the stem cell for renewal of the alveolar epithelium, both in the normal lung development and during epithelial repair and renewal following lung injury. The most recent data suggest that type II cells may also be involved in regulating the inflammatory functions of alveolar macrophages, as well as the actions of interstitial fibroblasts during lung growth or pulmonary fibrosis.

Current research utilizes multiple models of injury with a special emphasis on environmental agents as modulators of cellular function. Studies of inhaled oxidant gases (ozone, hyperoxia), inhaled particulate

matter (generated by combustion processes including diesel exhaust) and ionizing radiation (therapeutic as well as accidental release) all provide a platform to study the pulmonary injury response. Another important aspect of recent work is the interaction of engineered nonmaterial's with cellular signaling systems and how these interactions may result in a toxic response.

The overall goal of the current research is to identify the key control mechanisms involved in epithelial cell and fibroblast proliferation, and in related extracellular matrix synthesis, processing, and assembly. Dr. Finkelstein's work seeks to define such mechanisms not only during normal lung growth and normal development, but also during the repair of epithelial damage, which may have important implications for pediatric and adult lung disease, including bronchopulmonary dysplasia (BPD). This work is funded by grants from the NIEHS, the EPA, NIAID, NSF and the Department of Defense.

Ronnie Guillet, M.D., Ph.D.

Dr. Guillet's primary research focus is in neonatal brain development and injury. The developing brain is at risk from the effects of centrally acting agents, including hypoxia, seizures, and medications; this risk is due in part to the fact that the brain may be more vulnerable during times of rapid maturational change. Dr. Guillet has an active clinical research program, focused on the neonatal brain. She is the PI for a multicenter randomized clinical trial funded by NICHD examining the effect of continuation of phenobarbital after resolution of neonatal seizures. She is the overall primary investigator for long-term follow-up of children around the world who were enrolled in the CoolCap Study (head cooling with systemic hypothermia for infants with neonatal encephalopathy). As the Rochester co-investigator for the NICHD Neonatal Research Network grant, she assists the PI and, in particular, is responsible for Network studies involving new treatments for neonatal brain injury. Other areas of clinical research interest for Dr. Guillet include the Auditory Brainstem Evoked Response—in particular, its use as a tool to evaluate brain maturation and its relationship to hyperbilirubinemia in preterm infants. She is also involved in studies to examine the effect of anemia in pregnant adolescents on their infants. Her work is supported in part by grants from the NIH and FDA.

Carl Johnston, Ph.D.

Dr. Johnston's work seeks to understand how the postnatal lung copes with external stress. A critical biological factor playing a role in childhood pulmonary susceptibility is that a significant portion of lung development takes place postnatally. One of the environmental factors relevant to developmental lung disease is the recent increase in complexity and distribution, if not the levels, of airborne pollutants, including allergens and endotoxins, respirable particulate matter, and irritant gases, exposure to which damages various cell types. Among the most important of these are the respiratory epithelium and critical immune effector cell populations. In addition, combined exposures to multiple pollutants may activate several unique signaling pathways that are age dependent and, depending on the sequence of initiation, may result in responses not predicted by evaluating exposures to an individual pollutant. Dr. Johnston's work depends heavily on mRNA analysis, microarray technology, immuno-histochemistry, and in situ hybridization. This work is supported by participation in several NIH grants.

Nirupama Laroia, M.D.

Dr. Laroia's research interests have focused on neonatal seizures, especially those related to stroke and hypoxic ischemic injury in the newborn. Her work has included development of criteria for long-term EEG monitoring in neonates at risk for seizures. Current projects include study of neuroprotective strategies in infants with hypoxic ischemic injury and long-term follow-up of infants with neonatal stroke and intraventricular hemorrhage. She is the site PI for a study on treatment of neonatal seizures. She also works on a breast milk study for preterm infants that will be funded by Prolacta Bioscience.

Ruth A. Lawrence, M.D.

Dr. Lawrence's focus in neonatal care has been nutrition—particularly in human milk and breastfeeding. Because she believes that human lactation has suffered from considerable neglect, she has been spending time revising her textbook, *Breastfeeding: A Guide for the Medical Profession*, now in its seventh edition (2010); her work includes researching the current literature and creating a computerized database and developing consensus. Specific research projects are also being done in collaboration with Dr. Cynthia Howard at Rochester General Hospital. The current funded study involves Vitamin D and its levels in

human milk. Breastfeeding mother-infant pairs are recruited to test the impact of high-dose Vitamin D by measuring the levels of Vitamin D in the mother's milk and in her baby. The tests are also followed by densometry.

Dr. Lawrence is also a consultant to and an investigator with Dr. Ann Dozier in the Department of Community Medicine. Current projects include the impact of epidural anesthesia on breastfeeding; the impact of Depoprovera given to the mother before discharge on breastfeeding and several other exploratory efforts.

Dr. Lawrence has also been involved in efforts to provide human milk for prematures. A product has been produced exclusively from human milk to be used to supplement the milk of a mother who is feeding a premature infant. The product was developed in consultation with Dr. Lawrence by Prolacta Bioscience, a human milk bank. The study was funded by Prolacta. A blinded, randomized study of the supplement will test its impact on the growth of prematures as well as the incidence of infections compared to breastfeeding prematures who are supplemented with a bovine product.

Other work based on clinical toxicology issues and prevention education is funded by Health and Human Services grants through the Health Resources and Services Administration and carried out at the Poison Center.

The Ruth A. Lawrence Regional Poison Center was closed December 31, 2010 after 54 years as first Poison Center to answer calls from the public. It has served as a national role model for toxicology services as well as education and prevention activities. The Lactation Study Center and the drug information line continue along with the clinical toxicology service. Dr. Lawrence continues to serve as medical director of the lactation and drug lines.

William M. Maniscalco, M.D.

Dr. Maniscalco's laboratory research is concerned with pulmonary microvascular development in lung injury. Using various animal models, including a non-human primate model of BPD, this work examines the effects of oxygen and ventilation of immature lung on the development of alveolar capillaries. The major goals of the research are to characterize microvascular development in lung injury and investigate angiogenic and angiostatic regulators in normal and injured lung. Recent work has linked expression of inflammatory CXC chemokine mediators, which regulate angiogenesis and are part of the pathophysiology of BPD, to impaired lung microangiogenesis.

Thomas J. Mariani, Ph.D.

The broad objectives of Dr. Mariani's laboratory are to identify the genetic mechanisms of susceptibility to chronic lung diseases, particularly focusing upon their developmental antecedents and the influence of environmental factors. Dr. Mariani's research program focuses upon defining key regulatory networks involved in lung development and maturation, and which may be perturbed in diseased states such as asthma, chronic obstructive pulmonary disease (COPD) and bronchopulmonary dysplasia (BPD). Work focuses predominantly upon defining pathways contributing to regulation of epithelial-mesenchymal interactions and expression of extracellular matrix molecules. His laboratory utilizes genetic modeling in animals, exposure-related models of chronic lung disease and studies of human samples. He is a leader in the application of genome-wide expression array methods to pulmonary biology and lung disease gene/biomarker discovery. Dr. Mariani is co-PI on an NIH Pulmonary Outcome of Prematurity grant, which seeks to identify immunologic markers of long term respiratory outcome. He is also supported by an RO1 grant from NIH.

Robert H. Notter, M.D., Ph.D.

Research in my laboratory focuses on lung surfactant, a complex mixture of lipids and proteins that is essential for normal respiratory function. Lung surfactant deficiency in premature infants leads to the neonatal respiratory distress syndrome (NRDS), and surfactant dysfunction/inactivation is also important in the pathology of clinical acute lung injury (ALI) and the acute respiratory distress syndrome (ARDS) in patients of all ages. The prevalent and lethal lung injury syndromes of ALI/ARDS can result from multiple

kinds of direct pulmonary insults (e.g., viral or bacterial pneumonia, gastric or meconium aspiration, lung contusion, hyperoxia, lung transplant, thoracic radiation) or from indirect extra-pulmonary causes (e.g., sepsis, shock, burn injury, long bone fracture, pancreatitis, bone marrow transplant). A major focus of my current NIH-funded multi-university collaborative research is on developing new highly-active synthetic lipid/peptide exogenous surfactants for treating NRDS and direct pulmonary forms of ALI/ARDS. This includes basic and translational NIH Bioengineering Research Partnership (BRP) studies on the molecular design, synthesis, and biophysics of novel amphipathic peptides having structural homology to active surfactant proteins (SP), as well as research defining the surface and pulmonary activity of synthetic surfactants containing these peptides plus novel phospholipase-resistant lipids or synthetic biologic lipids. Also studied is the use of exogenous surfactants not just to reverse surfactant deficiency and dysfunction *in vivo*, but also to deliver other pharmacologic agents to the lungs to concurrently target other aspects of the complex pathology of ALI/ARDS (pulmonary edema, vascular dysfunction, inflammation). Prior research in my laboratory at Rochester helped to develop clinically-effective first-generation surfactant therapy for premature infants with animal-derived drugs, and this is now being extended using sophisticated molecular bioengineering principles to define and develop new fully-synthetic lung surfactants for treating NRDS and direct pulmonary forms of ALI/ARDS.

Michael A. O'Reilly, Ph.D.

The O'Reilly lab consists of an interactive group of senior scientists, graduate students, technicians, and summer undergraduate scholars interested in understanding how neonatal oxygen disrupts lung development and the host response to respiratory viral infections. Premature exposure to oxygen is a major risk factor for neonatal lung disease and can cause bronchopulmonary dysplasia (BPD), a chronic form of lung disease frequently seen in preterm infants with very low birth weight. While better clinical care has reduced mortality, children born prematurely are at increased risk for reduced lung function, respiratory viral infections, pulmonary hypertension, and asthma. According to the NHLBI web site (<http://www.nhlbi.nih.gov/new/press/06-07-26.htm>), the annual costs of treating infants with BPD in 2005 were \$26.2 billion dollars. Hence, there is an urgent need to understand how oxygen supplementation permanently disrupts lung development and how these changes enhance susceptibility to respiratory infections. Using the mouse as a model system, our studies are focused on defining how high oxygen at birth alters growth and differentiation of progenitor cells critical for lung development and host defense against infections. We also investigate how oxygen-induced damage activates molecular pathways that control whether cells live or die. We then collaborate with physicians who study health outcomes and treat children born prematurely. By integrating research findings in cells, mice, and humans, we hope to ultimately identify therapeutic opportunities for improving the long-term health of children born prematurely. This work is supported by several NIH grants and a grant from the March of Dimes.

Dale L. Phelps, M.D.

Dr. Phelps' research is on retinopathy of prematurity (ROP). Inositol supplementation from birth to reduce ROP is her main project, funded by both the National Institute of Child Health and Development and the National Eye Institute.

Gloria S. Pryhuber, M.D.

As a clinician scientist, Dr. Pryhuber maintains a basic science laboratory, and acts as communicating Principal Investigator for the University of Rochester / University at Buffalo (URUB) research site for the Prematurity and Respiratory Outcomes Program (PROP, NHLBI U01). This program is composed of 6 Pediatric Pulmonary/Neonatology centers around the country and is focused on identifying biomarkers and mechanisms of chronic lung disease in premature infants. In the development, and now implementation of the PROP, she has worked very closely with the Rochester Human Immunology Center in order to bring advances in immunologic techniques to the study of premature newborns. As a Neonatologist, and because of the strong infrastructure that we have put in place for the PROP and the NICHD Neonatal Research Network, including collaborative arrangements with the Maternal Fetal Medicine, Neonatology and Pediatric Pulmonary Divisions, she has excellent access to adequate numbers of premature and full term infant patients to ensure the timely screening, enrollment, and completion of clinical studies/trials with these populations. In addition, her laboratory has notable experience in collecting, storing, processing, and performing quality assessment and analysis of animal and human subject samples. She works with a number of investigators at the UR and external on "Identification and Validation of Molecular Markers for

BPD.” This project provides support for investigation and validation of altered gene expression in human neonatal lung samples with and without chronic lung disease. Her research studies in pulmonary biology, neonatology and immunology, , have prepared her to participate in and support collaborative work between the Human Immunology Center, and the Departments of Pediatrics, Divisions of Neonatology, Infectious Disease and Pulmonology. She has collaborated with Drs. Topham, Gill and Caserta, on two NIH proposals to study CD8+ T cells in responses to viruses and vaccines with correlations to gut microbiomics and measures of immune modulators in breast milk. She is highly enthusiastic to work with this multidisciplinary group of collaborators, as to do so will contribute meaningfully to the short- and long-term health of our infants.

Arshad Rahman, Ph.D.

Dr. Rahman and his research group want to know how pro-inflammatory mediators such as the coagulation protease thrombin and the pro-inflammatory cytokine TNF α , released in high amounts during sepsis and other inflammatory conditions, mediate neutrophil (PMN) sequestration and emigration in the lung and thus induce lung vascular injury. In particular, they are interested in defining the critical signaling pathways mediating activation of the transcription factor NF- κ B in the endothelium, an important cellular target of proinflammatory mediators in perpetuating and amplifying the inflammatory responses. Activation of NF- κ B is essential for the expression of proinflammatory genes, including adhesion molecules (ICAM-1, VCAM-1, E-selectin), cytokines (TNF α , IL-6), and chemokines (IL-8/CXCL8). The coordinate action of these proteins serves to facilitate the adhesion and transendothelial migration of PMN, and to increase endothelial permeability associated with ALI and Acute Respiratory Distress Syndrome (ARDS). Dr. Rahman and colleague use a creative integration of *in vitro* and *in vivo* approaches to identify the signaling events controlling the activation of NF- κ B in cultured endothelial cells and then assess the *in vivo* relevance of the identified signaling events in the mechanism of lung PMN infiltration and lung microvascular injury in mouse models of ALI. Uncovering the intricate signaling network in control of NF- κ B activation holds the potential for identification of specific therapeutic target(s) to control ALI/ARDS. A key benefit of this approach is that targeting specific signaling molecule(s) may allow for suppression of detrimental inflammation such that host defense response is not compromised - a problem associated with current treatment options to control ALI/ARDS and other inflammatory disease states. This work is supported by an NIH R01 grant and participation in other grants.

Kristin Scheible, M.D.

Premature infants are considered immunocompromised hosts. They are more susceptible to infection and suffer from diseases mediated in part by dysregulation of immune cells, including BPD, PVL and Necrotizing Enterocolitis. Little is known about the nature of T cell responses in neonates, and less is known about T cell behavior and function in premature infants. Her research focuses on the effect of early activation of T cells in the context of premature infants with poor thymic recovery. Utilizing high-parameter flow cytometry on human umbilical and peripheral cells, she is able to examine T cell phenotype, homeostasis and antigen-specific responses, as well as trace changes that occur over time in postnatal immune development. By combining *in vitro* data with clinical data, she can understand the role that T cell dysregulation may play in mediating diseases of prematurity. In addition to the project on neonatal immune development, she is also studying adult CD8+ T cell responses to influenza virus through the New York Influenza Center of Excellence. This area of research increases our understanding of a phenotype and functional profile that may define a “protective” CD8+ T cell response to an ever-shifting but frequently encountered antigen. Her work is supported by an NIH K award.

Timothy P. Stevens, M.D., M.P.H.

Dr. Stevens’s primary research interest is on pulmonary outcome of premature infants, with emphasis on the neonatal antecedents of later airway dysfunction that cause preterm infants to require ongoing pulmonary care in childhood. With funding from the National Institute of Child Health and Human Development Neonatal Research Network and a NICHD K23 Award, two prospective clinical research projects are underway investigating the effect of supplemental oxygen exposure on the risk of wheezing in later childhood. As a secondary study to The NICHD SUPPORT Trial, a randomized trial of clinical treatment of high- vs. low-targeted oxygen saturations in preterm infants < 28 weeks’ gestation, Dr. Stevens is investigating the effect of differential oxygen exposure on symptomatic airway dysfunction in

preterm infants. In a Rochester-based cohort, the level of early oxygen exposure and consequent oxidant stress is being investigated as predictors of later symptomatic airway dysfunction in premature infants 28-32 weeks' gestation.

Robert J. Swantz, M.D.

Dr. Swantz' primary research interest is undergraduate medical education. He directs the 3rd year clerkship and 4th year sub-internship for the Department of Pediatrics, and is actively involved with the Dean's office in the management and evaluation of the medical school curriculum and the admission and advancement of medical students.

Jennifer L. Young, Ph.D.

Dr. Young's research focuses on understanding extracellular matrix (ECM) signaling during lung injury and repair. Specifically, the focus of the laboratory is on understanding the role of the matricellular signaling molecule CCN1/Cyr61 in lung injury. CCN1 is an ECM-associated signaling molecule that functions to promote cell adhesion, migration, survival and differentiation in vascular development. In the context of the lung, they have found that CCN1 together with TNF α causes apoptosis of alveolar epithelial cells and lung fibroblasts. Because CCN1 is induced in the lungs of patients with lung diseases such as chronic obstructive pulmonary disease (COPD) and acute respiratory distress syndrome (ARDS), they hypothesize that CCN1, together with inflammatory mediators such as TNF α causes cell death of primary lung cells *in vivo*, thus contributing to lung injury. Dr. Young's studies focus on elucidating the molecular mechanism(s) of cell death and survival of primary lung cells in response to CCN1 and TNF α using cultured cells as well as *in vivo* models of lung injury.

In addition to CCN1's apoptotic function, they have found that CCN1 functional knock-out mice have greatly reduced lung inflammation after LPS treatment. This suggests that CCN1, in addition to playing a role in apoptosis and cell survival, is likely to be involved in the inflammatory response as well. Thus, they are actively investigating the modulation of inflammation by CCN1 in models of acute lung injury and fibrosis *in vivo*. The ultimate goal of these studies is to gain a better understanding of the complex pathology of lung diseases so that better treatments can be developed. Research funding comes from the American Heart Association.

Scientific Presentations

Abstracts Presented at 2011 Pediatric Academic Societies' Annual Meeting, Denver, Colorado

Amin SB. Determinants of Iron Status Prior to Discharge in Premature Infants. Poster

Amin SB., Laroia, N, Orlando, M, Wang, H. Unbound Bilirubin and auditory Neuropathy Spectrum disorder in late Preterm and Term Neonates with Severe Jaundice. Poster

Amin SB. Auditory Neuropathy Spectrum Disorder in Premature Infants: Incidence and Risk Factors. Poster

Amin, SB, Smith, T, Wang, H. Neonatal Jaundice and Autism Spectrum Disorder Meta-Analysis of Observational. Studies. Platform Presentation.

Arriagada SA, Chess PR, Stevens TP. Impact of a QI Program on Pulmonary Outcomes in Preterm Infants. Poster

Arriagada SA, Chess PR, Stevens TP. Implementation of a QI Program Using a Bundle of Evidence-Based Respiratory Practices. Poster
Ben Saad T, Hoffmire CA, Glantz JC, Chess, PR. Improving perinatal outcomes through reduction of elective deliveries prior to 39 weeks gestation. Poster

D'Angio CT, Stevens TP, Harter TV, Martinez FD, Tepper RS. PAS Topic Symposium

Dadiz R, Nair J, Reubens L, D'Angio CT, Ryan RM, Lakshminrusimha S. Increased Methemoglobin (MHb) Levels Predict Response to Inhaled Nitric Oxide (iNO) in Persistent Pulmonary Hypertension of the Newborn (PPHN). Poster

Guillet R, Urine Phenobarbital: Potential Use for Compliance Assessment. Poster

Guillet R, Edwards AD, Thoresen M, GunnAJ. Functional Outcomes at 7-8 y of Survivors of CoolCap Trial Is Highly Associated with 18 m Neurodevelopment Assessment. Poster Symposium.

Kaiser JR, Yap VL, Mulkey SB, Guillet R, Gunn AJ. Duration of Early a Hypocapnia in Infants with Hypoxic Ischemic encephalopathy (HIE) Predicts Long-Term Outcomes. Poster

O'Reilly MA. Defining how neonatal hyperoxia is a developmental antecedent that increases susceptibility to influenza A virus infection. Invited Presentation for the thematic session titled: *Approaches to Study Alveolar Formation In the Developing Lung. What Is the Molecular Basis of the Pathogenesis of BPD?*

Seltzer L, Kwon, J, Burchfield J, Alfieris G, Guillet R. EEG Pattern Following Hypothermic Circulatory Arrest Predicts Subsequent Seizures. Poster

Abstracts Presented at 2010 American Thoracic Society 107th International Conference, Denver, CO

Bhattacharya, S, Srisuma, S, Solleti, SK, Krenitsky, D, Huyck, HL, Gascon, JL, Parnell, V, Metlay, L, Mariani, TJ, Pryhuber, GS. Transcriptional Profiling of Bronchopulmonary Dysplasia (BPD) Tissue Reveals Changes in the IGF1 Pathway and Mast Cell Accumulation are Associated with Disease Pathogenesis. Poster

Bijli, K., Fazal, F., Smrcka, A., Rahman, A. Critical Role of Phospholipase C Epsilon in Lipopolysaccharide-Induced Lung Inflammation. Poster Discussion

Brehm, JM, Hagiwara, K, Mariani, TJ, Bhattacharya, S, Boutaoui, N, Ziniti, J, Soto-Quiros, ME, Avila, L, Cho, MH, Himes, BE, Litonjua, AA, Jacobson, F, Bakke, P, Gulsvik, A, Anderson, WH, Lomas, DA, Forno, E, Datta, S, Silverman, EK, Celedon, JC. Identification of FGF7 As a Novel Susceptibility Locus for chronic Obstructive Pulmonary Disease. Poster

Buczynsky BW, Yee M, Marr SH, Lawrence BP, and O'Reilly MA. High Levels of Neonatal Oxygen Disrupt the Immune Response to Influenza A Virus in Adult Mice by Disrupting Surfactant Protein-D Expression. Poster Discussion.

Christley, S, An, GC, Bhattacharya, S, Mariani, TJ. A Novel Parsed Network Analysis of Whole Lung Genomic Data: Towards Spatially-Explicit Dynamic Modeling of Early Human Lung Development. Poster

Fazal, F, Bijli, M, Minhajuddin, A, Rahman, A. Myosin light chain kinase regulates thrombin-induced ICAM-1 expression and lung PMN sequestration in mice. Poster

Gewandter JS, Staversky RJ, and O'Reilly MA. Mitochondrial DNA Damage Activates P53 Retrograde Signaling and Slows Proliferation: A Potential Early Sensor of Impending Mitochondrial Dysfunction. Mini Symposium-Oral Presentation.

Gottfried, L, Dean, DA. The T1Alpha Promoter Mediates Nuclear Import of Plasmid DNA Into Alveolar Epithelial Type I Cells. Poster

Johnston CJ, Finkelstein JN, Manning CM, Reed, C, Hernady E, Williams JP. Early life Exposure to Radiation Sensitizes Mice to Later Life Bacterial and Viral Challenges. Poster.

Lin, X., and D. A. Dean. 2011. Gene transfer of the epithelial sodium channel (ENaC) alpha1 subunit using electroporation protects from lipopolysaccharide (LPS)-induced acute lung injury. Poster

Melen, E, Kho, A, Sharma, S, Gaedigk, R, Leeder, SJ, Mariani, TJ, Carey VJ, Weiss, ST, Tantisira, K. Expression Analysis of Asthma Candidate Genes During Human And Murine Lung Development. Poster

Popoval P, Bentley JK, Bozyk PD, Goldsmith AM, Linn MJ, Lei J, Pryhuber GS, Hershenson MB, Glycogen Synthase Kinase-3 β /beta-Catenin signaling In Neonatal Lung Mesenchymal Stromal Cell Myofibroblastic differentiation. Presentation at a “Best in Pediatrics Minisymposium.”

Rangasamy, T, Gopinath, P, Sivagnanalingam, U, Shafiq, M, Yamamoto, M, Mariani, TJ, Prockop, DJ, Kleeberger, SR, Tudor, R, Georas, S. Investigating The therapeutic Potential of Nrf2 Wild-Type and Nrf2-Deficient Mesenchymal Stem Cells in Elastase Induced Pulmonary Emphysema. Mini-Symposium

Ringo, K, Norman, R, Bijli, KM, Rahman, A, Young, JL. Extracellular matrix protein CCN1 (Cyr61) modulates neutrophil recruitment to the lung. Poster

Solleti, SK, Bhattacharya, S, Simon, DM, Crossno, JT, Rangasamy, T, Almudevar, A, Rahman, A, Bijli, K, Sime, P, Mariani, TJ. Epithelial cell PPAR γ modulates smoke-induced chemokine expression and emphysema susceptibility in mice. Mini Symposium.

Zhao L, Yee M, and O'Reilly MA. Transdifferentiation and Epithelial-Mesenchymal Transition of Primary Mouse Alveolar Type II Cells are Differentially Regulated by TGF- β 1 and BMP-4. Poster.

Yee M, Lawrence BP, and O'Reilly MA. Neonatal Hyperoxia Disrupts Epithelial Repair Following Influenza A Virus Infection. Poster Discussion.

Abstracts Presented at Other National Research Meetings (2010-2011)

Allen JL, Finkelstein JN, Johnston CJ, Oberseorster G, Cory-Slechta DA. Persistent CNS Effects of Postnatal Exposure to Concentrated Ambient particles. Society of Toxicology, Washington, DC. March 2011.

Badding, M. A., and D. A. Dean. Transcription factor binding by plasmid DNA is needed for interactions with microtubules and trafficking in cells. *Mol Therapy* **18**:S228. 2010. Poster

Badding, M. A., and D. A. Dean. Directed movement and velocity of transfected plasmids is enhanced on acetylated microtubules. *Mol Therapy* **19**:S67. 2011. Poster

Barnett, R. C., and D. A. Dean. Development of a nonviral gene therapy approach for surfactant protein B deficiency. *Mol Therapy* **19**:S109. 2011. Poster

Bhattacharya, S. and Mariani TJ. “An Expression Profiling Data Repository for Lung Disease Gene Discovery” Proceedings of 18th Annual ISMB, Boston, MA, USA, 2010

Bhattacharya, S. and Mariani TJ. “Systems-level discovery of the developmental basis for disease” Proceedings of Proteomics-2011: International Conference & Exhibition on Proteomics & Bioinformatics, Hyderabad, India, 2011

Bijli KM, Alexander WB, Fazal F, Smrcka AV, Rahman A. Phospholipase C epsilon is a critical mediator of NF- κ B activation and vascular cell adhesion molecule-1 expression in endothelial cells. Experimental Biology, Washington DC, April 9-13, 2011.

Ekstrom, M. H., and D. A. Dean. The Amaza nucleofector system and standard electroporation: a comparison of the efficiency of DNA nuclear localization. 2011. *Mol Therapy* **19**:S269-270. Poster

Finkelstein JN, Williams JP, Hernady E, Johnston CJ. Early Life Exposure to radiation Sensitizes Mice to later Life Inflammatory Challenges. Radiation Research, Maui, HI. September 2010.

Finkelstein JN; Williams JP; Hernady E; Johnston CJ. Early Life exposure to Radiation Sensitizes Mice to Later Life Inflammatory Challenges. Radiation Research, Maui, Hawaii. September 2010

Gottfried, L. F., and D. A. Dean. The T1a promoter mediates nuclear import of plasmid DNA in alveolar epithelial type I cells. *Mol Therapy* **18**:S339. 2010. Poster

Gottfried, L. F., and D. A. Dean. T1a promoter mediated gene delivery into alveolar epithelial type I cells. *Mol Therapy* **19**:S59. 2011. Poster

Hein AM, Johnston CJ, Finkelstein JN, Williams JP, Olschowska JP, O'Banion MK. Head-only Radiation in Adult Mice and Whole-Body Radiation in Neonatal Mice Impair Contextual Fear Memory. Radiation Research. Maui, HI. September 2010

Johnston CJ, Finkelstein JN, Manning JN, Reed C, Hernady E, Williams JP . Early Life Exposure to Radiation Sensitizes Mice to Later Life Bacterial and Viral Challenges. American Thoracic Society, Denver, CO., May 2011

Johnston CJ, Joshua A, Gelein R, Finkelstein JN, Oberdoerster G, Cory-Slechta DA. Early Life Particle and Ozone Inhalation Sensitizes the Lung and Brain to Later Life Challenges. Society of Toxicology, Washington, DC. March 2011.

Johnston CJ, Opanashuk L, Gelein R, Finkelstein JN, Cory-Slechta D, Oberdoerster G. Inhalation of Ambient Traffic Related Particulate Matter during Postnatal Lung Development Induces and Persistent Pulmonary and Neuroinflammation. Society of Toxicology, Salt Lake City, UT. March 2010

Lin, X., and D. A. Dean. Gene transfer of the epithelial sodium channel (ENaC) alpha1 subunit using electroporation protects from lipopolysaccharide (LPS)-induced acute lung injury. *Mol Therapy* **19**:S43. 2011. Poster

Machado-Aranda D, Yu B, Wang Z, Notter RH, Raghavendran K. Surfactant dysfunction correlates with the degree of permeability injury in a mouse model of lung contusion. A3720, Presented at 40th Society for Critical Care Medicine National Meeting, San Diego, CA, January 16, 2011.

Manning C, Hohnston C, Williams J. Neonatal Irradiation Sensitizes Mice to Adult Pulmonary Inflammatory Challenges. 14th International Congress of Radiation Research, Warsaw, Poland, August 2011.

Manning, CM, Reed, CK, Head JL, Johnston CJ, Lawrence BP, Williams JP, Finkelstein JN. Thoracic irradiation influences the immune response to a subsequent influenza virus infection. Radiation research, Maui, HI. September 2010.

O'Reilly MA. Modeling persistent pulmonary disease (PPD): the new, new BPD. Children's Hospital, Cincinnati OH. October 29, 2010. Invited Lecture

Reynolds, H. M., and D. A. Dean. Development of a high-throughput quantitative method for assessing plasmid nuclear import. *Mol Therapy* **19**:S5. 2011. Oral Presentation

Scheible K, Zhang G, Baer, J, Azadniv M, Lambert K, Pryhuber G, Treanor JJ, Topham DJ.. *CD8+ T cell functional phenotype in human subjects without recent exposure to influenza virus*. NIAID/Centers for Excellence in Influenza Research and Surveillance (CEIRS) Annual National Meeting, Atlanta, GA, 2011. Poster presentation.

Scheible K, Shang G, Baer, J, Azadniv M, Lambert K, Pryhuber G, Treanor JJ, Topham DJ. Pre-existing CD8T Cell immunity to pandemic H1N1 in human subjects. NIAID/CEIRS Annual National Meeting, Rochester, NY, 2010. Poster presentation.

Scheible K, Zhang G, Baer J, Azadniv M, Lambert K, Pryhuber G, Treanor JJ, Topham DJ. Pre-existing CD8T cell immunity to pandemic H1N1 in human subjects. Options For the Control of Influenza Meeting, Hong Knog, 2010. Poster Presentation.

Sharifahmadian M, Waring AJ, Walther FJ, Notter RH, Booth V: Structural studies of Super-Mini-B: Role of the N-terminal insertion sequence of surfactant protein B. Presented at the 55th Annual Meeting of the Biophysical Society, Baltimore, MD, March 2011.

Valeaquez J, Hein A, Burely C, Johnston C, Finkelstein J, Williams J, O'Banion MK. Hippocampal neurogenesis and memory formation are disrupted following whole-body irradiation of neonatal mice. 14th International Congress of Radiation Research, Warsaw, Poland, August 2011.

Weinschreider J, Dadiz R. Coming to the table:Debriefing for patient safety, Annual convention of the Association of Women's Health, Obstetric and Neonatal Nurses, Las Vegas, NV. Oral presentation.

Williams, JP, Johnston C, Finkelstein JN., Model Development in the Assessment of Lung Late Effects Following a Radiological or Nuclear Event. American Society for Radiation Oncology, Dandiego, CA. October 2010.

Williams JP, Johnston C, Finkelstein JN. Model Development in the Assessment of Lung Late Effects Following a Radiological or Nuclear Event. American Society for Radiation Oncology, San Diego, CA. October 2010.

Williams, JP, Hill RP, Haston C, Johnston C, Miller J, Zimmermann C, Hernady E, Reed C, Finkelstein JN. A Combined Therapeutic Approach to Pulmonary Mitigation following a Radiological Event. Radiation research, Maui, HI. September 2010.

William JW, Hill R, Haston C, Johnston C, Miller J, Stoyer B, Zimmermann C, Reed, C, Harnady E, Finkelstein JN. Combination therapy approach to mitigating lung effects following a terrorism event. 14th international Congress of Radiation Research, Warsaw, Poland, August 2011.

Recent Study Sections and Advisory Committee Memberships

Sanjiv B. Amin, M.B.B.S, M.D., M.S.

Reviewer for Private Finding Agency, 2008

Reviewer of CTSI proposal, 2008

Reviewer for NIH NIDCD P50 Proposal, 2010

Reviewer for NIH Developmental Brain Disorder Study Section, 2011

Reviewer for NIH Loan Repayment Proposals, 2011

CTSI/GCRC advisory committee member, University of Rochester

Patricia R. Chess, M.D.

Pediatric Planning Committee, American Thoracic Society; 2001 - present

Research Grant Review Committee, American Lung Association, 2001 – present

Austrian Science Fund ad hoc reviewer, 2002-2009

Wellcome Foundation UK, 2009 NYS-DOH Perinatal grant reviewer, 2006-present

NYS-DOH Perinatal grant reviewer, 2006-2009

Pediatric Research Society Grant reviewer 2009-present

UR Medical School MD with Distinction in Research Committee 2011

Carl T. D'Angio, M.D.

Grant Review Committee, New York State Empire Clinical Research Investigator Program, 2005-2011

Member, NIAID Ancillary Studies in Immunomodulation Clinical Trials Special Emphasis Panel, 2009

Member, NIAID Clinical Trial Special Emphasis Panel, 2011

Member, US Food and Drug Administration Pediatric Advisory Committee, 2008-2011

David A. Dean, Ph.D.

Member, Gene and Drug Delivery Study section, NIH, 2007-2010

External advisory committee, program project grant on “Pathophysiology of alveolar epithelial lung Injury,” Northwestern University, 2007-present

Cardiovascular Gene Therapy Committee member, American Society for Gene Therapy, 2007-2010

Respiratory Tract Gene Therapy Committee member, American Society for Gene Therapy, 2010-2013

Member, NIH NIBIB P41 Center Grant Site Visit Study Section, 2009

Member, American Lung Association Grant Review Committee 2008-2011

Chair, NIH NHLBI Novel Approaches for Gene Therapy (R21/R33) Study Section, 2009

Member, College of CSR Reviewers, NIH 2010-2012

Jacob N. Finkelstein, Ph.D.

Ad hoc Reviewer:

National Cancer Institute (NCI),

National Heart, Lung, and Blood Institute (NHLBI)

National Institute of Environmental Health Science (NIEHS) ONES Review Panel

National Institute of Allergy and Immunologic Diseases,

James and Esther King Biomedical Research Program (State of Florida Biomedical Research Program)

Tobacco Related Diseases Research Program (California)

Member F10A Study Section

Scientific Advisory Board member

California National Primate Center Davis California

San Joaquin Valley Particulate Matter research Center Davis California

NIEHS Board of Scientific Councillors

Ronnie Guillet, M.D., Ph.D.

Member, National Quality Forum, Perinatal Steering Committee, 2008

Member (ad hoc), NIH Study Section, 2009, 2010

Ruth A. Lawrence, M.D.

Advisory Committee to promote breastfeeding among clients at Early Head Start, Washington, D.C.;

Pediatric Advisory Committee, FDA, present

William Maniscalco, MD

Pediatric Academic Society Abstract Reviewer

Thomas J. Mariani, Ph.D.

Ad Hoc Reviewer

NIH/Lung Injury Repair and Remodeling Scientific Review Group, 2011

NIH/NHLBI RFA(ZHL1) Scientific Review Group, 2011

External Grant Reviewer, Harvard-NIEHS Center Pilot Projects, 2010

Robert H. Notter, M.D., Ph.D.

Standing National Grant Review Committee, Ikaria/INO/Forest Advancing Newborn Medicine Fellowship

Grant Program, 2001- 2011

Solicited Ad Hoc Grant Reviewer for NIH and foundations

Michael A. O'Reilly, Ph.D.

NIH, ad hoc reviewer, multiple study sections

Gloria S. Pryhuber, M.D.

Reviewer

National Institutes of Health, Special Emphasis Panel/Scientific Review Group K08, 2010.

Ad Hoc Reviewer

Arshad Rahman, Ph.D.

Member, NIH Center for Scientific Review special Emphasis Panel, Review Group: 2009/05 ZRG1 CVS-F (03) M, Vascular Pathophysiology, 2009
 Member, NIH Center for Scientific review Special Emphasis Panel for Challenge (RC1) grant application, Review Group:ZRG1 VH-D (58) R, 2009
 Member, NIH Center for Scientific Review special Emphasis Panel, Review Group: 2009/10 ZRG1 CRV G (02) M, 2009
 Co-chair, NIH Center for Scientific Review special Emphasis Panel, Review Group: 2010/05 ZRG1 CVRS-G (02) M
 Co-chair, NIH Center for Scientific review special Emphasis Panel, review Group: 2010/10 ZRG1 CRV-G (02)
 Member, American Heart Association Molecular Signaling 4, Review Group: 2011

Timothy P. Stevens, M.D., M.P.H.

New York State Obstetric and Neonatal Collaborative (NYSONQC) Steering Committee Member and Data Panel Chair

IV. Teaching Activities

Pediatric Residents

Faculty of the Division of Neonatology teach Pediatrics and Medicine-Pediatrics residents in the Neonatal Intensive Care Unit at Golisano Children's Hospital at Strong and Pediatrics and Family Practice residents at the Special Care Nursery at Rochester General Hospital. The Neonatology Division teaches approximately 70-75 residents during their rotations in the NICU and SCN. Clinical teaching activities include Attending Rounds (5 days/week), Work Rounds (7days/week), Health Team Rounds (1day/week), High-Risk Perinatology Rounds (1day/week), NICU Pathology Rounds (1 day/4 weeks), and Ethics Rounds (1day/4 weeks). Division faculty are also active in teaching on the Pediatric Wards and in the Neonatal Resuscitation course for residents in Pediatrics, Medicine-Pediatrics, Emergency Medicine, and Obstetrics and Gynecology.

Neonatal-Perinatal Medicine Fellowship Program

The three-year, ACGME accredited, Neonatology Fellowship fully meets the requirements of the Neonatal-Perinatal Medicine subspecialty board of the American Board of Pediatrics. The program provides intensive training in clinical care of high-risk newborns in a Level IIID NICU (including ECMO, HFOV, and inhaled nitric oxide), a Level II Special Care nursery, an 8-bed Level I nursery, within a 13-county referral region. Fellows acquire active clinical and/or laboratory-based research experience, including study design, institutional review, study performance, analysis, presentation, and publication. Several alternative career development tracks are available, including the traditional Basic Science/Clinical Science Concentration, a Clinical Evaluation Sciences Concentration, including courses within the Master of Public Health Program: two Combined Programs, a Master of Public Health-Clinical Investigation track, and a Master of Science in Business Administration-Medical Management (MSBA-MM) track. Additional commitment may be required if a Combined Program is elected.

Neonatal-Perinatal Medicine Fellows (2010-2011)

Susana Arriagada, M.C. (Third year)
 Medical School: University of Chile
 Residency Program: University of Chile, Santiago

Mazen Nayrouz, M.B.Ch.S., M.S. (Third year)
 Medical School: Alexandria University

Residency Program: Alexandria University Hospital, Egypt

Rebecca Barnett , D.O. (Second year)
 Medical School: West Virginia School of Osteopathic Medicine
 Residency Program: University of Arizona, Tucson

Yesef Antongiorgi, M.D. (Second year)
 Medical School: Ponce School of Medicine Puerto Rico
 Residency Program: Jackson Memorial Hospital, University of Miami

Echezona Maduekwe, MD (First year)
 Medical School: University of Nigeria, Nigeria
 Residency Program: Bronx-Lebanon Hospital Center, Bronx NY

Majd Dardas, MD (First Year)
 Medical School: American University of Beirut
 Residency Program: SUNY Health Science Center at Syracuse, Syracuse NY

Basic Science Teaching in Graduate/Undergraduate Courses

In addition to the clinical-related teaching activities, several faculty in the Division of Neonatology have secondary appointments in other departments of the University of Rochester, and participate in teaching in graduate and undergraduate courses. These faculty members include Drs. Chess, Dean, Finkelstein, Mariani, O'Reilly, Pryhuber, and Rahman, who lecture in and/or direct graduate or undergraduate courses in the Toxicology Program and in the Departments of Environmental Medicine, Biomedical Engineering, and Chemical Engineering. Division faculty also participate in lecturing to medical students during courses in the Double Helix Curriculum.

Education and Training of Basic Science Undergraduate and Graduate Students

Division of Neonatology faculty perform teaching activities relating to the training of non-medical graduate students and postdoctoral fellows, in addition to medical residents and clinical fellows. Graduate students and basic science postdoctoral fellows currently in the Division or completing their studies in the past year are:

Current Graduate Students and Mentors in Laboratories

Melissa Badding
 Program: Toxicology
 Thesis Advisor: David Dean,

Randi (Potter) Benson
 Program: Toxicology, Ph.D.
 Mentor(s): Patricia Chess, Primary Advisor; Jacob Finkelstein, Co-Advisor

Bradley Buczynski
 Program: Toxicology, Ph.D.
 Mentor: Michael O'Reilly, Thesis Advisor

Benjamin Danziger
 Program: Biomedical Engineering
 Thesis Advisor: David Dean

Marta Ekstrom
 Program: Toxicology
 Thesis Advisor: David Dean

Mootaz Eldib
Program: Biomedical Engineering (received MS July 2010)
Thesis Advisor: David Dean

Megan Gable
Fellow in Gastroenterology (2010 – present)
Mentor: Gloria Pryhuber

Diana Go
Fellow in Pulmonology (2011 – present)
Mentor: Gloria Pryhuber

Khatera Rahmani
Program: Toxicology
Thesis Advisor: David Dean

Katherine Ringo
Program: Toxicology, PhD
Mentor: Jennifer Young; David Dean

Sean Gehen
Program: Toxicology, Ph.D.
Mentor(s): Michael O'Reilly, Thesis Advisor

Jennifer Gewandter
Program: Biochemistry and Biophysics, Ph.D.
Mentor(s): Michael O'Reilly, Thesis Advisor

Casey Manning
Program Toxicology
Mentor: Jacob Finkelstein, Thesis Advisor

Aaron Miller
Medical Scientist Training Program, Integrated Graduate program, Northwestern University
(received PhD December 2008)
Thesis Advisor: David Dean

Jennifer Murzycki, M.D., Ph.D.
Pediatric Residency research track
Mentor: Patricia Chess,

Emily Resseguie
Program: Toxicology, Ph.d.
Mentor: Michael O'Reilly, Thesis Advisor

Erik Rushton
Program: Toxicology, Ph.D.
Mentor(s): Jacob Finkelstein, Thesis Advisor

Chia (Ta) Thach
Program: Toxicology
Mentor: Jacob Finkelstein

YuChieh (Melissa) Wu
Program: Biomedical Genetics, Ph.D.

Mentor: Michael O'Reilly, Thesis Advisor

Lan Zhao, Ph.D.

Postdoctoral Fellow

Mentor: Michael O'Reilly

Faculty on Graduate Student Thesis Committees

Patricia Chess

Benjamin Danziger, BME Master's student

William Okech, BME, Masters Oral Exam committee

David Dean

Chris Heier, Ph.D. 2005 – present student in IGP, Molecular Biology and Genetics, Northwestern University

Ted Thurn, Ph.D. 2005 – present student in IGP Cancer Biology, Northwestern University

Ling Yiu, Ph.D. 2007 – present student in Chemical and Biomolecular Engineering, Georgia Institute of Technology

Melissa Badding, Ph.D. 2008 – present student in Toxicology, UR

Marta Ekstrom, Ph.D. 2010- present student in Toxicology, UR

Tha Thatch, Ph.D. 2008 – present student in Toxicology, UR

Jacob Finkelstein

Nelissa Perez Nazario student in Immunology

Melissa Badding Ph.D. student in Toxicology

Brittany Serke Ph.D. student in Toxicology

Katherine Ringo Ph.d. student in Toxicology

Scott Peslak Ph.d. student in Pathology

Michael O'Reilly

Samantha England, Ph.D. student in Biomedical Genetics, 2006 – 2011

Molly Gill, Ph.D. student 2009-2010

Whitney Christian, Ph.D. student in Toxicology, 2009 - present

Andrew Campbell, Ph.D. student in biomedical genetics, 2010 - present

John Lapek, Ph.d. student in Toxicology, 2010 – present

Waqarun Rashid, Ph.D. student in biochemistry, 2010 – present

Daniel Dever, Ph.D. student in Toxicology, 2010 – present

Garrielle Crandall, M.S. student in biology, 2011-present

Gloria Pryhuber

Moyinoluwa (David) Adenuga, Ph.D. student in Toxicology, 2006 - present

Helen Ngai Ph.D. student in Microbiology and Immunology, Final Exam Committee Chair

Arshad Rahman

Melissa Badding, Ph.D. student in Environmental Medicine, 2009- present

Jennifer Head, Ph.D. student in Environmental Medicine, 2008-present

Jennifer Gewandter Ph.D. student in Biochemistry, 2008 – 2011

Mootaz A. Eldib, M.S. student in Biomedical Engineering, 2009- 2010

Punsiri Mahendra Colonne, Ph.D. student in Pathology, 2009- present

Randi Potter, Ph.D. student in Environmental Medicine, 2004 – 2009

Yu-Chieh Wu, Ph.D. student in Biomedical Genetics, 2007 – 2010

Teaching Honors and Awards (2008-2011)

Rita Dadiz, D.O.

George W. Merck Dean's Teaching Fellow, University of Rochester School of Medicine and Dentistry, 2008-2010

Ruth A. Lawrence Academic Faculty Service Award in Training, Department of Pediatrics, 2009

David A. Dean, Ph.D.

Ruth A. Lawrence Academic Faculty Service Award in Research, 2011

Ronnie Guillet, M.D., Ph.D.

URMC Mentoring Award – mentoring of junior faculty (2010)

Ruth A. Lawrence, M.D.

Distinguished Alumni Award, University of Rochester School of Medicine, 2010

Recipient, Anthony L. Jordan Recognition Award, Anthony L. Jordan Health Center, 2010

Doctor of Divinity (Honorary), St. Bernard's School of Theology and Ministry, 2009

Dr. Richard Bayley Award, Richmond University Medical Center, Staten Island, NY 2009

Martha May Elliott Award, American Public Health Association (APHA), 2009

Athena Award, Women's Council Rochester, 2008

Dale L. Phelps, M.D.

Recipient of the American Academy of Pediatrics Section on Perinatal Pediatrics Landmark Award for 2010. In Recognition of significant contributions in a special Landmark area of Neonatology. San Francisco, California.

Gloria Pryhuber, M.D.

George Washinton Goler Professor of Pediatrics, University of Rochester, 2011

Timothy P. Stevens, M.D., M.P.H.

University of Rochester Medical Center Board Excellence Award, 2009

Health Care Achievement Award for Management, Rochester Business Journal, 2010

Major Educational Presentations and Programs (2009-2011)**Sanjiv B. Amin, M.B.B.S., M.D., M.S.**

Invited lecturer, Dental Ground Rounds. University of Rochester, 2008 and 2009

Invited lecturer, Auditory Research Seminar, Iron and Auditory Neural Myelination. University of Rochester, May, 2009

Invited Speaker 2011 PAS National Meetings – Bilirubin Neurotoxicity – Brainstem Processing Disorders.

Presentation at the Bilirubin Club Meeting, Pediatric Academic Society Meetings, May 2011

Invited Speaker 2010 National Neonatal Conference Meeting (Neocon) in India – Bilirubin-induced neurotoxicity in term and premature infants –October 2010.

Neonatal Clinical Research Seminar Series – Bilirubin-induced neurotoxicity, April 2011

Patricia R. Chess, M.D.

Genes to Generations 3rd year medical student course. Pulmonary Development lecturer U of R School of Medicine and Dentistry, 2001-present
Nursing Care of the High risk neonate course 436 U of R School of Nursing Follow-up of the NICU graduate. ROP 2007-present

Pediatric Fellows' Core Curriculum, Ten minute Presentations. 2006 - present

Feedback and Evaluation. Pediatric and Medicine-Pediatrics Residency Competency Core, University of Rochester, 2007-present

Congenital Diaphragmatic Hernia: Past, Present, and Future, Grand Rounds UofR 2009.

Anemia in the Fetus and Newborn. Grand Rounds, Unity Hospital, 2009

High frequency ventilation, Syracuse University RT program, 2009

Use of iNO/ ECMO/ High frequency NMKB UofR 2007-present
 Pulmonary Function and biomechanics NMKB UofR 2010
 Career Paths in the Sciences. Uof R workshop group leader 2010
 Effect of Timing of Elective Deliveries and admission to the Neonatal Intensive Care Unit, Cayuga
 Medical Center, Ithaca NY, 2011

Rita Dadiz, DO

Obstetric and neonatal multidisciplinary simulation-based team training. URM, 2007-present.
 Delivery room and newborn nursery simulations. URM, 2008-present.
 Mega Obstetrical Emergency Simulation. Workshops at District II/NY Annual Meeting, American College
 of Obstetrics and Gynecology, New York City, 2008, 2009.
 In-situ NICU mock codes. URM, 2009-present.
 Training for the unexpected. Simulation course facilitator, Center for Obstetrics and Gynecology
 Simulation, URM, 2009-present.
 Calcium, phosphorus and magnesium. Fellow Neonatal Medical Knowledge Base Curriculum, URM,
 2009.
 Primary care of the NICU graduate. Pediatric Noon Conference, URM, 2009.
 A team approach to resuscitation using simulation. Harriet-Davis Teaching Day. Rochester, NY, Sept
 2009.
 Voices of distinction: Best practices from University of Rochester award-winning faculty. University of
 Rochester, 2010.
 Team building. Chief resident training workshop, URM, 2010.
 Parental adjustment and advocacy for NICU Babies. Pediatric Noon Conference, URM, 2011.

Carl T. D'Angio, M.D.

18th Annual Neonatology Conference, Nemacon, PA. February 20, 2009. "Vaccines in Premature Infants:
 Theory Meets Practice."
 Contemporary Management of Neonatal Pulmonary Disorders. "Respiratory Viral Illness in the
 Premature Infant: Risks and Prevention." Phoenix, AZ.
 November 4-5, 2010.
 Contemporary Management of Neonatal Pulmonary Disorders. "The Ethics of Resuscitation in the "Gray
 Zone" of Neonatal Viability." Phoenix, AZ.
 November 4-5, 2010.
 "Genes to Generations" medical student course, Pulmonary Biology lecturer, URM
 Research Ethics/Integrity (IND 503), Session facilitator, URM 2005 - present
 Statistics lecturer, Pediatric fellows core lecture series, University of Rochester School of Medicine and
 Dentistry, 2005 - present

David A. Dean, Ph.D.

"Electro gene transfer to the lung", Gordon Research Conference on Bioelectrochemistry, Biddeford, ME,
 2010
 "Mechanisms of intracellular trafficking in gene delivery", Program in Targeted Therapeutics, University
 of Pennsylvania, Philadelphia, PA, 2010
 "Use of Electroporation for Efficacious Gene Delivery to the Lungs", Symposium Presentation,
 Electrochemical Society Annual Meeting, Montreal, Canada, 2010
 "The importins of plasmid nuclear localization", American Society for Gene Therapy Annual Meeting,
 Seattle, WA, 2010
 "Intracellular movement of plasmids and DNA-protein complexes during gene transfer",
 Department of Pharmaceutical Sciences, Wayne State University, Detroit, MI, 2009
 "Pulmonary Gene Transfer: Successful and Safe Use of Electroporation in a Pig Model,"
 American Society for Gene Therapy Annual Meeting, San Diego, CA, 2009
 "Cytoplasmic and nuclear trafficking of plasmids during gene delivery," Plenary Symposium,
 Society for In Vitro Biology Annual Meeting, Charleston, SC, 2009

Fabeha Fazal, Ph.D.

Importin α 3 and α 4 Mediate Thrombin-Induced ICAM-1 Expression in Endothelial Cells by Facilitating

RelA/p65 Nuclear Translocation . 13th Annual Genetics Day, University of Rochester, 2009
 Dual Regulation of Cofilin-1 Activity by LIM Kinase and Slingshot-1L Phosphatase Mediates Thrombin-Induced Actin dynamics and ICAM-1 Expression in endothelial Cells. Lung research and Trainee Day, University of Rochester, October 2010

Jacob N. Finkelstein, Ph.D.

Co-director, Advanced Pulmonary Toxicology (TOX 564)
 Lecture, core Toxicology (TOX) 521)
 Course Director Tox 522 Spring 2011
 Participant path 509 environmental Pathology

Ronnie Guillet, M.D., Ph.D.

Therapeutic Hypothermia for Infants with HIE, Syracuse Perinatal Symposium, Syracuse, NY, 2009
 Breaking Bad News. Pediatric Noon Conference, 2007, 2009
 Studying Neonatal Seizures: The devilish details. Neonatology Clinical Research Seminar, 2009
 23-24 Weeks' Gestation: Approaches and Outcomes, Thruway Conference, 2009
 Therapeutic Hypothermia for Hypoxic Ischemic Encephalopathy, 21st Annual Rochester Conference in Perinatal Medicine, Rochester, NY, 2009
 Neonatal Seizures: What are we doing...and does it make sense? The 5th International Conference on Brain Monitoring and Neuroprotection. Clearwater Beach, FL 2010
 PROPHENO – Update, NESTT meeting, San Francisco, CA 2010
 CoolCap Follow-up Study: Outcome at 7-8 years; Hypoxic-Ischemic Encephalopathy Workshop, Bethesda, MD, 2010.
 PB or not PB: A question of equipoise; Columbus OH; Detroit, MI; Ann Arbor MI; 2011.

Carl Johnston, Ph.D.

Lectured on pulmonary inflammation in the toxicology core class – 2011

Nirupama Laroia, M.D.

Fetal Alcohol Syndrome and long term developmental effects. Invited Talk. Finger Lakes Regional Perinatal Forum. Canandaigua, NY, 2010
 Smoking, Alcohol, drugs and pregnancy. Fetal Health lectures. Two lectures. Boys and girls class, Wilson Magnet School. Rochester, NY, 2010
 NRP for Anesthesiologists. Grand Rounds. Dept of Anesthesia. Rochester General Hospital. 2010
 Townsend Teaching Day. Invited Speaker. "What is the diagnosis? A case study." 2009
 PediCon 2009, Annual Conference of the Indian Academy of Pediatrics, Bangalore, India. Expert Panelist, "Effectiveness of Neonatal Care Package.", 2009
 Welcome Host and Breakout Group on NRP participant. AAP/IAP Joint Program, Hynes Convention Center, Boston, MA., 2008
 Neonatal Resuscitation Program, "The First Golden Minute" Training of trainers, Bangalore, India. A collaborative project between the American Academy of Pediatrics, Indian Academy of Pediatrics, Latter Day Saint Charities. 01/21/2009 - 01/22/2009
 Physician Assistant, Rochester Institute of Technology, Rochester, NY. Normal and Sick Newborn. 2000 - Present
 Neonatal Nurse Practitioner Course, Course work in Neonatal Neurology, University of Rochester, Rochester, NY. 1999 – Present
 Fellows Curriculum.
 Hypoxia-Ischemia in the Newborn, 2 lectures. 2010
 Intraventricular Hemorrhage and Post Hemorrhagic Hydrocephalus. Current Knowledge for 2009 Neonatal Thermoregulation. 2009
 Neonatal Nurse Practitioner course #436. Neonatal neurology, 2009

Ruth A. Lawrence, M.D.

The Key to Life & Work Balance: Time Management, Pathfinder Protégé Gathering, University of Rochester, July 2011.

Vaccine to Protect Children from Anthrax, National Biodefense Science Board, Washington, DC, July 2011.

3rd Annual Summit on Breastfeeding, Washington, D. C., Chair of event, Sponsored by Kellogg Foundation, June 2011

Breastfeeding Training Days, WIC, Caldwell County Health Department, Lenoir, NC, April, 2011.

Breastfeeding Special Interest Conference (BFESIG), National Association of Pediatric Nurse Practitioners (NAPNAP), Baltimore, MD, March 2011.

Breastfeeding Conference: Optimal Nutrition for the Infant and Young Child, The California Chapter 4 AAP, Fountain Valley, California, March 2011.

22nd Annual Conference on Breastfeeding, Emory University School of Medicine, Atlanta, GA, March 2011.

Time Management, Faculty Colloquium, University of Rochester, June 2, 2010.

Conference Children's Environmental Health, Environmental Toxins and Breastfeeding, Syracuse, NY, June 2, 2010.

2nd Annual Summit on breastfeeding, Washington, D.C., Chair of event, Sponsored by Kellogg Foundation, June 2010.

Time Management, Faculty Seminars, January 19, 2010.

School of Public Health Albany National Broadcast for World Breastfeeding week, Albany, NY, Thursday, August 5, 2008, August 6, 2009, August 7, 2010, August 4, 2011.

25th Anniversary of Surgeon General's Workshop Summit on Breastfeeding, sponsored by Kellogg Foundation, Chair of event (Cynthia Howard co-chair, June 2009

Anatomy and Physiology of the Breast in course on Breastfeeding for physicians at Academy of Breastfeeding Medicine Annual meeting each year since, 2005, 2007, 2008, 2009.

Grand Rounds, Breastfeeding especially prematures, Erie, PA., September 16, 2009.

Medical Society Meeting, The Physicians Role in Successful Breastfeeding, Erie, PA., September, 15, 2009.

Human Teratogens: Are they a problem for breastfeeding?, Human Teratogens Course, Mass General Hospital for Children, Boston, MA, April, 2009.

Growing up Catholic, John Henry Newman Lecture Series, The John Henry Cardinal Newman Chair of Catholic Studies and the Catholic Newman Community University of Rochester, April 2009.

Epidemiology of Breastfeeding Lecture, Department of Community & Preventive Medicine, University of Rochester, April 2007, April 2008, April 2009.

Drugs in Breastmilk and Their Significance, Toxicology 530, University of Rochester, April 2009.

Breastfeeding on the State and National Fronts, The Finger Lakes Region Perinatal Forum, Canandaigua, NY, October 23, 2009.

Lactation and Breastfeeding, Reproductive Diseases, Disease Processes and Therapeutics, University of Rochester, January 7, 2009, January 6, 2010, March 7, 2011..

William M. Maniscalco, M.D.

Mechanisms of vascular disruption in BPD 19th Annual Neonatology Conference, Nemaocolin, PA. February 20, 2010.

James Kendig Memorial Lecture Introduction, Towsend Teaching Day, 2009

Smoking Cessation, Corning Hospital, 2008

New approach to patients 23-24 week's gestation, Arnot-Ogden Hospital, 2009

Thomas J. Mariani, Ph.D.

Invited Session Chair, "Elastin in Lung Development and Disease", Gordon Research Conference on Elastin and Elastic Fibers, 2011

Invited Session Chair, "Lung Repair Pathways", Inaugural Gordon Research Conference on Lung Development, Injury and Repair, 2011

Meet the Professor (Invited Speaker), A Primer on Systems Biology Research, American Thoracic Society International Conference, American Thoracic society International Conference, 2011

Co-Chair, EMERGING OXIDATIVE STRESS-RELATED MECHANISMS IN INJURY AND REPAIR, American Thoracic Society International Conference, 2011

Invited Speaker, LET'S START AT THE VERY BEGINNING: EARLY LUNG CARCINOGENESIS, American Thoracic Society International Conference, 2011

Invited Speaker, SMOKE SIGNALS: ILLUMINATING NOVEL TARGETS FOR COPD AND EMPHYSEMA INTERVENTION, American Thoracic Society International Conference, 2011

Speaker on Career Development (Non-Clinician Track), Center for Fellows and Junior Professionals, American Thoracic Society International Conference, 2011

Invited Speaker, "Systems Biology of Lung Development and Disease", Department of Biochemistry and Center of Excellence in Genomics, University at Buffalo, 2010

Invited Speaker, "Systems Biology of Lung Development and Disease", Department of Pediatrics, Neonatal-Perinatal Fellowship Program, Children's Hospital of Pennsylvania at the University of Pennsylvania, 2010

Director and Lecturer, Transcriptomics and Integrative Genomics Interest Group, University of Rochester, 2010 - 2011

Invited Speaker, Meet the Professor session, Functional Genomics: Uncovering Disease Biomarkers And Mechanisms, American Thoracic Society International conference, New Orleans, LA, 2010

Session Organizer and Chair, Scientific Symposium, Scientific Breakthroughs of the Year: Stem Cells And Regenerative Medicine. American Thoracic Society International conference, New Orleans, LA, 2010

Invited Speaker and Session Chair, Scientific symposium, Translational Systems Biology as Applied To Diseases of Pulmonary Inflammation. American Thoracic Society International Conference, New Orleans, LA, 2010

Session Chair, Scientific symposium, PPAR Gamma: A Novel Target in Lung Cell Biology and Disease. American Thoracic Society International Conference, New Orleans, LA, 2010

Group Organizer, Transcriptomics and Integrative Genomics (TIGER) Working Group, URMC, 2010

Instructor (2 lectures), TOX521, toxicology Graduate Program, 2009-2010

Lecturer, Clinical and Translational Research Center, University of Rochester, 2010

Visiting Faculty and Speaker, Annual Retreat of the University of Giessen Lung Center, Giessen, Germany 2009

Invited Chair and Speaker, Biochemical Basis of Respiratory Disease, Biochemical Society, Charnwood, United Kingdom, 2009

Co-Chair, Mini-Symposium, NOVEL MOUSE MODELS OF DEVELOPMENT AND DISEASE FOR 2009 American Thoracic Society International Conference, San Diego, CA, 2009

Facilitator, Thematic Poster Session, PULMONARY FIBROSIS: THE FIBROBLAST, American Thoracic Society International Conference, San Diego, CA, 2009

Co-Chair, Scientific Symposium, TARGETING PROTEASES IN PULMONARY INFLAMMATION AND REMODELING: NEW INSIGHTS INTO DISEASE PATHOPHYSIOLOGY, American Thoracic Society International Conference, San Diego, CA, 2009

Invited Speaker, Targeting PPARs to Modulate Disease, Scientific Symposium, EMERGING THERAPEUTIC TARGETS IN LUNG DISEASE, American Thoracic Society International Conference, San Diego, CA, 2009

Michael A. O'Reilly, Ph.D.

Courses, 2009-2011

Ethics 501/503 – Ethics Core Course as session leader for ethics course (6 lectures)

Scientific Reasoning in Medicine (1 lecture)

TOX 594 – Gene Environment Interactions Course Co-Director overseeing (13 lectures)

TOX 521 – Tox Core Course - Course Co-Director and gave (4 lectures)

TOX 564 – Pulmonary Toxicology – Course Co-Director (14 lectures)

PTH 507 – Cancer Biology (1 lecture)

O'Reilly MA. Neonatal hyperoxia as a developmental antecedent of cardiopulmonary disease. Hershey Medical College, Hershey PA. December 2, 2011. Invited Lecture

O'Reilly MA. Defining how neonatal hyperoxia is a developmental antecedent of lung disease. Meakins-Christie Laboratories, Montreal CA. March 20-22, 2011. Invited Lecture

O'Reilly MA. Defining how neonatal hyperoxia is an antecedent of cardiopulmonary disease. Children's Hospital of Philadelphia. June 16, 2011. Invited Lecture

Dale L. Phelps, M.D.

Down and Upsides of Oxygen Saturation (and ROP) Pediatric Grand Rounds and visiting professor. New York Presbyterian Hospital, New York, NY., February 15, 2011.

Gloria S. Pryhuber, M.D.

Poster Design: Presenting Your Hard Work. Pediatric Fellows Academic Core Curriculum, University of Rochester Medical Center, 2006-2008

Skeletal Dysplasias, NPM Fellow Neonatal Knowledge Base Curriculum, URM, 2007

Respiratory Anatomy and Physiology I, NPM Fellow Neonatal Knowledge Base Curriculum, URM, 2008

Arshad Rahman, M.D.

Courses, 2007-2011

TOX 564 Pulmonary Toxicology elective (15 lectures)

TOX 521 Toxicology core course (1 lecture)

TOX 522 Pulmonary and Cardiovascular Toxicology (1 lecture)

TOX 521 Genetic Toxicology (2 lectures) Courses

TOX 522 Pulmonary and Cardiovascular Toxicology (1 lecture)

TOX 521 Genetic Toxicology (2 lectures)

Courses, 2007-2009

TOX 564 Pulmonary Toxicology elective (14 lectures)

Courses, 2007-2008

TOX 564 Pulmonary Toxicology elective (15 lectures)

TOX 521 Toxicology core course (1 lecture)

TOX 522 Pulmonary and Cardiovascular Toxicology (1 lecture)

TOX 521 Genetic Toxicology (2 lectures) Courses, 2008-2009

TOX 522 Pulmonary and Cardiovascular Toxicology (1 lecture)

TOX 521 Genetic Toxicology (2 lectures)

Endothelial ICAM-1 and Acute Lung Injury, First-Year Toxicology Graduate Students, University of Rochester Medical Center, 2008

Mammalian Target of Rapamycin: An Endogenous Modulator of Endothelial ICAM-1 Expression and Lung Inflammation?, Cardiovascular Research Institute, University of Rochester Medical Center, 2009

New Endothelial Signals Controlling Neutrophil Trafficking into the Lung, Pulmonary Biology Research Seminar Series, University of Rochester Medical Center, 2009

Endothelial Signals Controlling Neutrophil Trafficking into the Lung, First-Year Pathology Graduate Students, University of Rochester Medical Center, 2009

Endothelial Signals Controlling Neutrophil Trafficking into the Lung, First-Year Toxicology Graduate Students, University of Rochester Medical Center, 2009

Endothelial Signals Controlling Neutrophil Trafficking into the Lung, First-Year Cellular and Molecular Basis of Medicine (CMM) Graduate Students, University of Rochester Medical Center, 2009

Endothelial Signals Controlling Neutrophil Trafficking into the Lung. Department of Biological Sciences, East Tennessee State University, Johnson City, 2009

New Endothelial Signals Controlling Neutrophil Trafficking into the Lung, Department of Pharmacology and Biophysics, University of Rochester Medical Center, 2010

Endothelial Signals Controlling Neutrophil Trafficking into the Lung, First-Year Pathology Graduate Students, University of Rochester Medical Center, 2010

Blocking NF- κ B: An Inflammatory Issue, Neonatology Seminar Series, Department of Pediatrics, University of Rochester Medical Center, 2010

Endothelial Cell Signals in Lung Inflammation and Injury, Gastrointestinal Seminar Series, Department of Medicine, University of Rochester Medical Center, 2010

Blocking NF- κ B: An Inflammatory Issue, Medical Knowledge Curriculum Meeting, Department of Pediatrics (Neonatology), University of Rochester Medical Center, 2011

Blocking NF- κ B: An Inflammatory Issue, 2011 Transatlantic Airway Conference entitled "Pulmonary circulation in health and disease, 19-21 January 2011, Lucerne, Switzerland

Kristin Scheible, M.D.

Neonatal Immunity. Fellow Neonatal Medical Knowledge Base Curriculum, Department of Pediatrics (Neonatology) University of Rochester Medical Center, 2010
 PDA Ligation and Pain Control in the NICU. New Fellow's Orientation, Department of Pediatrics (Neonatology), University of Rochester Medical Center, 2011

Timothy P. Stevens, M.D., M.P.H.

Neonatal Intensive Care Unit, Neonatology Web site, a resource for resident, fellow and nursing education and clinical care. The site is updated comprehensively once each year and frequently throughout the academic year. It includes a medication reference, resident guide to common neonatal care, and on-call issues, as well as PowerPoint presentations on common neonatal diseases and links to extramural pediatric and neonatal resources, 2004 - present
 Perinatal Outreach Program. Twice yearly CME talks, FF Thompson Hospital, Canandaigua, New York, 2001 - present
 American Thoracic Society – Annual Meeting
 “What PO₂ or Saturation Level should We Target in Babies with RDS?”
 San Diego, May 19th, 2009.
 American Thoracic Society – Annual Meeting
 “Risk Factors For Respiratory Disease After Discharge From the NICU”
 New Orleans, LA, May 16th, 2010.
 Invited Speaker, Preventing NICU Central Line-Associated Bloodstream Infection (CLABSI): Current Knowledge, Strategies to Promote Improvement . Evidence-based Neonatology, “Preventing NICU Central Line-Associated Bloodstream Infection (CLABSI): Current Knowledge,” Strategies to Promote Improvement. Stockholm, Sweden, June, 2011.
 Invited Speaker, Risk Factors For Respiratory Disease After Discharge From the NICU. Pediatric Academic Society Annual Meeting Topic Symposium: “Beyond Bronchopulmonary Dysplasia: Measuring Long-term respiratory Outcomes in Former Premature Infants.” Denver, CO, May 3rd, 2011.
 Invited Speaker, Surfactant Administration and It's Timing. Pediatric Academic Society Annual Meeting Topic symposium “the first Golden Minutes of Life of the Preterm Infants”, Denver, CO, May 3rd, 2011.
 Invited Speaker, Comparative Growth Outcomes Among NYS Regional Perinatal Centers - 2009
 NYS Dept. of Health's Obstetric and Neonatal Quality Collaborative, Albany, NY Feb. 7th 2011.
 Invited Speaker, The Limits of Viability. 24th Annual Rochester Conference in Perinatal Medicine, University of Rochester Medical Center, Rochester, NY, May 26a, 2011.
 Invited Speaker, Comparative Growth Outcomes Among NYS Regional Perinatal Centers – 2010. NYS Dept of Health's Obstetric and Neonatal Quality Collaborative, Albany, NY, June 8th 2011.

Robert J. Swantz, M.D.

Teaching in a Busy Inpatient Setting; Faculty Development Workshop, University of Rochester, School of Medicine and Dentistry, March 2, 2010

Jennifer L. Young, Ph.D.

The Extracellular Matrix Signaling Molecule CCN1 Modulates Neutrophil Recruitment.
 Children's Research Center, “Focus on Pediatric Research”, 6th Annual Poster Symposium, University of Rochester, Rochester, NY 2009.
 The Extracellular Matrix Signaling Molecule CCN1 Modulates Neutrophil Recruitment, 1st Annual Lung Research Day, University of Rochester, Rochester, NY 2009.
 The ECM molecule CCN1 Regulates Inflammation and Lung Injury, 2nd Annual Lung Research Day, University of Rochester, Rochester, NY 2010. (Poster)
 Extracellular Matrix Protein CCN1 (Cyr61) Promotes Neutrophil Recruitment to the Lung. Toxicology Research Day, University of Rochester, Rochester, NY 2010.
 Matricellular Protein CCN1 Regulates Neutrophil Recruitment in Acute Lung Injury via Amplification of Neutrophil Chemotaxis. Toxicology Research Day, University of Rochester, Rochester, NY 2011.
 Extracellular Matrix Protein CCN1 Promotes Neutrophil Recruitment to the Lung. 22nd Annual Genetics Day, Poster Symposium, University of Rochester, Rochester, NY 2010.

Extracellular Matrix Protein CCN1 Promotes Neutrophil Recruitment to the Lung. 23rd Annual Genetics Day, Poster Symposium, University of Rochester, Rochester, NY 2011.

V. Faculty Data

Memberships and Leadership Roles in Scholarly Societies

Sanjiv B. Amin, M.B.B.S.,M.D., M.S.

American Academy of Pediatrics, 1993 - present
 Early Hearing Detection and Intervention, 2003 - present
 New York Chapter, 2006 - present
 AAP, Perinatal section, 1999 - present
 Society for Pediatric Research, 2003 - present

Kaiser M. Bijli, Ph.D.

American Thoracic Society
 American Physiological Society
 American Heart Association

Patricia R. Chess, M.D.

American Academy of Pediatrics, 1990 - present
 American Thoracic Society, 1994 - present
 Perinatal Research Society, 2005 - present
 Society for Pediatric Research, 2000 - present

Rita Dadiz, D.O.

American Academy of Pediatrics, 2001-present
 American Osteopathic Association, 2002-present
 American Medical Association, 2002-present
 Society for Simulation in Healthcare, 2008-present

Carl T. D'Angio, M.D.

American Academy of Pediatrics, 1991 - present
 Perinatal Research Society, 2006 - present
 Society for Pediatric Research, 1999 - present

David A. Dean, Ph.D.

American Thoracic Society
 American Society of Cell Biology
 American Society for Gene Therapy
 Respiratory Gene Therapy Committee
 Society for Experimental Biology
 Co-chair 2012 (Chair 2014) Gordon Conference on Bioelectrochemistry

Fabeha Fazal, Ph.D.

American Thoracic Society

Jacob N. Finkelstein, Ph.D.

American Association for the Advancement of Science
 American Society for Biochemistry and Molecular Biology
 American Society for Cell Biology
 American Thoracic Society
 Radiation Research Society
 Society for Leukocyte Biology
 Society for Pediatric Research

Society of Toxicology (Inhalation Section)
ASTRO

Ronnie Guillet, M.D., Ph.D.

American Academy of Pediatrics
New York State Perinatal Association
Society for Pediatric Research
American Pediatric Society

Sema Hart, M.D.

American Academy of Pediatrics, 1991 - present

Carl Johnston, Ph.D.

American Thoracic Society
Radiation Research Society
Society of Toxicology

Nirupama Laroia, M.D.

American Academy of Pediatrics
Breast Feeding Medicine
International Child Health; committee chair, India Giani Scholarship Fund
Neonatal Perinatal Medicine
Eastern Society for Pediatric Research
Indian Academy of Pediatrics
National Neonatology Forum (India)

Ruth A. Lawrence, M.D.

Professional

Academic Affairs Committee, St. Bernard's School of Theology and Ministries, 1991 - present
Academy of Breastfeeding Medicine—Founder, Advisory Board member and former president, 1996 - present
American Academy of Pediatrics, 1960 - present
Chair and member, Section on Breastfeeding, 2002 – present, Chair 2004-2010
American Association of Poison Control Centers, 1962 - present
American Institute of Nutrition, a constituent society of the Federation of American Societies for Experimental Biology, 1996 - present
American Pediatric Society, 1986 - present
Medical Nutrition Council of the American Society for Nutrition, 2006 - present
Sigma Delta Epsilon, Graduate Women in Science, honorary member, 1999 - present
United States Breastfeeding Committee—vice president and member of Executive Committee, 2002 – 2007, member 1995 - present

Community

Girl Scouts of Genesee Valley, honorary Board member, 2003 – 2010
March of Dimes, Upstate N.Y. Chapter—member, Board of Directors, 2005 – 2009
Our Lady of Mercy High School, Rochester, New York—member, Board of Directors, 2004 – 2010

William M. Maniscalco, M.D.

American Pediatric Society
American Thoracic Society
Perinatal Research Society
Society for Pediatric Research

Thomas J. Mariani, Ph.D.

American Association for the Advancement of Science, 1991 - Present
American Thoracic Society, 1996 - Present
Group Leader and Reviewer, RCMB Program Committee, 2004-200, 2010-2011

Chair-Elect, ATS RCMB Assembly Program Committee, 2008-2009
 Chair, ATS RCMB Assembly Program Committee, 2009-2010
 Co-Chair, ATS RCMB Educational Session Planning Working Group, 2010-2011
 Member, ATS RCMB Executive Committee, 2010-2011
 American Society for Cell Biology, 1997 - Present
 American Physiological Society, 2005 - Present

Robert Notter, M.D., Ph.D.

Sigma Xi
 Society for Pediatric Research
 Tau Beta Pi
Who's Who in Science and Engineering
Who's Who in the World
Who's Who in America
Who's Who in Medicine and Healthcare

Michael A. O'Reilly, Ph.D.

American Physiological Society
 American Thoracic Society
 Sigma Beta

Dale L. Phelps, M.D.

American Academy of Pediatrics
 American Association for Pediatric Ophthalmology and Strabismus—honorary member, 2006 - present
 American Pediatric Society, 1987 - present
 Association for Research in Vision and Ophthalmology (ARVO), 1988 - present
 Perinatal Research Society, 1986 - present—council member 1986, 1987, 1991; president 1993
 Society for Pediatric Research, 1979 – present (emeritus)

Gloria S. Pryhuber, M.D.

American Academy of Pediatrics
 American Physiological Society
 American Thoracic Society
 Society for Pediatric Research
 Alpha Omega Alpha Medical Honor Society
 International Cytokine Society

Arshad Rahman, Ph.D.

ATS RCMB Assembly Program Committee, 2010- present
 American Heart Association
 American Physiological Society
 American Society for Biochemistry and Molecular Biology
 American Thoracic Society
 Shock Society

Kristin Scheible, M.D.

American Academy of Pediatrics, 2004 - present

Timothy P. Stevens, M.D., M.P.H.

American Academy of Pediatrics, 1998 - present; fellow, 1990 - present
 American Thoracic Society, 2006 - present
 Society for Pediatric Research, 2006 - present

Robert J. Swantz, M.D.

American Academy of Pediatrics
 Fellow, 1993 - present

Fellow, Perinatal Section, 1997 - present
 Council on Medical Student Education in Pediatrics, 1994 - present
 Faculty Development Task Force, co-chair, -2008 - 2011

Jennifer L. Young, Ph.D.

American Society for Cell Biology
 American Thoracic Society

Service Activities

Sanjiv B. Amin, M.B.B.S., M.D., M.S.

New York Chapter Champion, Newborn Hearing Committee, American Academy of Pediatrics, 2005 – present
 GCRC (CTSI) Advisory Committee Member, Rochester, NY, 2007 – present
 Perinatal Outreach Program, Park Ridge Hospital, twice yearly CME talks, 2009 – present
 New Born Hearing Committee, University of Rochester, NY, 2006 - present
 ROP Oversight Committee Member, University of Rochester, NY, 2007 - present
 Medical Knowledge Core Curriculum for Neonatology Fellows, Committee Member, University of Rochester, 2007 – present

Abstract reviewer, Pediatric Academic Society Annual meeting, 2004 and 2009
 Reviewer for Society of Pediatric Research Meeting Workshop Proposals, 2010

Patricia R. Chess, M.D.

Fellowship Director, Neonatal-Perinatal Medicine Fellowship Program 2010-present
 Associate Fellowship Director, Neonatal-Perinatal Medicine Fellowship Program 2009-2010
 Chair of Pediatrics, Unity (formerly Parkridge) Hospital, 2006 – present
 Medical director, ECMO Program, oversee provision of care to ECMO patients, ELSO Registry, 1998 - present
 Abstract Reviewer
 American Thoracic Society, 2004 - present
 Pediatric Academic Society, 2004 – present
 Presenter/Facilitator: Neonatal lung disease: clinical and animal studies: at ATS 2008
 Co-director, NYS Finger Lakes Perinatal Forum, 2006 - 2009
 APS/SPR Student Research Program Steering Committee 2010-present
 American Lung Association Research Grant Review Committee (national), 2001 - present
 Palliative Care Team member, 2005 - present
 Pediatric Planning Committee, American Thoracic Society, 2005 - 2010
 Neonatal specialist, Preferred Care Health Insurance Children's Health Care Team, 1999 – 2011
 Graduate Medical Education Committee, member 2009-present
 University of Rochester Advisory Parent Council 2008-present
 Outreach coordinator, United Memorial Hospital, Batavia, New York, 2000- present

Rita Dadiz, D.O.

Neonatal Resuscitation Program, URMC, 2008-present
 Obstetrics Simulation Steering Committee, URMC, 2008-present.
 Mentoring Working Group, University of Rochester, 2009 - present.

Carl T. D'Angio, M.D.

Associate Chair, Board 5, Research Subjects Review Board, University of Rochester, 2004 - present
 Editorial Board, *Pediatric Health*
 Faculty Senate Research Policy Committee, University of Rochester, 2006 - present
 Data Safety and Monitoring Boards
 Effects of Massage on Immune System of Preterm Infants. NIH/NCCAM R21 AT001872, 2005 – present
 Maternal Oral therapy to Reduce Obstetric Risk (MOTOR) T. NIH/NIDCR, 2003 -2009

Chair, Data Safety and Monitoring Board, “Intravenous Omega-3 Fatty Acid Emulsion (Omegaven) in Total-Parenteral-Nutrition-Related Cholestasis - A Compassionate Use Protocol, 2008- present,”
 Safety Monitoring Committee, “Executive Function in Children with Hypertension,”
 NIH/NHLBI 1R01HL098332-01A1, 2011 – present.

David A. Dean, Ph.D.

Abstract Reviewer: American Society for Gene Therapy, 2004 – present
 Editorial Board Member
American Journal of Physiology: Lung Cellular and Molecular Physiology, 2006 - present
Experimental Biology and Medicine, 2006 – present

Fabeha Fazal, Ph.D.

Reviewer
American Journal of Physiology: Heart and Circulatory Physiology
Journal of Biochemistry and Molecular Biology
Frontiers in Bioscience: Molecular Biology in Clinical Practice
Chemical Research in Toxicology
Respiratory Research
International Journal of Biochemistry and Cell Biology
Experimental Cell Research

Jacob N. Finkelstein, Ph.D.

Director of Enrichment, Environmental Health Sciences Center, 1999 - present
 Director of University Facilities Core, Environmental Health Sciences Center
 Steering Committee, Pulmonary Training Grant
 Steering Committee, Toxicology Training Program

Ronnie Guillet, M.D., Ph.D.

Committees
 URMC
 Strong Hospital
 Town-Gown Committee, Department of Pediatrics, member
 Neonatology Morbidity and Mortality Committee, member
 Perinatal Morbidity and Mortality Committee, member
 Prenatal Diagnosis Committee, member
 Highland Hospital
 Medical Executive Committee
 Perinatal Morbidity and Mortality Committee, co-chair
 Perinatal Practice Committee
 Pediatric Quality Committee
 National Quality Forum, Perinatal Steering Committee member 2008
 NIH ad hoc reviewer Surgical Sciences, Biomedical Imaging and Bioengineering IRG 2009
 NIH ad hoc reviewer Development Brain Disorders 2010

Sema Hart, M.D.

Regional instructor, Neonatal Resuscitation Program (605-6309), 2004 - present

Nirupama Laroia, M.D.

Member, Perinatal Data Systems (PDS) advisory group

Ruth A. Lawrence, M.D.

Consultant, Food and Drug Administration Advisory Council, 2007 - present
Lactation/Drug Center: Back-up consultation;

William M. Maniscalco, M.D.

Member, Pediatric Tenure and Promotion Committee
Outreach Coordinator, Arnot-Ogden Hospital, Corning Hospital, and Schuyler Hospital
Co Chair, Perinatal Forums
Abstract Reviewer, Pediatric Academic Societies, 2008-2011
Invited session chair, Pediatric Academic Society Annual Meeting, 2010

Thomas J. Mariani, Ph.D.

Member, URMC Functional Genomics Oversight Committee, 2011
Director and Lecturer, Transcriptomics and Integrative Genomics Interest Group, University of Rochester,
2010 - 2011
Editorial Board, *American Journal of Respiratory Cell and Molecular Biology* | 2003 - Present

Robert Notter, M.D., Ph.D.

Pediatrics Promotions Committee
Dean's Ad Hoc Promotions Committee

Michael A. O'Reilly, Ph.D.

Editorial Board
American Journal of Physiology: Lung Cellular and Molecular Physiology, 2003 - present
American Journal of Respiratory Cell and Molecular Biology, 2007 - present

Dale L. Phelps, M.D.

Member
AAO/AAP/AAPOS Joint Statement on ROP Screening, 1997 - present
DSMB for the Division of Lung Diseases Clinically Oriented Research. NIH-NHLBI, 2007 - present
DSMB for the Maternal Fetal Medicine Network. NIH-NICHD, 2006 - present
DSMC for the NIH-NEI PEDIG Group Trials: Multiple Trials Group in Pediatric Ophthalmology,
1997 - present

Gloria S. Pryhuber, M.D.

Member
Dean's Research Advisory Committee, 2000 – 2010
Department of Pediatrics Technology Committee, 2000 – 2010
Graduate Medical Education Committee, 2000 – 2010

Arshad Rahman, Ph.D.

Institutional Biosafety Committee, University of Rochester, 2009-present
Editorial Board
American Journal of Physiology: Lung Cellular and Molecular Physiology
Recent Patent Reviews on Anti-Infective Drug Discovery
Science of Advanced Materials
World Journal of Biological Chemistry

Timothy P. Stevens, M.D., M.P.H.

New York State Regional Perinatal Center Steering Committee, 2005 – present

Robert J. Swantz, M.D.

Pediatric Education Committee, 1995 - present
Curriculum Steering Committee, University of Rochester School of Medicine and Dentistry, 2006 – 2008
Admissions Committee, University of Rochester School of Medicine and Dentistry, 2007 – 2011
Third and Fourth Year Instruction Committee: vice-chair, 2006-2007; Chair, 2007– 2008

Medical Student Promotion and Review board, University of Rochester School of Medicine and Dentistry, 2008 - present

Jennifer L. Young, PhD

Abstract/Poster Reviewer, Toxicology Research Day, University of Rochester, 2010

VI. Three-Year Bibliography (2008-2011)

- Adams-Chapman I, Hansen NI, Stoll BJ, Higgins R; NICHD Research Network. [D Phelps as PI of Participating center] Neurodevelopmental outcome of extremely low birth weight infants with posthemorrhagic hydrocephalus requiring shunt insertion. *Pediatrics* 2008 May; 121(5):e1167-77. Epub 2008 Apr 7. PMID: 18390958 [PubMed – indexed for MEDLINE]
- Ahlfors C, Amin SB, Parker A. Unbound bilirubin predicts abnormal automated auditory brainstem responses in a diverse newborn population. *J Perinatology* 2009; 29(4):305-9.
- Ambalavanan N, Van Meurs KP, Perritt R, Carlo WA, Ehrenkranz RA, Stevenson DK, Lemons JA, Poole WK, Higgins RD; NICHD Neonatal Research Network, Bethesda, MD. [Phelps D as PI of participating center] Predictors of death or bronchopulmonary dysplasia in preterm infants with respiratory failure. *J Perinatology* 2008 Jun; 28(6):420-6. Epub 2008 Mar 13.
- Ambalavanan N, Carlo WA, D'Angio CT, McDonald SA, Das A, Schendel D, Thorsen P, Higgins RD; Eunice Kennedy Shriver National Institute of Child Health and Human Development Neonatal Research Network. [Phelps DL as PI of the Rochester participating center]. Cytokines associated with bronchopulmonary dysplasia or death in extremely low birth weight infants. *Pediatrics* 2009 Apr; 123(4):1132-41. PMID: 19336372. NIHMSID: 154397.
- Amin SB. Effect of Free Fatty Acids on Bilirubin-Albumin Binding Affinity and Unbound Bilirubin in Premature Infants. *JPEN* 2010 34 (4):414-420
- Amin SB, Ahlfors C. Bilirubin binding capacity in premature infants. *Pediatrics* 2008; 121(4):872-3.
- Amin SB, Ahlfors C. Effect of storage and freezing on unbound bilirubin measurement. *Clin Chem Acta* 2008; 396(1-2):56-7.
- Aistrup, G. L., R. Villuendas, J. Ng, A. Gilchrist, T. W. Lynch, D. Gordon, I. Cokic, S. Mottl, R. Zhou, D. Dean A, Wasserstrom J A, Goldberger JJ, Kadish AH, Arora R. Targeted G-Protein Inhibition as a Novel Approach to Decrease Vagal Atrial Fibrillation by Selective Parasympathetic Attenuation. *Cardiovasc* 2009; *Res* 83:481-492.
- Amin SB, Harte T, Scholer L, Wang H. Intravenous Lipid and bilirubin-Albumin Binding Variables in Premature Infants. *Pediatrics* 2009; 124:211-217.
- Amin SB, Kamaluddeen, Madhavi S. Neurodevelopmental outcome of premature infants after exposure to antenatal indomethacin. *Am J Obstet Gynecol* 2008; 199(1):41.e1-8.
- Amin SB, Karp J, Benzley LP. Unconjugated Hyperbilirubinemia and Early Childhood Caries in a Diverse Group of Neonates. *American J of Perinatology* 2010; 27(5):393-7.
- Amin SB, McDermott M, Shamoo A. Clinical trials of drugs used off-label in neonates: Ethical issues and alternative study designs. *Account Res* 2008; 15(3):168-87.
- Amin SB, Miravalle N. Effect of ibuprofen on bilirubin-albumin binding affinity in premature infants. *Journal of Perinatal Medicine* 2011 Jan;39(1):55-8.
- Amin SB, Orlando M, Eddins A, et al. *In-utero* Iron Status and Auditory Neural Maturation in Premature Infants as Evaluated by Auditory Brainstem Response. *J Pediatrics* 2010; 156(3):377-81.
- Amin SB, Prinzing D, Myers G. Hyperbilirubinemia and language delay in premature infants. *Pediatrics* 2009; 123(1):327-31.
- Amin SB, Wang H. Histologic chorioamnionitis and acute neurological impairment in premature infants. *Journal of Maternal Fetal Neonatal Medicine* 2010 October; 23(10):1165-1171.
- Ang JY, Lua JL, Asmar BI, Shankaran S, Heyne RJ, Schelonka RL, Das A, Lei L, Jackson DM, Higgins RD, D'Angio CT on behalf of the National Institute of Child Health and Human Development Neonatal Research (NICHD) Neonatal Research Network. Nasopharyngeal carriage of *Streptococcus pneumoniae* in very low birth weight infants after administration of heptavalent pneumococcal conjugate vaccine. *Arch Pediatr Adol Med* 2010; 164(12):1173-1175.

- Badding MA, Vaughan EE, Dean DA. Binding of Transcription Factors to Plasmids Modulates Microtubule Interactions and Intracellular Trafficking during Gene Transfer. *Gene Therapy* 2010. In press.
- Ben Saad T, Chess P, Pegoli W, Katzman W. Evaluation and treatment of emphysema in a preterm infant. *Int J Pediatr Neonatol* 2009; 11(1).
- Bhattacharya S, Tyagi S, Srisuma S, DeMeo DL, Shapiro SD, Bueno R, Silverman EK, Reilly JJ, Mariani TJ. Peripheral blood gene expression profiles in COPD subjects. *J Clin Bioinformatics* 2011; 1(12).
- Bhattacharya S, Mariani TJ. Array of hope: expression profiling identifies disease biomarkers and mechanism. *Biochem Soc Trans* 2009; 37(Pt 4): 855-862.
- Bhattacharya S, Srisuma S, Demeo DL, Shapiro SD, Bueno R, Silverman EK, Reilly JJ, Mariani TJ. Molecular biomarkers for quantitative and discrete COPD phenotypes. *Am J Respir Cell Mol Biol* 2009 Mar; 40(3):359-67. Epub 2008 Oct 10.
- Bhattacharya, S.; Srisuma, S.; Demeo, D.L.; Shapiro, S.D.; Bueno, R.; Silverman, E.K.; Reilly, J.J., Mariani, T.J. "Molecular biomarkers for quantitative and discrete COPD phenotypes. *Am J Respir Cell Mol Biol* 2009. Epub ahead of print.
- Bijli KM, Fazal F, Minhajuddin M, Rahman A. Activation of Syk by PKC- δ regulates thrombin-induced ICAM-1 expression in endothelial cells via tyrosine phosphorylation of RelA/p65. *J Biol Chem* 2008, 283: 14674-14684.
- Blake DJ, Singh A, Kombairaju P, Malhotra D, Mariani TJ, Tudor RM, Gabrielson E, Biswal S. Deletion of Keap1 in the lung attenuates acute cigarette smoke-induced oxidative stress and inflammation. *Am J Respir Cell Mol Biol* 2010; May; 42(5):524-36. Epub 2009 Jun 11. Pmed: 19520915.
- Capaccio, C, Stoykov NS, Sundararajan R, Dean DA. Quantifying Induced Electric Field Strengths During Gene Transfer to the Intact Rat Vasculature. *J. Electrostatics* 2008. In press.
- Carlo WA, Finer NN, Walsh MC, Rich W, Gantz MG, Lupton AR, Yoder BA, Faix RG, Das A, Poole WK, Schibler K, Newman NS, Ambalavanan N, Frantz ID 3rd, Piazza AJ, Sanchez PJ, Morris BH, Laroia N, Phelps DL, Poindexter BB, Cotten CM, Van Meurs KP, Duara S, Narendran V, Sood BG, O'Shea TM, Bell EF, Ehrenkranz RA, Watterberg KL, Higgins RD. Target ranges of oxygen saturation in extremely premature infants. SUPPORT study group of the Eunice Shriver NICHD Neonatal Research Network. *NEJM* 2010 May 27; 362(21):1959-69.
- Chess PR, Benson RP, Maniscalco WM, Wright TW, O'Reilly MA, Johnston CJ, Murine mechanical ventilation stimulates alveolar epithelial cell proliferation. *Exp Lung Research*, 2010; 36(6)331-341
- Chess PR, Malhotra Y, Laroia N. Neonatal Care and Transport. *Nancy Caroline's Emergency Care in the Streets*, Seventh edition. Guerrero C Ed. and Jones and Bartlett publishers, 2011. In press
- Chess PR, Malhotra Y, Laroia N. Neonatal Emergencies In: *Critical Care Transport*, Emerton C ed. Jones and Bartlett publishers. 874-921 (2009)..
- Chess PR, Malhotra Y, Laroia N. Neonatal resuscitation guidelines. *Strong Perifax* 2007; 730:2-15.
- Chess PR, Benson R, Maniscalco W, Wright T, O'Reilly M, Johnston C. Murine Mechanical Ventilation Stimulates Alveolar Epithelial Cell Proliferation. *Exp Lung Res* 2010. In press.
- Christiansen SP, Dobson V, Quinn GE, Good WV, Tung B, Hardy RJ, Baker JD, Hoffman RO, Reynolds JD, Rychwalski PJ, Shapiro MJ, Early Treatment for Retinopathy of Prematurity Cooperative Group. Progression of type 2 to type 1 retinopathy of prematurity in the Early Treatment for Retinopathy of Prematurity Study. [Phelps DL as PI of the Rochester participating center and member of Permanent Executive Committee]. *Arch Ophthalmol* 2010; 128(4):461-465.
- Cole CR, Hansen NI, Higgins RD, Ziegler TR, Stoll BJ, Eunice Kennedy Shriver NICHD Neonatal Research Network, [Phelps DL as PI of participating center] Very low birth weight preterm infants with Surgical short bowel syndrome: incidence, morbidity and mortality, and growth outcomes at 18 to 22 months. *Pediatrics* 2008 Sep; 122(3):e573-82.
- Cotton CM, Taylor S, Stoll B, Goldberg RN, Hansen NI, Sanchez PJ, Ambalavanan N, Benjamin DK Jr. NICHD Neonatal Research Network. [DL Phelps as member of a participating center] Prolonged duration of initial empirical antibiotic treatment is enterocolitis and death for extremely low birth weight infants. *Pediatrics* 2009 Jan; 123(1):58-66.
- D'Angio CT, Heyne RJ, O'Shea TM, Schelonka RL, Shankaran S, Duara S, Goldberg RN, Stoll BJ, Van Meurs KP, Vohr BR, Das A, Li L, Burton RL, Hastings B, Phelps DL, Sanchez PJ, Carlo WA, Stevenson DK, Higgins RD. Heptavalent pneumococcal conjugate vaccine immunogenicity in very-

- low-birth-weight, premature infants. NICHD Neonatal Research Network. *Pediatr Infect Dis J* 2010 Jul; 29(7):600-6. PMID: 20234331. [PubMed – indexed for MEDLINE.]
- D'Angio ct, Heyne RJ, Duara S, Holmes LC, O'Shea TM, Wang H, Wang D, Sanchez PJ, Welliver RC, Ryan RM, Schnabel KC, Hall CB; for the Premature Infant Vaccine Collaborative. Immunogenicity of trivalent influenza vaccine in extremely-low-birth-weight, premature versus term infants. *Pediatr Infect Dis J* 2011; 30(7):570-574. PMID: 21273938 [PubMed - in process]
- Dadiz R, Guillet R. Interdisciplinary education: Improving communication and teamwork amongst pediatric and obstetric providers. *NeoReviews* 2011; 12(2):e63-8.
- Davitt BV, Dobson V, Quinn GE, Hardy RJ, Tung B, Good BV, and ETROP Cooperative Group. [Phelps DL as PI of a participating center, and on Editorial Committee.] Astigmatism in the Early Treatment for Retinopathy Of Prematurity Study: findings to 3 years of age. *Ophthalmology* 2009; 116(2):332-339.
- Dean, DA., Ramanathan T, Machado D, Sundararajan R. Electrical impedance spectroscopy study of biological tissues. *J Electrostatics* 2008; 66:165-177.
- Dean DA, Gasiorowski JZ, Nonviral gene delivery. In, "Optical Imaging Techniques: A laboratory Manual". Yuste R, Lanni F, Konnerthe A. (Eds). Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY. 2010.
- Dean DA. Electroporation-mediated gene transfer to the lung. In, "Electroporation in Science and Medicine". Kee S, Lee E, Gehl J (Eds). Springer, New Your, NY. 2010.
- DeGiulio, J. V., and D. A. Dean. Alveolar Epithelial Cell-Specific Plasmid Nuclear Import. *Gene Therapy* 2010; 17:541-549.
- DeMeo DL, Mariani TJ, Bhattacharya S, et al. Integration of genomic and genetic approaches implicates IREB2 as a COPD susceptibility gene. *Am J Hum Genet* 2009 Oct; 85(4):493-502. PMID: 19800047.
- Di Meglio G, McDermott MP, Lawrence RA, Howard CR, Klein JD. A Randomized Controlled Trial of Peer Support on Breastfeeding Duration. *Breastfeeding Medicine* 2010; 5(1):41-47.
- Du R, Tantisira K, Carey V, Bhattacharya S, Metje S, Kho AT, Klanderman BJ, Gaedigk R, Lazarua R, Mariani TJ, Leeder JS, Weiss St. Platform dependence of inference on gene-wise and gene-set involvement in human lung development. *BMC Bioinformatics* 2010; 10: 189.
- Edirisinghe I, Yang SR, Yao H, Rajendrasozhan S, Caito S, Adenuga D, Wong C, Rahman A, Phipps RP, Jin ZG, Rahman I. VEGFR-2 inhibition augments cigarette smoke-induced oxidative stress and inflammatory responses leading to endothelial dysfunction. *FASEB J* 2008; 22:2297-2310.
- Edirisinghe I, Arunachalam G, Wong C, Yao H, Rahman A, Phipps RP, Jin ZG, Rahman I. Cigarette smoke-induced oxidative/nitrosative stress impairs VEGF- and fluid shear stress-mediated signaling in endothelial cells. *Antioxid Redox Signal* 2010; 22:2297-2310.
- Ehrenberg MS, Friedman AE, Finkelstein JN, Oberdörster G, McGrath JL. The influence of protein adsorption on nanoparticle association with cultured endothelial cells. *Biomaterials* 2009 Feb; 30(4):603- 10.
- Eldib M, Dean DA. Cyclic Stretch of Alveolar Epithelial Cells alters Cytoskeletal Micromechanics. *Biotechnology and Bioengineering* 2010; 108:446-53.
- Ellsworth MA, Stevens TP, D'Angio CT. Infant Race Affects Application of Clinical Guidelines When Screening for Drugs of Abuse in Newborns. *Pediatrics* 2010; 125(6); E1379-85, PMID: 20478941
- Escoffre JM, Rols MP, Dean DA. Electrotransfer of DNS. In, „Electroporation in Science and Medicine“. Kee S, Lee E, Ghl J (Eds). Springer, New York, 2010.
- Fazal F, Bijli KM, Minhajuddin M, Rein T, Finkelstein JN, Rahman A. Essential role of cofilin-1 in regulating thrombin-induced RelA/p65 nuclear translocation and ICAM-1 expression in endothelial cells. *J Biol Chem* 2009; 284:21047-21056.
- Fazal F, Rahman A. Hug tightly and say goodbye: role of endothelial ICAM-1 in leukocyte transmigration. *Antioxid Redox Signal* 2009; 11:823-829.
- Fedulov AV, Leme A, Yang Z; Dahl M, Lim R, Mariani TJ, Kobzik L. Pulmonary exposure to particles during pregnancy causes increased neonatal asthma susceptibility. *American JI of Res Cell and MolBio* 2008; 38(1):57-67. Epub 2007 Jul 26.
- Feldman-Winter LB, Schanler, RJ, O'Connor KG, Lawrence, RA. Pediatricians and the Promotion and Support of Breastfeeding. *Archives Pediatr Adolesc Med* 2008 Dec; Vol. 162, p. 1142,
- Feldman-Winter L, Schanler RJ, O'Connor KG, Lawrence RA. Are pediatricians better or worse prepared to

- promote and support breastfeeding? *Arch Pediatr Adolesc Med* 2008; 162(12):1142-1149.
- Finer NN, Carlo WA, Walsh MC, Rich W, Gantz MG, Lupton AR, Yoder BA, Faix RG, Das A, Poole WK, Donovan EF, Newman NS, Ambalavanan N, Frantz ID 3rd, Buchter S, Sanchez PJ, Kennedy KA, Laroia N, Poindexter BB, Cotten CM, Van Meurs KP, Duara S, Narendran V, Sood BG, O'Shea TM, Bell EF, Bhandari V, Watterberg KL, Higgins RD. Early CPAP versus surfactant in extremely preterm infants. SUPPORT Study Group of the Eunice Kennedy Shriver NICHD Neonatal Research Network. *New England Journal of Medicine* 2010 May 27; 362(21):1970-9.
- Gantz M, Roy J, Guillet R. Analyzing Retrospective Data with Time-Varying Exposure: A Cautionary Tale of H2 Blockers in ELBW Neonates. *Am. J. Perinatology* 2008; 25:93-100.
- Geiger, RC, Kaufman CD, Lam AP, Budinger GRS, Dean DA. Tubulin acetylation and histone deacetylase 6 (HDAC6) activity in the lung under cyclic load. *Am J Respir Cell Mol Biol*, 2009; 40:76-82.
- Gehn SC, Stavarsky RJ, Bambara RA, Keng PC, O'Reilly MA. Hsmg-1 and ATM sequentially and independently regulate the G1 checkpoint during oxidative stress. *Oncogene* 2008; 27:4065-4074. PMID: PMC2651885.
- Gewandter JS, Bambara RA, O'Reilly MA. The RNA surveillance protein SMG1 activates p53 in response to DNA double strand breaks but not exogenously oxidized mRNA. *Cell Cycle*. In press.
- Gewandter JS, Stavarsky RJ, O'Reilly MA. Hyperoxia augments UPR induced cell death independent of BiP loss. *Free Radical Biology and Medicine* 2009; 47:1742-1752. PMID: PMC2783969.
- Guillet R. Phenobarbital: Too Much of a Good Thing? *J. Pediatric Neurology* 2009; 7:95-99.
- Guillet R., Kwon JM. Prophylactic Phenobarbital after Resolution of Neonatal Seizures: Survey of Current Practice. *Pediatrics* 2008, 122:731-735.
- Guillet R, Dees R. Will my baby walk?: The predictive value of cranial imaging. *Neurology*, 2011 Jun 14; 76(24):2048-9. No abstract available. PMID: 21670432 [PubMed - in process]
- Guillet R, Kwon JM, Chen S, McDermott M. Urine pheobarbital drug screening: Potential use for compliance assessment in neonates. *J Child Neurology*. In press.
- Halterman JS, Lynch K, Conn K, Hernandez T, Perry TT, Stevens TP. Environmental Exposures and Respiratory Morbidity among Very Low Birth Weight Infants at One Year of Life. *Arch Dis Child*, 2009 Jan; 94(1):28-32. PMID: 18703545.
- Hersh CP, Silverman EK, Gascon J, Bhattacharya S, Klanderman BJ, Litonjua AA, Lefebvre V, Sparrow D, Reilly JJ, Anderson WH, Lomas DA, Mariani TJ. SOX5 is a Candidate Gene for COPD susceptibility and is Necessary for Lung Development. *Am. J of Resp and Critical Care Me.*, 2011; Epub 2011 Feb 17.
- Himes BE, Klanderman B, Ziniti J, Senter-Sylvia J, Soto-Quiros ME, Avila L, Celedon JC, Lang C, Mariani TJ, Lasky-Su J, Hersh CP, Raby BA, Silverman EK, Weiss ST, Demeo DL. Association of SERPINE2 with Asthma. *Chest*, 2011; Epub 2011 Mar 24.
- Hintz SR, Bann CM, Ambalavanan N, Cotten CM, Das A, Higgins RD; Eunice Kennedy Shriver National Institute of Child Health and Human Development Neonatal Research Network. [Phelps DL as PI of the Rochester participating center]. Predicting Hospital Discharge for Extremely Preterm Infants. *Pediatrics*, 2010 Jan; 125(1):e146-54. PMID: 20008430.
- Hoffmire, CA; Chess, PR; Ben Saad, T; Glantz, JC. Elective Delivery before 39 Weeks: The Risk of Infant Admission to the Neonatal Intensive Care Unit, *Maternal and Child Health Journal*, 2011, In print.
- Hussein S, Dadiz R, Young KC, Devia C, Hehre D, Suguihara C. Toll-like receptor 4 deficient mice are resistant to chronic hypoxia-induced pulmonary hypertension. *Exp Lung Res* 2010; 36(2):111-9.
- Hwang J-W, Rajendrasozhan S, Yao H, Chung S, Sundar IK, Huyck HL, Pryhuber GS, Kinnula VL, Rahman I. FoxO3 deficiency leads to increased susceptibility to cigarette smoke-induced inflammation, airspace enlargement, and chronic obstructive pulmonary disease. *J Immunology* 2011; 187:987-998. PMID: 3131437
- Jaacks LM, Young MF, Essley BV, McNanley TJ, Cooper EM, Pressman EK, McOntyre AW, Orlando MS, Abkowitz JL, Guillet R, O'Brien KO. Placental Expression of the Heme Transporter, Feline Leukemia Virus Subgroup C Receptor, Is Related to Maternal Iron Status in Pregnant Adolescents. *J Nut*, 2011 Jul; 141(7): 1267-72. Epub 2011 May 18. PMID: 21593354 [PubMed - in process]

- Johnston CJ, Manning C, Hernady E, Reed C, Thurston SW, Finkelstein JN, Williams JP. Effect of total body irradiation on late lung effects: Hidden dangers. *Int J Radiat Biol* 2011 May 17. [Epub ahead of print].
- Johnston CJ, Hernady E, Reed C, Thurston SW, Finkelstein JN, Williams JP. Early alterations in cytokine expression in adult compared to developing lung in mice after radiation exposure. *Radiation Research* 2010; 173(4):522-35.
- Kainth M, D'Angio CT. Newborn immunizations. *Peri-FACTS* 2010, Nov.
- Kaufman, CD, Geiger R C, and Dean DA. Electroporation- and Mechanical Ventilation-Mediated Gene Transfer to the Lung. *Gene Therapy* 2010; 7:1098-1104.
- Kho AT, Bhattacharya S, Tanisira KG, Carey VJ, Gaedigk R, Leeder JS, Kohane IS, Weiss ST, Mariani TJ. Transcriptomic Analysis of Human Lung Development. *Am J Respir Crit Care Med* 2010 Jan; 1;181(1): 54-63.PMID:19815808.
- Kho AT, Bhattacharya S., Mecham BH, Hong J, Kohane IS, Mariani TJ. Expression Profiles of the Mouse Lung Identify a Molecular Signature of Time-to-Birth. *Am J Respir Cell Mol Bio* 2009; 47-57. Epub 2008; Jul 29.
- Kwon JM, Guillet R, Shankaran S, Laptook AR, McDonald SA, Ehrenkranz RA, Tyson JE, O'Shea TM, Goldberg RN, Donovan EF, Fanaroff AA, Poole WK, Higgins RD, Walsh MC, for the Eunice Kennedy Shriver NICHD Neonatal Research Network. Clinical Seizures in Neonatal Hypoxic-Ischemic Encephalopathy Have No Independent Impact On Neurodevelopmental Outcome: Secondary Analyses of Data from the NRN Hypothermia Trial, *J Child Neurology* 2011 Mar; 26 (3):322-8. Epub 2010 Oct. 4. PMID: 20921569 [PubMed – indexed for MEDLINE]
- Lam AP, Dean DA. Identification of protein cofactors necessary for sequence-specific plasmid DNA nuclear import. *Gene Therapy* 2009; 17:439-447.
- Lam A. P., Dean DA. Cyclic stretch-induced nuclear localization of transcription factors results in increased nuclear targeting of plasmids in alveolar epithelial cells. *J Gene Medicine* 2008; 10:668-678.
- Lam AP, Dean DA. Cyclic stretch-induced nuclear localization of transcription factors results in increased nuclear targeting of plasmids in alveolar epithelial cells. *J Gene Medicine*, 2008; 10:668-678.
- Laptook A, Tyson J, Shankaran S, McDonald S, Ehrenkranz R, Fanaroff A, Donovan E, Goldberg R, O'Shea TM, Higgins RD, Poole WK; National Institute of Child Health and Human Development Neonatal Research Network. [Phelps DL as PI of participating center] Elevated temperature after hypoxic-ischemic encephalopathy: risk factor for adverse outcomes. *Pediatrics* 2008 Sep; 122(3):491-9.
- Laroia N. Overview of neonatal seizures. *Prenatal* 2007. In press.
- Lam, AP., Dean. DA. Progress and Prospects: Nuclear Import of non-viral vectors. *Gene Therapy* 2009. In press.
- Lawrence RA, Lawrence RM. *Breastfeeding: A guide for the medical profession*, 7th ed., 2010.
- Lawrence RA. Breastfeeding. In: Wooldrige N, Story M, Holt K, Sofka D (Eds) *Bright Futures in Practice: Nutrition* (3rd edition) July 2011. Arlington, VA: National Center for Education in Maternal and Child Health.
- Lawrence, RM, Lawrence, RA. Breastfeeding *Pediatrics in Review*.
- Lawrence RA. Global Science and Global Profits. *Breastfeeding Medicine* 2011;6(4):1.
- Lawrence RA. A Tribute in Memoriam. *Breastfeeding Medicine*, 2011 July ;6(4):3.
- Lawrence RA. Factors That Influence Breastmilk and a Tale from West Virginia. *Breastfeeding Medicine* 2011 June; 6(3):109-110.
- Lawrence RA. Disasters at Home and Abroad. *Breastfeeding Medicine*, 2011 April; 6(2):2:53.
- Lawrence RA. The Obstetrician as the Lynchpin to Successful Breastfeeding. *Breastfeeding Medicine* 2011 Feb; 6(1):1-2.
- Lawrence RA. New Terminology for an Old Problem, Nipple Shield Reality, and other Updates. *Breastfeeding Medicine* 2010; 5(6):281.
- Lawrence RA, Howard CR. Leading the Charge: Year Two. *Breastfeeding Medicine* 2010 Oct; 5(5):181.
- Lawrence RA. Abuse, Neglect, and Breastfeeding. *Breastfeeding Medicine* 2010 Aug; 5(4):139-140.
- Lawrence RA. Complications While Breastfeeding: Challenges and Concerns. *Breastfeeding Medicine* 2010 June; 5(3):101-102
- Lawrence RA. Classic Klaus Brings Eloquence to Journal. *Breastfeeding Medicine* 2010 Feb ; 5(1):1
- Lawrence, RA. Obesity Prevention begins with breastfeeding Childhood Obesity. 2010; Volume 1. In press.

- Lawrence, RA. Academy of Breastfeeding Medicine Protocol Committee. ABM clinical protocol #5: peripartum breastfeeding management for the healthy mother and infant at term revision. *Breastfeed Med* 2008 June; (2):129-32.
- Lawrence RA, Lawrence RM. Approach to breastfeeding. In: Walker WA, Duggan C, Watkins JB (Eds) *Nutrition in Pediatrics* 2008; (4th edition).
- Lawrence RA. Breastfeeding. In: McInerney TK, Adam HM, Campbell DE, Kamat DM, Kelleher KJ (Eds) *Textbook of Pediatric Care*. American Academy of Pediatrics, Elk Grove Village 2008.
- Lawrence RA. Co-sleeping and breastfeeding: is it safe? *Breastfeed Med*, 2008; 3(1):1.
- Lawrence RA. Lactation and lactation suppression. In: Adams Hillard PJ (Ed) *The 5-Minute Obstetrics and Gynecology Consult* 2008 Philadelphia: Lippincott Williams & Wilkins; p. 348-349.
- Lawrence RA. Standing on the shoulders of giants. *Breastfeed Med*, 2008 June; (2):101-2.
- Lee BH, Stoll BJ, McDonald SA, Higgins RD, National Institute of Child Health and Human Development Neonatal Research Network. Neurodevelopmental outcomes of extremely low birth weight infants exposed prenatally to dexamethasone versus betamethasone. *Pediatrics* 2008 Feb; 121(2):289-96. PMID 18245420
- Lew BJ, Collins LL, O'Reilly MA, Lawrence BP. Activation of the aryl hydrocarbon receptor (AhR) during different critical windows in pregnancy alters mammary epithelial cell proliferation and differentiation. *Toxicol Sci*, 2009; 111:151-162. PMCID: PMC2726296.
- Lin X, Dean DA. Gene Therapy for ALI/ARDS. *Critical Care Clinics* 2011. In press.
- Madan J, Kendrick D, Hagadorn JI, Frantz III ID, for the NICHD Neonatal Research Network. [Phelps DL as PI of the Rochester participating center]. Patent ductus arteriosus therapy: impact on neonatal and 18-month outcome. *Pediatrics* 2009 Feb; 123(2):674-81. PMID: 19171637. PMCID: PMC2752886.
- Madhavi S, Asthana S, Amin SB. Neonatal outcomes after multiple courses of postnatal indomethacin for patent ductus arteriosus. *Pediatr Cardiol* 2008; 29(5):878-84.
- Malcolm WF, Gantz M, Martin RJ, Goldstein RF, Goldberg RN, Cotten CM; National Institute of Child Health and Human Development Neonatal Research Network. Use of medications for gastroesophageal reflux at discharge among extremely low birth weight infants. *Pediatrics* 2008 Jan; 121(1):22-7. PMID: 18166553
- Maniscalco WM and Bhandari, V. Disruption in lung vascular development. In: Abman, S (ed). *BPD*. New York: Informa. Vol 240, 2010.
- McGrath-Morrow S, Lauer T, Collaco M, Yee M, O'Reilly MA, Mitzner W, Neptune E, Wise R, Biswall S. Neonatal hyperoxia contributes additively to cigarette smoke-induced COPD changes in adult mice. *Am. J. Respir. Cell Mol. Biol* 2011. In press.
- McGrath-Morrow S, Lauer T, Yee M, Neptune E, Podowski M, Thimmulappa RK, O'Reilly MA, Biswal S. Nrf2 increases survival and attenuates alveolar growth inhibition in neonatal mice exposed to hyperoxia. *Am J Physiol Lung Cell Mol Physiol* 2009; 296:L565-L573. PMCID: PMC2670765.
- Meinzen-Derr J, Poindexter B, Wrage L, Morrow AL, Stoll B, Donovan EF, for the NICHD Neonatal Research Network. [Phelps DL as PI of the Rochester participating center]. Role of human milk in extremely low birth weight infants' risk of necrotizing enterocolitis or death. *J Perinatol* 2009 Jan; 29(1):57-62. Epub 2008 Aug 21. PMID: 18716628. PMCID: PMC2801431. NIHMSID: 164921.
- Melen E, Kho AT, Sharma S, Gaedigk R, Leeder JS, Mariani TJ, Carvey VJ, Weiss ST, Tantisira KG. Expression analysis of asthma candidate genes during human and murine lung development. *Res* 2011; 12(1):86. Epub 2011 June 23.
- Miller, AM, Dean, DA. Cell Specific nuclear import of plasmid DNA in smooth muscle requires tissue-specific transcription factors and DNA sequences. *Gene Ther* 2008; 15:1107-1115.
- Miller AM, Dean DA. Identification of protein cofactors necessary for sequence-specific plasmid DNA nuclear import. *Mol Therapy*, 2009; 17:1897-1903.
- Miller AM, Dean D A. Tissue-specific and transcription factor-mediated nuclear entry of DNA. *Adv Drug Delivery Rev* 2009; 61:603-613.
- Min Yee M, Chess PR, McGrath-Morrow S, Wang Z, Gelein R, Zhou R, Dean DA, Notter R, O'Reilly M. Neonatal oxygen adversely affects lung function in adult mice without altering surfactant composition or activity. *AJP Lung* 2009; 297(4) L641-649.
- Minhajuddin M, Bijli KM, Fazal F, Sassano A, Nakayama KI, Hay N, Plataniias LC, Rahman A. Protein kinase C δ and PI 3-kinase/Akt activate mammalian target of rapamycin to modulate NF- κ B activation and ICAM-1 expression in endothelial cells. *J Biol Chem*, 2009; 284:4052-4061.

- Morris BH, Oh W, Tyson JE, Stevenson DK, Phelps DL, O'Shea TM, McDavid GE, Perritt RL, Van Meurs KP, Vohr BR, Grisby C, Yao Q, Pedroza C, Das A, Poole WK, Carlo WA, Duara S, Lupton AR, Salhab WA, Shankaran S, Poindexter BB, Fanaroff AA, Walsh MC, Rasmussen MR, Stoll BJ, Cotton CM, Donovan EF, Ehrenkranz RA, Guillet R, Higgins RD, MD; Follow-up investigators; for the NICHD Neonatal Research Network A Multi-center Randomized Trial of Aggressive versus Conservative Phototherapy for Extremely Low Birth Weight Infants. *N Engl J Med* 2008; 359:1885-96.
- Morton J, Lawrence RA. Breastfeeding. In: Rudolph CD (Ed) *Rudolph's Pediatrics*, 22nd ed. January, 14, 2011.
- Munkonge FM, Amin V, Smith J, Hooley R, Xenariou S, Nixon C, Ward M A, Leeds N, Leung KY, Hillery E, Griesenbach U, Geddes DM, Poste I EH, Dean DA, Dunn MJ, Alton EFWF. Identification and Functional Characterization of Cytoplasmic Determinants of Plasmid DNA Nuclear Import. *J Bio Chem* 2009; 284:26978-26987.
- Natarajan G, Shankaran S, McDonald SA, Das A, Stoll BJ, Higgins RD, Thorsen P, Skogstrand K, Hougaard DM, Carlo WA; for the NICHD Neonatal Research Network. [Phelps DL as PI of the Rochester participating center]. Circulating beta chemokine and MMP 9 as markers of oxidative injury in extremely low birth weight infants. *Pediatr Res* 2010; 67(1):77-82. PMID: 19755933.
- Narang S, Roy J, Stevens TP, Butler-O'Hara M, Mullen CA, D'Angio CT. Risk factors for umbilical venous catheter-associated thrombosis in very low birth weight infants. *Pediatr Blood Cancer* 2009 Jan;52(1):75-9. PMID:18680150.
- Nayrouz M, Chess PR, Antenatal Corticosteroids for Women at Risk of Preterm Delivery, 2011. In press.
- Notter RH, Wang Z: Lung surfactants. In: *Encyclopedia of Biomaterials and Biomedical Engineering*, Vol. 3, 2nd Edition. Wnek GE, Bowlin GL (Eds). New York: Informa Healthcare 2008; pp.1683-1694.
- Notter RH, Schwan AL, Waring AJ, Wang Z, Walther F, Gordon LM, Wang Zho, Davy JA: Synthetic Lung Surfactants and Use Thereof. International Patent Cooperation Treaty (PCT) US Patent Application 12374458 -US07/73970, January 20, 2009.
- Notter RH, Schwan AL, Waring AJ, Wang Z, Walther F, Gordon LM, Wang Zho, Davy JA: Synthetic Lung Surfactants and Use Thereof. International Patent Cooperation Treaty (PCT) European Patent Application 07813152.1-1211-US07/73970, January 20, 2009.
- O'Reilly MA, Marr SH, Yee M, McGrath-Morrow SA, Lawrence BP. Neonatal hyperoxia enhances the inflammatory response in adult mice infected with influenza A virus. *Am J Respir Crit Care Med* 2008; 177: 1103-1110. PMID: PMC2383992.
- Pang J, Hoefin R, Wang J, Yin G, White R, O'Dell MR, Pryhuber G, Mohan A, Yan C, Massett M, Berk B. GIT1 is Required for Pulmonary Vascular Development. *Circulation* 2009;119(11): 1524-1532.
- Papuga MO, Kwok E, You Z, Rubery PT, Dougherty PE, Pryhuber G, Beck CA, Hilton MJ, Awad HA, Schwarz EM. TNF is required for the induction but not the maintenance of compression-induced BME signals in murine tail vertebrae: limitations of anti-TNF therapy for degenerative disc disease. *J Ortho Res* 2011; 29(9):1367-1374. PMID: 3076794.
- Phelps DL. It's plus disease, isn't it? (invited editorial). *Arch Ophthalmol*. 2007;125(7):963-964..
- Phelps DL. Retinopathy of Prematurity. Questions to Guide Molecular Biology. *Retinal and Choroidal Angiogenesis* 2008.
- Planagumà A, Kazani S, Marigowda G, Haworth O, Mariani TJ, Israel E, Bleecker ER, Curran-Everett D, Erzurum SC, Calhoun WJ, Castro M, Chung KF, Gaston B, Jarjour NN, Busse WW, Wenzel SE, Levy BD. Airway Lipoxin A4 Generation and Lipoxin A4 Receptor Expression are Decreased in Severe Asthma. *American Journal of Respiratory and Critical Care Medicine*, 2008; 178(6):574-82. Epub 2008 Jun 26.
- Pressman EK, Thornburg LL, Glantz JC, Earhart A, Wall PD, Ashraf M, Pryhuber G, Woods JR. Inflammatory Cytokines and Antioxidants in Midtrimester Amniotic Fluid: Correlation with Pregnancy Outcome. *Am J Ob Gyn* 2011;204(2):155 e1-7.
- Pryhuber GS, Huyck HL, Bhagwat B, O'Reilly MA, Finkelstein JN, Gigliotti F, Wright TW. Parenchymal Cell TNF Receptors Contribute to Inflammatory Cell Recruitment and Respiratory Failure in Pneumocystis carinii-Induced Pneumonia. *J. Immunol* 2008; 181(2): p. 1409-1419

- Quinn GE, Dobson V, Davitt BV, Hardy RJ, Tung B, Pedroza C, Good WV. [Phelps DL as PI of a participating center, and on Editorial Committee]. Progression of myopia and high myopia in the early treatment for retinopathy of prematurity study: findings to 3 years of age. *Ophthalmology* 2008; 115(6):1058-1064.
- Quinn GE, Dobson V, Davitt BV, Hardy RJ, Tung B, Pedroza C, Good WV, Early Treatment for Retinopathy of Prematurity Cooperative Group. [Phelps DL as PI of the Rochester participating center] .Progression of myopia and high myopia in the early treatment for retinopathy of prematurity study: findings to 3 years of age. *Ophthalmology* 2008; 115(6):1058-1064.
- Raghavendran K, Pryhuber GS, Chess PR, Davidson BA, Knight PR, and Notter RH. Pharmacotherapy of acute lung Injury and acute respiratory distress syndrome. *Curt Med Chem* 2008; 15:1911-1924.
- Raghavendran K, Davidson BA, Knight PR, Wang Z, Helinski J, Chess PR, Notter RH: Surfactant Dysfunction in Lung Contusion with and without Superimposed Gastric Aspiration in a Rat Model, *Shock* 2008; 30:508-517.
- Raghavendran K, Davidson B, Huebschmann J, Helinski J, Hutson A, Dayton M, Notter RH, Knight P: Superimposed gastric aspiration increases the severity of inflammation and permeability injury in a rat model of lung contusion. *J Surgical Res* 2009; 155:273-282.
- Raghavendran K, Notter RH, Davidson BA, Helinski JD, Kunkel SL, Knight PR: Lung contusion: Inflammatory mechanisms and interaction with other injuries. *Shock*, 2009; 32:122-130.
- Raghavendran K, Davidson BA, Hutson AD, Helinski JD, Nodzo SR, Notter RH, Knight PR: Predictive modeling and inflammatory biomarkers in rats with lung contusion and gastric aspiration. *J Trauma* 2009; 67:1182-1190.
- Raghavendran KR, Willson D, Notter RH: Surfactant therapy of ALI/ARDS. *Crit Care Clin* 2011. In Press.
- Rahman A and Fazal F. Blocking NF- κ B: An Inflammatory Issue. *Proceedings of the American Thoracic Society*. In press.
- Rahman A, Fazal F. Hug tightly and say goodbye: role of endothelial ICAM-1 in leukocyte transmigration. *Antioxid Redox Signal* 2009; 11:823-829.
- Reddy NM, Potteti HR, Mariani TJ, Biswal S, Reddy SP. Conditional Deletion of Nrf2 in Airway Epithelium Exacerbates Acute Lung Injury and Impairs the Resolution of Inflammation. *Am. J of Resp. Cell and Mol. Bio* 2011; Epub 2011 Jun 09.
- Reynolds SD; Zemke AC; Giangreco A; Brockway BL; Teisanu RM; Drake JA; Mariani T; Di PY; Taketo MM; Stripp BR. Conditional Stabilization of Beta-catenin Expands the Pool of Lung Stem Cells. *Stem cells (Dayton, Ohio)* 2008; 26(5):1337-46. Epub 2008 Mar 20.
- Riccio J, Chess P. Management of the 23 to 26 week preterm infant. *Strong Perifax*, 2010; 902: 1-9.
- Roepke JB, Lawrence RA. Encouraging Breastfeeding. In: Hark L, Morrison G (Eds). *Medcial Nutrition and Disease* 2009, 4th edition. Blackwell Publishing.
- Rosenwasser LJ; Fuhlbrigge AL; Weiss ST. "FCER2: a Pharmacogenetic Basis for Severe Exacerbations in Children with Asthma. *The Journal of Allergy and Clinical Immunology* 2007;120(6):1285-91. Epub 2007 Nov 05. The Early Treatment for Retinopathy of Prematurity Cooperative Group, Good WV, Hardy RJ, Dobson V, Palmer EA, Phelps DL, Quintos M, Tung B. Final visual acuity results in the early treatment for retinopathy of prematurity study. *Archives of Ophthalmology* 2010; 128(6):663-671.
- Rushton EK; Jiang J; Leonard SS; Eberly S; Castranova V; Biswas P; Elder A; Han X; Gelein R; Finkelstein J; Oberdorster G. Concept of assessing nanoparticle hazards considering nanoparticle dosemetric and chemical/biological response metrics. *J of Tox and Env Health. Part A*. 2010;73(5):445-61.
- Saluja S, Agarwal A, Kler N, Amin SB. Auditory neuropathy spectrum disorder in late preterm and term infants with severe jaundice. *Int J Pediatr Otorhinolaryngol* 2010;74(11):1292-7.
- Saperstein S; Chen L; Oakes D; Pryhuber G; Finkelstein J. "IL-1beta augments TNF-alpha-mediated inflammatory responses from lung epithelial cells. *Journal of interferon & cytokine research : the official journal of the International Society for Interferon and Cytokine Research* 2009; 29(5):273-84. NIHMS 102625; PubMed #19231998. PMCID: 2718541.
- Saperstein S; Huyck H; Kimball E; Johnston C; Finkelstein J; Pryhuber G. "The effects of interleukin-1beta in tumor necrosis factor-alpha-induced acute pulmonary inflammation in mice." *Mediators of inflammation*. 2009;958658. Epub 2009 Nov 4. PMID: 19901996 PMCID: 2772277.

- Scheible K, Zhang G, Baer J, Azadniv M, Lambert K, Pryhuber G, Treanor JJ, Topham DJ. CD8+T cell immunity to 2009 pandemic and seasonal H1N1 influenza viruses. *Vaccin* 2011 Mar; 3:29(11): 2159-2168. PMID: 3061835.
- Schulman J, Stricof R, Stevens TP, Horgan M, Gase K, Holzman IR et al, Statewide NICU central line-associated bloodstream infection rates decline after bundles and checklists. (Epub 2011 Feb 21). *Pediatrics* 2011 Mar; 127(3):436-444. PMID: 21339265.
- Schulman J, Sticof RL, Stevens TP, Holzman IR, Shields EP, Angeret RM, Wasserman-Hoff RS, Nafday SM, Saiman L. Development of a Statewide Collaborative to Decrease NICU Central Line Associated Bloodstream Sifections. *J Perinatol* 2009 Sep; 29(9):591-9. Epub 2009 Mar 4. PMID: 19262569.
- Sharma S, Tantisira K, Carey V, Murphy AJ, Lasky-Su J, CeledUn JC, Lazarus R, Klanderman B, Rogers A, Soto-QuirUs M, Avila L Mariani T, Gaedigk R, Leeder S, Torday J, Warburton D, Raby B, Weiss ST. A role for Wnt signaling genes in the pathogenesis of impaired lung function in asthma. *American Journal of Respiratory and Critical Care Medicine* 2010; 181(4):328-36. Epub 2009 Nov 19
- Shankaran S, Pappas A, Luptook AR, McDonald SA, Ehrenkranz RA, Tyson JE, Walsh M, Goldberg RN, Higgins RD, Das A. NICHD Neonatal Research Network. [Phelps DL as PI of participating center] Outcomes of safety and effectiveness in a multicenter randomized, controlled trial of whole-body hypothermia for neonatal hypoxic-ischemic encephalopathy. *Pediatrics* 2008 Oct;122(4):e791-8.
- Shankaran S, Pappas A, McDonald SA, Luptook AR, Bara R, Ehrenkranz RA, Tyson JE, Goldberg R, Donovan EF, Fanaroff AA, Das A, Poole WK, Walsh M, Higgins RD, Welsh C, Salhab W, Carlo WA, Poindexter B, Stoll BJ, Guillet R, Riner NN, Stevenson DK, Bauer CR for the *Eunice Kennedy Shriver* NICHD Neonatal Research Network. Neonatal Hypoxic Ischemic Encephalopathy: Predictive value of an Early Amplitude Integrated EEG and Neurological Examination. *Pediatrics*. In Press.
- Shankaran S, Pappas A, McDonald SA, Luptook AR, Bara R, Ehrenkranz RA, Tyson JE, Goldberg R, Donovan EF, Fanaroff AA, Das A, Poole WK, Walsh M, Higgins RD, Welsh C, Salhab W, Carlo WA, Poindexter B, Stoll BJ, Guillet R, Finer NN, Stvenson DK, Bauer CR; for the Eunice Kennedy Shriver National Institute of Child Health and Human Development Neonatal Research Network. Predictive Value of an Early Amplitude Integrated Electroencephalogram and Neurologi Examination. *Pediatrics* 2011 Jul;128(1):e112-e120. Epub 2011 Jun 13. PMID: 21669899 [PubMed – as supplied by publisher].
- Simon DM, Tsai LW, Ingenito EP, Starcher BC, Mariani TJ. PPAR gamma deficiency results in reduced lung elastic recoil and abnormalities in airspace distribution. *Respir Res* 2010; June 2;11(1):69. PMID: 20525205.
- Sood BG, Madan A, Saha S, Schendel D, Thorsen P, Skogstrand K, Hougaard D, Shankaran S, Carlo W; On behalf of the NICHD Neonatal Research Network. [Phelps DL as PI of the Rochester participating center] .Perinatal Systemic Inflammatory Response Syndrome and Retinopathy of Prematurity. *editor Res.* 67(4):394-400, 2010. PMID: 20032809
- Srisuma S, Bhattacharya S, Simon, DM, Solleti SK, Tyagi S, Starcher B, Mariani TJ, Fibroblast growth factor receptors control epithelial-mesenchymal interactions necessary for alveolar elastogenesis. *Am. J of Resp. and Crit. Care med*, 2010; 181(8):838-50. PMID: 20093646.
- Stavarsky, R.J, Vitiello PF, Yee M, Dean DA, O'Reilly MA. Epithelial ablation of Bcl-X_L increases sensitivity to hyperoxia without disrupting lung development. *Am J Respir Cell Mol Biol* 2010; 43:376-385. PMID: 19880821.
- Stevens TP, van Wijngaarden E, Ackerman KG, Lally PA, Lally KP. Timing of Delivery and Survival in Infants with A Prenatal Diagnosis of Congenital Diphragmatic Hernia. *Pediatrics* 2009; 123; 494-502. PMID: 19171614.
- Stevens TP, Dylag A, Panthagani I, Pryhuber G, Halterman JS. Effect of Cumulative Oxygen Exposure on Recurrent Wheezing In VLBW Infants Without Bronchopulmonary Dysplasia, *Pediatr Pulmonol* 2010 Apr; 45(4):371-379. PMID: 20232470.
- Sullivan S, Schanler RJ, Kim JH, Patel AL, Trawogger R, Kiechl-Kohlendorfer U, Chan GM, Blanco CL, Abrams S, Cotten CM, Laroia N, Ehrenkranz RA, Dudell G, Cristofalo EA, Meier P, Lee ML, Rechtman DJ, Lucas A. An Exclusively Human Milk Based Diet is Associated with a Lower Rate of Necrotizing Enterocolitis than a Diet of Human Milk and Bovine Milk Products. *J of Pediatrics* 2010 Apr; 156(4):562-7.
- SUPPORT Study Group of the Eunice Kennedy Shriver NICHD Neonatal Research Network; Carlo WA, Finer NN, Walsh MC, Rich W, Gantz MG, Luptook AR, Yoder BA, Faix RG, Das A, Poole WK, Schibler K, Newman NS, Ambalavanan N, Frantz ID III, Piazza AJ, Sanchez PJ, Morris BH, Laroia N, Phelps DL, Poindexter BB, Cotton CM, Van Meurs KP, Duara S, Narendran V, Sood BG, O'Shea TM,

- Bell EF, Ehrenkranz RA, Watterberg KL, Higgins RD. Target ranges of oxygen saturation in extremely preterm infants. *New England Journal of Medicine* 2010; 362(21):1959-1969.
- SUPPORT Study Group of the Eunice Kennedy Shriver NICHD Neonatal Research Network. Finer NN., Carlo WA. Walsh MC. Rich W. Gantz MG. Lupton AR. Yoder BA. Faix RG. Das A. Poole WK. Donovan EF. Newman NS. Ambalavanan N. Frantz ID 3rd. Buchter S. Sanchez PJ. Kennedy KA. Laroia N. Poindexter BB. Cotten CM. Van Meurs KP. Duara S. Narendran V. Sood BG. O'Shea TM. Bell EF. Bhandari V. Watterberg KL. Higgins RD. Early CPAP versus surfactant in extremely preterm infants. *New England Journal of Medicine* 2010; 362(21):1970-9.
- The Early Treatment for Retinopathy of Prematurity Cooperative Group. Good WV, Hardy RJ, Dobson V, Palmer EA, Phelps DL, Quintos M, Tung B. Final visual acuity results in the early treatment for retinopathy of prematurity study. *Archives of Ophthalmology* 2010; 128(6):663-671.
- The Early Treatment for Retinopathy of Prematurity Cooperative Group. (Phelps DL PI of a participating center and on the ETROP Executive Committee) Visual Field Extend at Age 6 Years in Children who had High-Risk Prethreshold Retinopathy of Prematurity. *Arch Ophthalmol* 2011; 129:127-132.
- The Early Treatment for Retinopathy of Prematurity Cooperative Group. (Phelps DL PI of a participating center and on the ETROP Executive Committee) Grating Visual Acuity Results in the Early Treatment for Retinopathy Study. *Arch Ophthalmol* 2011. In press.
- Thingvoll ES, Guillet R., Caserta M., DiCenzo R. Observational Trial of a 48-Hour Gentamicin Dosing Regimen Derived from Monte Carlo Simulations in Infants Born at Less than 28 Weeks' Gestation. *J Pediatrics* 2008; 153(4):530-534.
- Thompson SM, Dadiz R, Young KC, Teomete U, Toledano S, Rodriguez MM. Newborn Girl with Massive Hepatomegaly, Anemia, and Thrombocytopenia. *J Pediatr* 2008; 152:129-32.
- Thornburg LL, Christensen N, Laroia N, Pressman EK, Prenatal Diagnosis of Total Arhinia Associated with Normal Chromosome Analysis: a Case Report. *J of Reproductive Medicine*, 2009; 54(9):579-82.
- Vanwinkle BA; de Mesy Bentley KL; Malecki JM; Gunter KK; Evans IM; Elder A; Finkelstein JN; Oberdörster G; Gunter TE. Nanoparticle (NP) uptake by type I alveolar epithelial cells and their oxidant stress response. *Nanotoxicology* 2009; 3(4):307-318.
- Vaughan, E. E., R. C. Geiger, A. M. Miller, T. Suzuki, N. Miyata, and D. A. Dean. Microtubule acetylation via HDAC6 inhibition results increased transfection efficiency. *Mol Therapy* 2008; 16:1841-1847.
- Vitello PF, Wu Y-CM, Staversky RJ, O'Reilly MA. P21Clip1 protects against oxidative stress by suppressing ER dependent activation of Mitochondrial death pathways. *Free Radical biology and Medicine* 2009; 46:33-4. PMID: PMC2631574.
- Vohr BR; Tyson JE; Wright LL; Perritt RL; Li L; Poole WK for the NICHD Neonatal Research Network. [Phelps DL as PI of the Rochester participating center]. Maternal Age, Multiple Birth, and Extremely Low Birth Weight Infants. *J Pediatr* 2009 Apr; 154(4):498-503.e2. Epub 2008 Dec 25. PMID: 19111322.
- Walther FJ, Waring AJ, Hernandez-Juviel JM, Gordon LM, Wang Z, Jung C-L, Ruchala P, Clark AP, Smith WM, Sharma S, Notter RH. Critical structural and functional roles for the N-terminal insertion sequence in surfactant protein B analogs. *PLoS ONE* 2010; 5:e8672. doi:10.1371/journal.pone.0008672.
- Wang Y., Heilig, K, Minto, A. Chen, S, Xiang, M, Dean, DA, Geiger, C, Chang, A, Pravtcheva, D, Schlimme, M. Deb, D. Wang, Y. Quigg, R. Heilig C. Nephron-Deficient FVB Mice Develop Rapidly Progressive Renal Failure and Heavy Albuminuria Involving Excess Glomerular GLUT1 and VEGF. *Lab Investigation* 2010; 90:83-97.
- Wang Z, Schwab U, Rhoades E, Chess PR, Russell, DG, Notter RH. Peripheral cell wall lipids of mycobacterium tuberculosis are inhibitory to surfactant function. *Tuberculosis* 2008; 88:178-186.
- Wagner CL, Howard CR, Lawrence RA, et al. Maternal vitamin D supplementation during lactation: A viable alternative to infant supplementation. *Breastfeeding Medicine* 2008.
- Weinberg GA, D'Angio CT. The search for new diagnostic tests for neonatal sepsis. *J.Pediatr*, 2009 Nov; 155(5):763-4. PMID: 19840628 [PubMed – indexed for MEDLINE]
- Weinberg GA, D'Angio CT. Laboratory aids for diagnosis of neonatal sepsis. In: *Remington JS, Klein JO, eds. Infectious Diseases of the Fetus and Newborn Infant*, 7th edition. Philadelphia: Elsevier, 2010;

- 1144-1160.
- Weinschreider J, Dadiz R. Back to basics: Creating a simulation program for patient safety. *J Healthc Qual* 2009; 31(5):29-36quiz 37. PMID:19813558 [PubMed – indexed for MEDLINE].
- Wheeler DT, Dobson V, Chiang MF, Bremer DL, Gewolb IH, Phelps DL, Hardy RJ, Good WV, Fellows R, Tung B, Palmer EA. Retinopathy of Prematurity in Infants Weighing Less Than 500 Grams at Birth Enrolled in the Early Treatment for Retinopathy of Prematurity (ETROP) Study. *Ophthalmology*. 2011; Jan, E1-E7.
- Williams JP; Johnston CJ; Finkelstein JN. Treatment for Radiation-Induced Pulmonary Late Effects: Spoiled for Choice or Looking in the Wrong Direction? *Curr Drug Targets* 2010 Nov;11(11):1386-94.;
- Wilson-Costello D, Walsh M, Langer J, Guillet R, Laptook A, Stoll B, Shankaran S, Finer N, Engle W, Das A, Van Meurs K. Impact of postnatal corticosteroid (PNS) use on neurodevelopment at 18-22 months adjusted age: Effects of dose, timing and risk of bronchopulmonary dysplasia in extremely low birthweight infants (ELBW). *Pediatrics*, 2009 Mar; 123(3):e430-7. Epub 2009 Feb 9.
- Williams JP, Johnston CJ, Finkelstein JN. Treatment for Radiation-Induced Pulmonary Late Effects: Spoiled for Choice or Looking in the Wrong Direction? *Curr Drug Targets* 2010 June 28. [Epub ahead of print] PMID: 20583979 [PubMed – as supplied by publisher].
- Willson DF, Chess PR, Notter RH. Surfactant for pediatric acute lung injury. *Pediatr Clin North Am* 2008; 55:545-575.
- Willson DF, Notter RH. Surfactant in the pediatric patient. In: *Neonatal and Pediatric Mechanical Ventilation: From Basics to Clinical Practice*. Rimensberger PC (Ed.); Berlin: Springer-Verlag, In press.
- Willson DF and Notter RH: New Horizons. The future of exogenous surfactant therapy. *J Respir Care*, 201. In press.
- Wu YCM, O'Reilly MA. Bcl-X_L is the primary mediator of p21 protection against hyperoxia-induced cell death. *Exp. Lung Res* 2011; 37: 82-91,
- Xavier J, Singh S, Dean DA, Rao NM, and V. Gopal. Designed multi-domain protein as a carrier of nucleic acids into cells. *J Control Release*, 2009; 133:154-160.
- Yang L, Chen G, Mohanty S, Scott G, Fazal F, Rahman A, Begum S, Hynes R, Xu L. GPR56 regulates VEGF production and angiogenesis during melanoma progression. *Cancer Res* 2011 Jul 1. [Epub ahead of print]
- Yao h, Yang SR, Edirisinghe I, Rajendrasozhan S, Caito S, Adenuga D, O'Reilly MA, Rahman I. Distribution of p21 Attenuates Lung Inflammation induced by Cigarette Smoke, LPS and fMLP in Mice. *Am. J. Respir. Cell Mol. Biol* 2008; 39:7-18, PMID: PMC2440259
- Yee M, White RJ, Awad HA, Bates WA, McGrath-Morrow SA, O'Reilly MA. Neonatal Hyperoxia causes pulmonary vascular disease and shortens life-span in aging mice. *Am. J. Pathol.* 2011; 178:2601-2610.
- Yee, M., Chess, PR McGrath-Morrow SA, Wang Z, Gelein R, Zhou Z, Dean DA, Notter RH, O'Reilly Neonatal oxygen adversely affects lung function in adult mice without altering surfactant composition or activity. *Am J Physiol Lung Cell Mol Physiol* 2009; 297:L641-L649. PMID: 19880821.
- Young MF, Pressman E, Foehr M, McNanley T, Cooper E, guillet R, Orlando M, McIntyre A, Lafond J, O'Brian KO. Impact of maternal Iron Status on Placental Transferrin Receptor Expression. *Placenta* 2010; 31(11): 1010-4.
- Young, JL, Zimmer WE, Dean DA. Smooth muscle-specific gene delivery in the vasculature based on restriction of DNA nuclear import. *Exp Biol Medicine* 2008; 233(7): .840-848.