



The Regional Neonatal Center

Division of Newborn Medicine

The Maria Fareri Children's Hospital at Westchester Medical Center

Valhalla, New York 10595

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Research and Academic Programs

2005-Present



Prepared: April 27, 2009

The consequences of extremely premature birth, congenital malformations or newborn metabolic diseases can be devastating to a family. Some affected newborns will die, while others will experience a certain degree of lifelong disability; yet the majority can and do survive, thrive and reach adulthood unaffected. Indeed, it is this triumph of medicine that trumpets a new life anticipated.

Department of Pediatrics, Division of Newborn Medicine

The excitement of newborn medicine lies first in the rapid evolution of new technologies, cutting edge developments in clinical and basic science, and bench-to-bedside correlates of human biology that are matched only by the avalanche of new discoveries that change today's management of old diseases. Each of these features contributes to the overall intensity of neonatology and its ability to re-invent itself nearly every 5 years

The physicians in the Division of Newborn Medicine at New York Medical College, through their clinical and basic science research investigations, are seeking ways to improve care for extremely preterm babies and other conditions of the newborn. These challenges include newborns born as early as 23 weeks' gestation - nearly 4 ½ months earlier than the 40 weeks of a full term pregnancy.

The Division of Newborn Medicine is dedicated to the highest quality of patient care, teaching, research outreach and public health. Clinical and Basic Science research projects at the Regional Neonatal Center, a NYS DOH level IV designated program, afford these tiny patients and their families an opportunity to receive new treatments and therapies not available at community hospitals or even at many other major medical centers (e.g., ECMO, Jet and Oscillatory Ventilation, Selective Brain Cooling for asphyxia, High Frequency Ventilation for transport, etc.). We run a network of neonatal intensive care programs at 11 hospitals and coordinate the largest High Risk Neonatal Follow-up Program in New York State.

The Division is also involved with many public health initiatives focused on enhanced access to health care and in identifying opportunities to improve perinatal outcomes for the citizens of our entire 5,000 square mile catchment area through a formal collaboration with the Lower Hudson and Mid-Hudson Valley Perinatal Networks. There have been over 20,000 sick or premature newborns cared for since the Division was established in 1985.

Our Faculty scientists hold leadership positions in many professional societies and are frequent contributors of important perinatal research in multicenter trials, single institution trials, and in basic research.

Studies can be grouped into the following general categories:

- Neonatal brain development and neurological disorders
- Neonatal cardiovascular and respiratory pathophysiology
- Mediators of neonatal inflammation and infections
- Neonatal nutrition, growth and development of the intestine
- Neonatal endocrine disorders and thyroid diseases
- Genetic foundations of neonatal conditions
- Studies on the impact of neonatal intensive care on long-term neurological outcomes
- Population based outcomes and public health initiatives

We invite you to explore research opportunities in the Division of Newborn Medicine, listed below alphabetically by investigator, beginning with the Chief; as well as to review recent publication listed in the web links of the Division.



Regional Neonatal Center Network Organization Chart
Maria Fareri Children's Hospital at WMC/NYMC

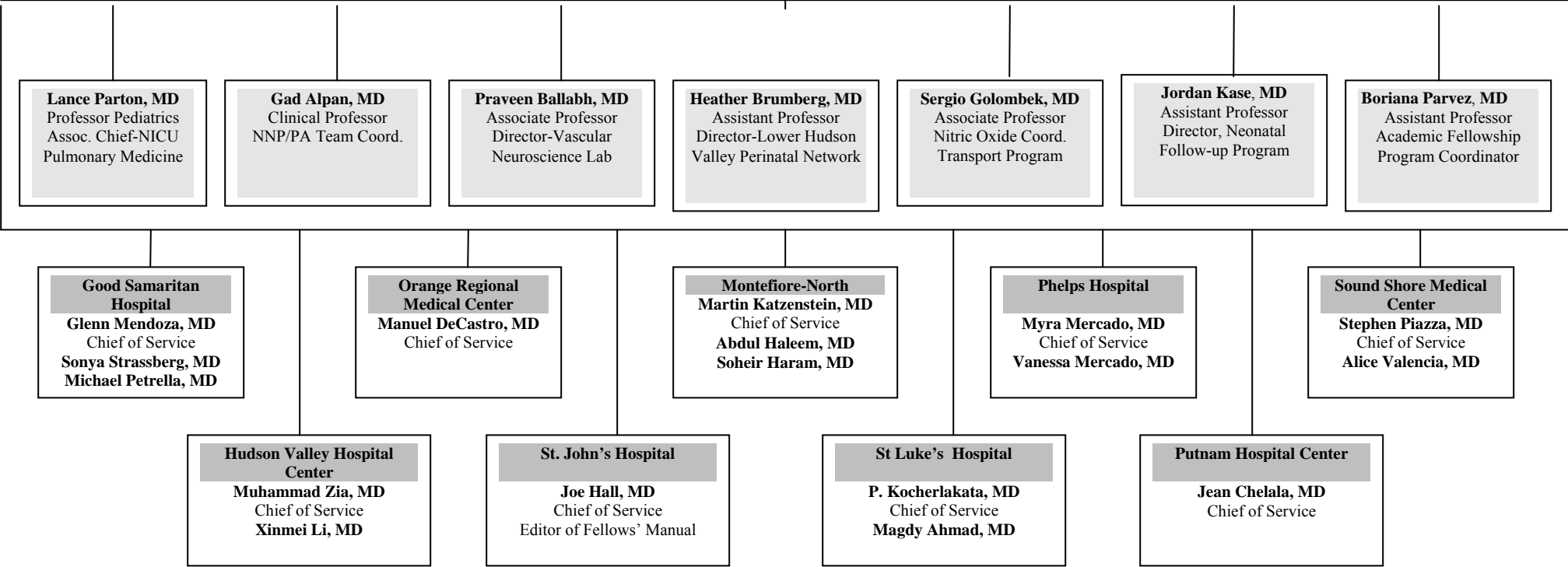


Leonard Newman, MD
 Professor and Chairman, Department of Pediatrics, NYMC

Michael Gewitz, MD
 Professor and Vice Chairman, Department of Pediatrics, NYMC
 Director-Maria Fareri Children's Hospital at WMC

Edmund F. LaGamma, MD
 Professor of Pediatrics, Biochemistry & Molecular Biology
 Chief-Newborn Services

Bistra Nankova, PhD
 Research Assoc Professor
 Lab Director



NYMC Neonatal Faculty Research/Bio Summaries

(B)=Basic Science

(C)=Clinical Research

Edmund F. LaGamma, MD

- Phase 3 Study of Thyroid Hormone in Extremely Premature Infants (C)
- rh-GCSF Effects on White Blood Cell Functions in Preterm Neonates (C)
- rh-GCSF + IVGG as early intervention for NEC (C)
- Evaluation of Maldistribution of Oxygen Delivery In VLBW Patients (C)
- Postnatal Bacterial Colonization and Pathogenesis of Neonatal Sepsis (C)
- Effects of Enteral Protein Type on Protein Turnover in VLBW Patients (C)
- Stress Mediated Regulation of Adrenal Neurotransmitters (B)

College:	City College of New York	1973
Medical School:	New York Medical College	1976
Residency:	NY Hospital-Cornell Medical Center	1978
Fellowship:	NY Hospital-Cornell Medical Center	1980
Post Doc:	Cardiovascular Res Institute, UCSF	1981
Post Doc:	Cold Spring Harbor Laboratories	1983
Pediatric Boards:		1981
Neonatal-Perinatal Boards:		1981

Edmund F. La Gamma is Professor of Pediatrics, Biochemistry & Molecular Biology and is the Chief of the Division of Newborn Medicine in the Department of Pediatrics of the New York Medical College. He is The Director of The Regional Neonatal Center of the Maria Fareri Children's Hospital at Westchester Medical Center. He is also the Director of one of the largest Neonatal-Perinatal Medicine Fellowship Programs in the United States with 13 trainees. Dr. La Gamma is a practicing neonatologist and researcher who has authored about 100 peer-reviewed basic and clinical research reports and 25 chapters in textbooks on various aspects of neonatal disease, nutrition, infection and development of the nervous system.

Dr. La Gamma has received funding as the Principal Investigator from the National Institutes of Health, the National Science Foundation, the American Heart Association, the March of Dimes Foundation, the Dysautonomia Foundation and from industry. He has published extensively in the areas of development of the nervous system, neonatal infections and in the use of cytokine growth factors to augment immune function in premature neonates. He presently holds two patents: one on gene therapy in the central nervous system and another in use of cytokines to treat neonatal infections. He has been on numerous "Best Doctor's" lists over many years.

Other responsibilities

Editor, Fellowship Training & Policy Manual	Fellowship Recruitment
Hospital Policy & Procedures Book	Fellowship Program Director
Public Relations Committee and Fund Raising	Case Conferences
SPDS Network Database & Regional Q/A	Graduate Medical Education
Chair, Joint Practice Q/A Committee	

Selected Publications from last 5 years

Haleem A, Zia MT, Mishra R, Parton LA, Stringel G, **La Gamma EF**. Bedside lung mechanics identifies the ability to survive in hypoplastic lung disease, submitted.

Zia M, Csiszar A, Labinsky N, Hu F, Vinukonda G, **LaGamma E**, Ungvari Z, Ballabh P. Oxidative –Nitrosative Stress in a Rabbit Pup Model of Germinal Matrix Hemorrhage: Role of NAD(P)H Oxidase. *Stroke* 2009. In press.

LaGamma EF, van Wassenaer A, Ares S, Golombek S, Kok J, Quero J, Hong T, Rahbar M, Morreale de Escobar G, Fisher D, Paneth N. A randomized phase 1 trial of four thyroid hormone regimens for transient hypothyroxinemia in neonates < 28 weeks gestation: the THOP 1 trial. *Pediatrics* 2009. In press.

D'Souza A, Onem E, Patel P, **LaGamma EF**, Nankova BB, Valproic acid regulates catecholaminergic pathways by concentration-dependent threshold effects on TH mRNA synthesis and degradation. *Brain Res.* 2009;1247(1)1-10.

Decastro M, El-Khoury N, Parton L, Ballabh P, **LaGamma EF**. Postnatal Betamethasone vs. Dexamethasone in Premature Infants with Chronic Lung Disease: A Pilot Study. *J Perinatol.* 2009;29:297-304.

Simmonds A, Munoz J, Aguero-Rosenfeld M, Carbonaro C, Montecalvo M, Clones B, **LaGamma EF**, Outbreak of Acinetobacter Infection in Extremely Low Birth Weight Neonates, *Ped Infectious Dis J*, 2009;28(3):210-14.

LaGamma EF, Guest Editor, 10 contributions: Transient Hypothyroxinemia of Prematurity: A Clinical and Developmental Neuroscience Review, *Semin Perinatol.* 2008;32(6):377-9.

Xu H, Hu F, Sado Y, Nonomiya Y, Borza, D, Ungvari Z, **LaGamma E**, Csiszar A, Nedergaard M, Ballabh P. Maturational Changes in Laminin, Fibronectin, Collagen IV and Perlecan in Germinal Matrix, Cortex and White Matter, and Effect of Betamethasone. *J Neurosci Res.* 2008;86(7):1482-500.

Georgiadis V, Xu M, Chua C, Hu F, Collins L, Huynh C, **LaGamma E**, Ballabh P. Characterization of Acute Brain Injuries and Neurobehavioral Profiles in a Rabbit Model of Germinal Matrix Hemorrhage. *Stroke* 2008;39(12):378-88.

Simmonds A, Munoz J, Montecalvo M, Clones B, **LaGamma EF**, Outbreak of Parainfluenza Virus Type 3 in a Neonatal Intensive Care Unit. *Am J Perinatol.* 2008.

Ahmad M, Fleit HB, Golightly MG, **La Gamma EF**. Dexamethasone Therapy Interferes with the Development of the Neutrophil Oxidative Burst In Vitro in Very Low Birthweight Infants. *Am J Perinatol.* 2007;24:223-26.

Parab S, Nankova BB, **La Gamma EF**. Differential regulation of the tyrosine hydroxylase and enkephalin neuropeptide transmitter genes in rat PC12 cells by short

chain fatty acids: concentration-dependent effects on transcription and RNA stability. *Brain Res.* 2007;1132(1):42-50.

Shah P, Nankova BB, Parab S, **La Gamma EF**, Short chain fatty acids induce TH gene expression via ERK-dependent phosphorylation of CREB protein. *Br Res.* 2006; 1107: 13-23.

El-Khoury N, Braun A, Hu F, Pandey M, Nedergaard M, **La Gamma EF**, Ballabh P. Astrocyte endfeet in germinal matrix, cerebral cortex and white matter in developing infants. *Pediatr Res.* 2006; 59(5):673-9.

Simmonds A, **La Gamma EF**. Addressing the “new” NEC: Part I: Rediscovering the Basics, *Indian J Peds.* 2006;73(11):1011-1018.

Simmonds A, **La Gamma EF**. Part II: Toward improving mucosal barrier defenses: rhG-CSF plus IgG antibody. *Indian J Peds.* 2006;73(11):1019-1026.

Mally P, Golombek SG, Mishra R, Nigam S, Mohandas K, Depalhma H, **La Gamma EF**: Association of Necrotizing Enterocolitis with Elective Packed Red Blood Cell Transfusions in Stable Premature Neonates. *Am J Perinatol.* 2006;23(8):451-458.

La Gamma EF, van Wassenaer AG, Golombek SG, Morreale de Escobar G, Kok JH, Quero J, Ares S, Paneth N, Fisher D. Neonatal Thyroxine Supplementation for Transient Hypothyroxinemia of Prematurity: Beneficial or Detrimental? *Treat Endocrinol.* 2006; 5(6):335-346.

La Gamma EF, Simmonds A. A Conceptual Approach Toward Improving Mucosal Barrier Defenses with rhG-CSF plus IgG Antibody: Addressing the “New” NEC. *Haematologica Reports* 2006;2(10):42-49.

DeCastro M, Nankova BB, Shah P, Patel P, Mally PV, Mishra R and **La Gamma EF**, Short chain fatty acids regulate tyrosine hydroxylase gene expression through cAMP-dependent signaling pathway, *Molec Br Res.* 2005;142:28-38.

Patel P, Nankova BB, and **La Gamma EF**, Butyrate, a gut-derived environmental signal, regulates tyrosine hydroxylase gene expression via a novel promoter element, *Develop Br Res.* 2005;160:53-62.

Magdy Ahmad, MD

- Role of Pro-inflammatory cytokines in Hypo-responsiveness to Nitric Oxide in Neonatal Pulmonary Hypertension (C)
- Target delivery of Nitric Oxide Donors in Neonatal Pulmonary Hypertension in community hospitals (C)
- rhG-CSF and neutrophils' functions (C)
- Mechanism of increased sepsis with postnatal steroid (C)
- Neuronal protective role of placenta in premature fetuses (C)
- Neuronal injury with transfusion of aged PRBC's (C)

Medical School:	Alexandria University	1982
Residency:	Christ Hospital/Rush University	1990
Residency:	Albert Einstein Medical Center	1992
Fellowship:	Stony Brook Medical Center	1999
Pediatric Boards:		2003
Neonatal-Perinatal Board Eligible		

Magdy Ahmad, MD, FAAP, is an Assistant Professor of Pediatrics at New York Medical College and Attending Neonatologist at St. Luke's Cornwall Hospital in Newburgh, New York. His research focuses on the issue of hypo-responsiveness to iNO (inhaled Nitric Oxide) in newborns with pulmonary hypertension, specifically the role of pro-inflammatory cytokines and others. A pulmonary targeted approach to enhance that response is being investigated. Studies about the link between steroid use and increased incidence of sepsis in premature newborns as well as steroids' effect on the oxidative burst of the neutrophils were performed in collaboration with the Department of Pathology.

Dr. Ahmad participated in the study of *in vivo* effect of rh-GCSF on phagocytic function and oxidative burst activity in septic neutropenic babies. Work is in progress to assess the protective role of the placenta in ameliorating the neurological injury of prenatal steroids. He presented research findings at the Society of Pediatric Research (SPR) annual conference regarding the neurological injury in premature babies who received transfusion with aged PRBC's > 28 days old.

Selected Publications from last 5 years

Ahmad M, Fleit HB, Golightly MG, La Gamma EF. Dexamethasone Therapy Interferes with the Development of the Neutrophil Oxidative Burst In Vitro in Very Low Birthweight Infants. *Am J Perinatol.* 2007;24:223-26.

Gad Alpan, MD

- Peripheral Blood Flow in Human Newborns Utilizing Impedance Plethysmography (C)
- Gastric Tonometry in Sick Newborn (C)

College:	University of Sussex, England	1973
Medical School:	Technion-Israel Institute of Technology	1983
Residency:	Georgetown University Hospital	1985
Fellowship:	University of California, San Francisco	1992
MBA:	New York University	2000
Pediatric Boards:		1988
Neonatal-Perinatal Boards:		1989

Dr. Alpan is a Clinical Professor of Pediatrics at New York Medical College. He is also an attending physician at the Regional Neonatal Center at Maria Fareri Children's Hospital. His academic interests lie in cardiovascular and pulmonary physiology of the newborn. He is embarking on projects which utilize a non-invasive method of measuring limb blood flow in neonates. The method is impedance plethysmography and has not been widely employed in neonates. Because of their small size, there is very little data on blood flow in premature newborns and the hope is that these measurements, taken under

various conditions, will provide data that will be important in clinical management. Thus, as an example, we would measure how different modes of ventilation, or different medications, affect blood flow. These measurements would enable us to assess the effects of ventilation and these medications on the cardiovascular system. Until now, such issues have been a matter of scientific speculation, rather than based on data. Dr. Alpan also teaches research methodology and statistics to fellows training in neonatal medicine.

Other responsibilities

Editor, Medical Guidelines and Protocols for NP/PA Team

Divisional Quality Assurance

WMC Medical Q/A Representative

Residents Education Committee

Selected Publications from last 5 years

None

Praveen Ballabh, MD

- Role of integrins in pathogenesis of germinal matrix hemorrhage (B)
- Neuroprotection in a model of germinal matrix hemorrhage (B)
- Neuroprotective roles of celecoxib in prevention of post-hemorrhagic white matter injury (B)
- Prevention of white matter injury in rabbit model of germinal matrix hemorrhage (B)

Medical School:	Institute of Medical Sciences, India	1984
Residency:	Christ Hosp Medical Ctr, Illinois	1997
Fellowship:	NY Presbyterian/Cornell	2001
Pediatric Boards:		1997
Neonatal-Perinatal Boards:		2001

Dr. Ballabh is an Associate Professor of Pediatrics, Cell biology and Anatomy at New York Medical College. His laboratory is focused to elucidate pathogenesis of intraventricular hemorrhage (IVH) in premature newborns. Dr. Ballabh and his colleagues are also evaluating neuroprotective strategies to prevent brain damage and subsequent cerebral palsy in premature infants after the development of IVH. The group has succeeded in developing an animal model of intraventricular hemorrhage in rabbit pups in which the hemorrhage evolves into white matter injury, similar to the preterm survivors of IVH. This model is being used for evaluating treatment avenues for both the prevention of IVH and neuroprotection after IVH.

In a recent study, Dr. Ballabh and his co-workers found that there is a rapid formation of new vessels in the part of the brain where IVH is initiated. Administering the drug celecoxib, which is commonly used to treat arthritis pain, reduced the formation of these blood vessels and substantially decreased the incidence of brain hemorrhage in the animal model. The study was funded by the National Institute of Neurological Disorders and Stroke (NINDS) and appeared in the journal *Nature Medicine*.

Selected Publications from last 5 years

Zia M, Csiszar A, Labinsky N, Hu F, Vinukonda G, LaGamma E, Ungvari Z, **Ballabh P**. Oxidative –Nitrosative Stress in a Rabbit Pup Model of Germinal Matrix Hemorrhage: Role of NAD(P)H Oxidase. *Stroke* 2009. In press.

Decastro M, El-Khoury N, Parton L, **Ballabh P**, LaGamma EF. Postnatal Betamethasone vs. Dexamethasone in Premature Infants with Chronic Lung Disease: A Pilot Study. *J Perinatol*. 2009;29:297-304.

Xu H, Hu F, Sado Y, Nonomiya Y, Borza, D, Ungvari Z, LaGamma E, Csiszar A, Nedergaard M, **Ballabh P**. Maturation Changes in Laminin, Fibronectin, Collagen IV and Perlecan in Germinal Matrix, Cortex and White Matter, and Effect of Betamethasone. *J Neurosci Res*. 2008;86(7):1482-500.

Csiszar A, Labinsky N, Podlutzky A, Kaminski PM, Wolin MS, Zhang C, Mukhopadhyay P, Pacher P, Hu F, deCabo R, **Ballabh P**, Ungvari A. Vasoprotective effects of resveratrol and SIRT1: attenuation of cigarette smoke-induced oxidative stress and proinflammatory phenotypic alterations, *Am J Physiol Hear Circ Physiol* 2008;294(6)LH2721-35.

Csiszar A, Labinsky N, Jo H, **Ballabh P**, Ungvari Z. Differential proinflammatory and prooxidant effects of bone morphogenetic protein-4 in coronary and pulmonary arterial endothelia cells. *Am J Physiol Hear Circ Physiol*. 2008;295(2):H569-77.

Georgiadis V, Xu M, Chua C, Hu F, Collins L, Huynh C, LaGamma E, **Ballabh P**. Characterization of Acute Brain Injuries and Neurobehavioral Profiles in a Rabbit Model of Germinal Matrix Hemorrhage. *Stroke* 2008;39(12):378-88.

Ballabh P, Xu H, Hu F, Braun A, Smith K, Rivera A, Lou N, Ungvari Z, Goldman SA, Csiszar A, Nedergaard M. Angiogenic inhibition reduces germinal matrix hemorrhage. *Nature Med*. 2007;13(4):477-485.

Braun A, Xu H, Hu, F, Kocherlakota P, Siegel D, Chander, P, Ungvari Z, Csiszar A, Nedergaard M, **Ballabh P**. Paucity of Pericytes in Germinal Matrix Vasculature of Premature Infants. *J Neurosci Res*. 2007;27(44):12012-24.

Csiszar A, Labinsky N, Zhao X, Hu F, Serpillon S, Huang Z, **Ballabh P**, Levy RJ, Hintze TH, Wolin MS, Austad SN, Podlutzky A, Ungvari Z. Vascular superoxide and hydrogen peroxide production and oxidative stress resistance in two closely related rodent species with disparate longevity. *Aging Cell* 2007;6(6):783-97.

El-Khoury N, Braun A, Hu F, Pandey M, Nedergaard M, La Gamma EF, **Ballabh P**. Astrocyte endfeet in germinal matrix, cerebral cortex and white matter in developing infants. *Pediatr Res*. 2006;59(5):673-9.

Ballabh P, Hu F, Kumarsiri M, Braun A, Nedergaard M. Development of tight junction molecules in germinal matrix, cerebral cortex and white matter in developing infants. *Pediatric Research* 2005;58(4):791-8.

Heather Brumberg, MD

- Perinatal public health (C)
- Breast feeding in the NICU (C)

Manuel DeCastro, MD

- Steroids in CLD (C)

College:	University of the Philippines	1987
Medical School:	Far Eastern University Medical Foundation, Manila, Philippines	1992
Residency:	Elmhurst Medical Center, Queens	1999
Fellowship	NYMC / Westchester Medical Center	2002
Pediatric Boards:		2001
Neonatal-Perinatal Boards:		2005

Dr. DeCastro is an Assistant Professor of Pediatrics at New York Medical College and Nursery Site-Director at the Orange Regional Medical Center. His clinical interest is comparing the postnatal use of betamethasone and dexamethasone in extremely low birth weight infants with evolving bronchopulmonary disease. Previous data has shown that the use of postnatal *BETA* showed a reduction in FiO₂ requirement comparable to *DEXA* in the 14d following initiation of treatment with less magnitude of metabolic side effects on serum glucose and daily weight change. There was no incidence of PVL in the *BETA* treated group. *BETA* has a slower rise in its peak blood levels, is a 50:50 acetate/phosphate mixture, crosses the blood-brain-barrier more slowly in animals and was used at a lower dose for a shorter duration than *DEXA*. These data suggest that short course *BETA* may be a more suitable therapy for evolving BPD.

Selected Publications from last 5 years

Decastro M, El-Khoury N, Parton L, Ballabh P, LaGamma EF. Postnatal Betamethasone vs. Dexamethasone in Premature Infants with Chronic Lung Disease: A Pilot Study. *J Perinatol.* 2009;29:297-304.

Sergio G. Golombek, MD

- RSV Prophylaxis with palivizumab (C)
- Micafungin vs. Amphotericin B Deoxycholate for the Treatment of Neonatal Candidiasis (C)
- Phase 3 Study of Thyroid Hormone in Extremely Premature Infants (C)

Medical School:	University of Buenos Aires	1983
Residency:	Raymond Blank Memorial Hospital for Children, Iowa Methodist MC	1993
Fellowship:	Children's Mercy Hospital, Kansas City	1996
Masters-Public Health:	New York Medical College	2002
Pediatric Boards:		1993
Neonatal-Perinatal Boards:		1997

Dr. Golombek is an Associate Professor of Pediatrics and Clinical Public Health at New York Medical College, and an Attending Neonatologist at the Regional Neonatal Center of the Maria Fareri Children's Hospital at Westchester Medical Center. He is the past president of the New York Perinatal Society, member of the American Academy of Pediatrics, the Society for Pediatric Research, the American Public Health Association and the Ibero-American Society of Neonatology. His research interests include the use of

inhaled nitric oxide in newborn babies (for pulmonary hypertension in term and late-term infants, and for prevention of chronic lung disease in preterm infants). He participated as a Site-PI in the NIH-sponsored trial “NO-CLD”, published in the New England Journal of Medicine in 2006 (Improved outcome with inhaled nitric oxide in preterm infants mechanically ventilated at 7-21 days of age. *N Engl J Med* 2006;355:1-11). He served as a co-PI with Dr. LaGamma in a National Institute of Neurological Disorders and Stroke (NINDS)-sponsored trial regarding supplementation of thyroid hormone to extremely low birth weight infants with transient hypothyroxinemia of prematurity – currently planning a Phase 3 study in the same area.

His interest in respiratory syncytial virus (RSV) has been shown in the organization and monitoring of a follow-up program of administration of Palivizumab prophylaxis for RSV for newborn infants at-risk for acquiring RSV disease. He has published in this area and has been interviewed many times for radio, newspapers and TV, both in Spanish and English. He has lectured extensively on these topics through Latin America.

Other responsibilities

WMC Pharmacy Committee
Chairman, New York Medical College IRB

Physiology & Bioethics Conferences
Neonatal Transport Liaison

Selected Publications from last 5 years

LaGamma EF, van Wassenaer A, Ares S, **Golombek S**, Kok J, Quero J, Hong T, Rahbar M, Morreale de Escobar G, Fisher D, Paneth N. A randomized phase 1 trial of four thyroid hormone regimens for transient hypothyroxinemia in neonates < 28 weeks gestation: the THOP 1 trial. *Pediatrics* 2009. In press.

Navarro M, Negre S, Diaz MC, Gasco B, **Golombek SG**, Vento M. Necrotising Enterocolitis as a consequent of the Use of Intravenous Immune Globulin for Newborn Hyperbilirubinaemia, *Acta Paediatrica* 2009. In press.

Rohan AJ, **Golombek SG**. Evaluation and Diagnosis of Hypoxia in the Term Newborn Infant: PART THREE: Sepsis and Hypotension, Neurologic, Metabolic and Hematologic Disorders – MCN, *The American Journal of Maternal Child Nursing*. In press.

Rohan AJ, **Golombek SG**. Evaluation and Diagnosis of Hypoxia in the Term New born Infant: PART TWO: Primary Pulmonary Disease, Airway Obstruction and Extrinsic Compression of the Lungs and Airway – MCN, *The American Journal of Maternal Child Nursing*. In press.

Rohan AJ, **Golombek SG**. Evaluation and Diagnosis of Hypoxia in the Term Newborn Infant: PART ONE: Cardio-Pulmonary Physiology and Assessment, Congenital Heart Disease, and Pulmonary Hypertension – MCN, *The American Journal of Maternal Child Nursing*, March-April 2009;34(2):30-37.

Sannoh S, Quezada E, Merer DM, Moscatello A, **Golombek SG**, Cystic hygroma and potential airway obstruction in a newborn: a case report and review of the literature. *Cases Journal*, 2009; 2:48.

Golombek SG, Sola A, Baquero H, Borbonet D, Cabanas F, Fajardo C, Goldsmit G, Lemus L, Miura E, Pellicer A, Perez JM, Rogido M, Zambosco G, van Overmeire B, and the First SIBEN Clinical Consensus Group: SIBEN's First Clinical Consensus: Diagnostic and Therapeutic Approach to the Patent Ductus Arteriosus in Preterm Infants. *Ann Pediatr (Barc)* 2008;69(5):454-81.

Golombek SG, Nonthyroidal illness syndrome and euthyroid sick syndrome in intensive care patients. *Semin Perinatol* 2008;32(6):413-8.

Ballard PL, Truog WE, Merrill JD, Gow A, Posencheg M, **Golombek SG**, Parton LA, Luan X, Cnaan A, Ballard RA. Plasma biomarkers of oxidative stress: relationship to lung disease and inhaled nitric oxide therapy in premature infants. *Pediatrics* 2008;121(3):555-61.

Truog WE, Ballard PL, Norberg M, **Golombek S**, Savani RC, Merrill JD, Parton LA, Cnaan A, Luan X, Ballard RA; Nitric Oxide (to Prevent) Chronic Lung Disease Study Investigators. Inflammatory markers and mediators in tracheal fluid of premature infants treated with inhaled nitric oxide. *Pediatrics* 2007; 119(4):670-8.

Ballard P, Merrill J, Truog W, Godinez R, Godenez M, McDevitt T, Ning Y, **Golombek S**, Parton L, Luan X, Cnaan A, Ballard R. Surfactant Function and Composition in Premature Infants Treated with Inhaled Nitric Oxide. *Pediatrics* 2007;122(2):346-53.

Golombek SG, van den Anker J, Rose K: Clinical Trials in Children - Ethical and Practical Issues. *Int J Pharm Med.* 2007;21(2):121-129.

Dejhalla M, Parton P, **Golombek SG**. Case Report of Haddad Syndrome in a Newborn with Congenital Central Hypoventilation Syndrome and Hirschsprung's Disease. *J Perinatol.* 2006;26:259-260.

Ballard RA, Truog WE, Martin RJ, Cnaan A, Ballard PL, Merrill JD, Durand DJ, Mayock DE, Eichenwald EC, Null DR, Hudak ML, Puri AR, **Golombek SG**, Courtney SE, Steward DL, Walsh MC, Welty SE, Phibbs RH, Hibbs AM, Luan X, Wadlinger SR, Asselin JM, Coburn CE for the NO CLD Study Group. Improved outcome with inhaled nitric oxide in preterm infants mechanically ventilated at 7-21 days of age. *N Engl J Med.* 2006;355:1-11.

Truog WE, **Golombek SG**. Principles of management of respiratory problems, in *Avery's Neonatology: Pathophysiology and Management of the Newborn*/edited by Mhairi G. MacDonald, Mary M.K. Seshia and Martha D. Mullet – Lippincott, Williams & Wilkins, Philadelphia, 6th Edition, 2005, pp 600-621.

Abdul Haleem, MD

- To determine whether measurement of tidal volume (TV) using bedside pulmonary graphics could assess the degree of hypoplasia and thus, predict survival in patients who are potential ECMO candidates (C)
- To determine whether using similar blood gas targets an “*Optimal FRC*” ventilation strategy (on-line ventilator graphics) is associated with lower levels of inflammatory mediators compared to conventional management (without graphics)

Medical School:	Sind Medical College, Karachi, Pakistan	1990
Residency:	Harlem Hospital/Columbia University	1998
Fellowship:	NYMC/Maria Fareri Children’s Hospital @ Westchester Medical Center	2005
Pediatric Boards:		1998
Neonatal-Perinatal Boards:		2008

Dr. Abdul Haleem is a Clinical Assistant Professor of Pediatrics at New York Medical College. He is a board certified Pediatrician and Neonatologist. Dr. Haleem completed his Pediatrics residency from Harlem hospital and his sub-specialty fellowship training in Neonatal-Perinatal Medicine at New York Medical College. He is an Attending Neonatologist at Montefiore North in the Bronx and St John’s Hospital in Yonkers, New York.

Dr. Haleem’s clinical interest is measuring bedside tidal volume by using pulmonary graphics in ECMO candidates. His serial and continuous bedside tidal volume (TV) results are consistent with previous reports using more elaborate pulmonary function testing for predicting survival in patients with hypoplastic lungs. He suggest that in the few days after birth, if daily TV measurements reveal values < 3 ml/kg, a formal pharmacological assessment of the magnitude of reversibility of pulmonary vascular resistance should be undertaken in order to help guide medical decision making.

Other responsibilities

Teaching neonatal fellows and medical students

Selected Publications from last 5 years

Haleem A, Zia MT, Mishra R, Parton LA, Stringel G, La Gamma EF. Bedside lung mechanics identifies the ability to survive in hypoplastic lung disease, submitted.

Joseph Hall, MD

- Pulmonary Hypertension (C)

College:	University of Maryland	1969
Medical School:	Harvard University Medical School	1977
Residency:	Boston City Hosp/University of MA	1980
Fellowship:	Medical College of Georgia	1983
Pediatric Boards:		1985
Neonatal-Perinatal Board Eligible		

Dr. Hall is an Assistant Professor of Pediatrics at New York Medical College and Site Director of the NICU at St. John's Riverside Medical Center in Yonkers, NY. With his extensive newborn intensive care and administrative management experiences he serves as a role model for new Attendings and fellowship trainees. He is also an aspiring novelist.

Other responsibilities

Editor, Fellowship Manual

Selected Publications from last 5 years

None

Soheir Haram-Mourabet, MD

- Central Line Related Infections (C)

College:	American University of Beirut, Lebanon	1983
Medical School	American University of Beirut, Lebanon	1987
Residency:	Westchester Medical Center	1992
Fellowship:	North Shore University Hospital	1996
Pediatric Boards:		1995
Neonatal Perinatal Boards:		1997

Dr. Haram-Mourabet is an Assistant Professor of Pediatrics at New York Medical College. She completed her pediatric residency training at Westchester Medical Center and her Neonatal Perinatal fellowship training at North Shore University Hospital.

She is an Attending Neonatologist at Montefiore-North Division where she serves as the Neonatal Perinatal fellowship coordinator.

Other responsibilities

Neonatal and Pediatric Quality Improvement Committees
Infection Control Committee
Pharmacy Committee

Selected Publications from last 5 years

None

Jordan Kase, MD

- Neurodevelopmental Outcomes of Premature Babies (C)
- Cause of preterm birth (C)

College:	George Washington University	1993
Medical School:	George Washington University	1998
Residency:	NYU Medical Center, NY	2001
Fellowship:	Columbia Presbyterian Hospital, NY	2004
Pediatric Boards:		2001
Neonatal-Perinatal Boards:		2005

Dr. Jordan Kase is a board certified Pediatrician and Neonatologist. He completed his residency training in Pediatrics from New York University Medical Center in 2001; and his sub-specialty fellowship training in Neonatology at New York Presbyterian Hospital Columbia Campus in 2004. He is also an Assistant Professor of Pediatrics at New York Medical College.

Dr. Kase works as a Neonatologist at Maria Fareri Children's Hospital at Westchester Medical Center and at Putnam Hospital Center. Dr. Kase dedicates most of his time as the Director of the Regional Neonatal Follow-up Program. He follows former preterm infants or any child at risk for developmental delay due to conditions relating to the newborn period.

Dr. Kase evaluates children until 3 years of age at each of five outpatient sites in White Plains, Valhalla, Middletown, Brewster, and Poughkeepsie. Dr. Kase's research interest centers upon long-term outcomes of former preterm infants, and specifically, late preterm infants (34-36 6/7 weeks of gestation).

Other responsibilities

Discharge Planning Materials for Parents

Selected Publications from last 5 years

Kalia J; Visintainer P; Brumberg H; Pici M; **Kase J**. The Comparison of enrollment in interventional therapies between late preterm (34 0/7- 36 6/7 weeks gestation) and Very Preterm (< 32 weeks gestation) Infants at 12 months Corrected Age. Pediatrics 2009; 123:804-09.

Kase JS, Visintainer P. The relationship between congenital malformation and preterm birth. J Perinat Med. 2007; 35(6):538-42.

Martin Katzenstein, MD

- No active research interests

College:	City College of NY	1973
Medical School:	New York Medical College	1978
Residency:	NY Hospital Cornell Medical Center	1981
Fellowship:	NY Hospital Cornell Medical Center	1984
Pediatric Boards:		1996
Neonatal-Perinatal Boards:		1999

Dr. Katzenstein is Clinical Director of Pediatrics and Neonatology at Montefiore Medical Center- North Division. He is also an Associate Clinical Professor of Pediatrics at New York Medical College and a board certified Neonatologist. He completed his residency in Pediatrics at NY Hospital Cornell Medical Center; and Neonatology at NYMC and Cornell.

Dr. Katzenstein was listed in New York's Magazine's "Top Doctors", and in The New York Times "Super Doctor's List for 2008." His research interests include "Gastrointestinal Disorders and Vitamin status of the premature infants." He was also

co-investigator of Department of Health and Human Services Maternal Child Health Research Program Grant, “Maternal Smoking and Micronutrient Anti oxidant Interaction in Mother and Newborn.”

Other responsibilities

Community activities

Chairman of Health and Hospitals for Bronx Community Board 8, Health and Hospital Committee

Selected Publications from last 5 years

None

Prabhakar Kocherlakota, MD

- GCSF and Neonatal Immunity (C)

Medical School:	Kurnool Medical College, India	1976
Residency:	St. Luke’s-Roosevelt Hospital, NY	1994
Fellowship:	SUNY, Stony Brook, NY	1997
Pediatric Boards:		1994
Neonatal-Perinatal Boards:		1997

Dr. Prabhakar Kocherlakota is a Clinical Assistant Professor of Pediatrics at New York Medical College, Attending Neonatologist at Maria Fareri Children’s Hospital, and Nursery Site-Director at the Elaine Kaplan Neonatal Intensive Care Unit of St. Luke’s Cornwall Hospital in Newburgh, as well as the Chairman of Pediatrics. Dr. Kocherlakota is interested in neonatal transport, neonatal resuscitation, hearing test, apnea, necrotizing enterocolitis (NEC), and cytokines.

Selected Publications from last 5 years

None

Xin Mei Li, MD

- Cellular Mechanisms of Pulmonary Artery Hypertension (B)

Medical School:	Beijing Medical University	1991
Residency:	Flushing Hospital and Medical Center	2005
Fellowship:	NYMC/Maria Fareri Children’s Hospital	2008
Pediatric Boards:		2008
Neonatal-Perinatal Board Eligible		

Dr. Xinmei Li is an Assistant Professor of Pediatrics at New York Medical College and an Attending Neonatologist at Maria Fareri Children’s Hospital and Phelps Memorial Hospital. Her research interest centers on pulmonary arterial hypertension (PAH) of the newborn. In collaboration with Dr. Susan C. Olson, Associate Professor and Researcher, Biochemistry and Molecular Biology at NYMC, Dr. Li dedicates most of her research time on the signal transduction pathways of PAH of the newborn. The current

research focus is to examine the role that endothelial STAT3 plays in the pathogenesis of PAH.

Selected Publications from last 5 years

Li J, Zhao X, **Li X**, Lerea KM, Olson SC. Angiotensin II Type 2 Receptor-Dependent Increase in Nitric Oxide Synthase Expression in Pulmonary Endothelium is Mediated via a Gai3/Ras/Raf/MAPK Pathway. *Am J Physiol Cell Physiol.* 2007;292(6):C2185-C2196.

Glenn Mendoza, MD

- Developmental Outcomes (C)
- Bilirubin (C)
- Pediatric Advanced Life Support (C)
- Late Preterm Infants (C)

College:	University of the Philippines	1972
Medical School:	University of the Philippines	1976
Residency:	Jewish Hospital & Medical Center, Bklyn, NY	1983
Fellowship:	Mt. Sinai Hospital & Medical Center, NY	1985
Post Doc:	NYMC School of Public Health, PhD	1995
Pediatric Boards:		1985
Neonatal-Perinatal Board Eligible		

Dr. Mendoza is a Clinical Associate Professor of Pediatrics at New York Medical College; and Director of Neonatology and the Neurodevelopmental Follow-up Program at Good Samaritan Hospital in Suffern, NY. He also serves the lower Hudson Valley area as the Director of the Regional Pediatric Advanced Life Support Program.

Dr. Mendoza is the current president of the Pediatric Society of Rockland County. He has been in the Castle Connolly Top Doctors in the NY Metropolitan Area since 1992 and has been selected as one of “America’s Top Pediatricians”.

Other responsibilities

Good Samaritan Hospital Perinatal Committee
Rockland County Department of Health Youth Bureau

Selected Publications from last 5 years

None

Myra E. Mercado, MD

- Access to Healthcare (C)

College:	University of Miami	1979
Medical School:	Universidad Central Del Este, Dominican Republic	1982
Residency:	Lincoln Hospital Medical Center, Bronx	1989
Fellowship:	New York University, NY	1996
Pediatric Boards:		1995
Neonatal-Perinatal Board Eligible		

Dr. Myra Mercado is a Clinical Assistant Professor of Pediatrics at New York Medical College. She completed her residency training at Lincoln Medical and Health Center and received her neonatal fellowship training at New York University Medical Center. She is an Attending Neonatologist at Maria Fareri Children's Hospital, Montefiore North and is the site Director for newborn services at Phelps Memorial Hospital.

Dr. Mercado is currently involved in administrative as well as teaching activities for fellows and nurses. She has an interest in medical care of the Hispanic population and is currently involved in a clinical research project related to evaluation of sepsis in newborns.

Selected Publications from last 5 years

None

Vanessa Mercado, MD

- Comparison of the inflammatory response resulting from the administration of Curosurf and Survanta to premature infants requiring mechanical ventilation for respiratory distress syndrome (C)

College:	De La Salle University	1898
Medical School:	De La Salle University College of Medicine	1993
Residency:	Westchester Medical Center, Valhalla, NY	2003
Fellowship:	NYMC/Maria Fareri Children's Hospital	2006
Pediatric Boards:		2005
Neonatal-Perinatal Board Eligible		

Dr. Vanessa Mercado is an Assistant Professor of Pediatrics at New York Medical College. She completed her Pediatric residency and Neonatal/Perinatal fellowship training at the Maria Fareri Children's Hospital at Westchester Medical Center. She also served as Chief Fellow for the Neonatal Program encompassing activities for 12 fellows. She devotes most of her time as an Attending Neonatologist at Phelps Memorial Hospital where she is involved in fellowship education as well as nursing education of well and sick newborns.

Dr. Mercado has conducted research with Dr. Lance Parton and has a research interest in comparing different types of natural surfactants and their affect on the pulmonary inflammatory response in extremely low birth weight neonates.

Selected Publications from last 5 years

None

Bistra B. Nankova, PhD

- Dietary factors and responses to stress (B)
- Environmental factors in the regulation of catecholamine biosynthesis (B)
- SCFA as modulators of cholinergic neurotransmission: potential contributors for hypoglycemia associated autonomic failure? (B)

- Genetic Networks Regulated by Dietary-Derived Short Chain Fatty Acids: a clue to Autism (B)

College:	Sofia State University, Sofia, Bulgaria	BS, MS	1974
Post Grad:	Institute of Molecular Biology, Sofia, Bulgaria	Ph.D	1980

Dr. Nankova is an Associate Professor in Pediatrics, Biochemistry and Molecular Biology at New York Medical College and Director of the Developmental Neuroscience Research Laboratory. She is a member of the Society for Neuroscience and the NYMC Radiation Safety Committee (2007-2009). The major focus of the laboratory is regulation of neurotransmitter related genes with particular interest in the role of diet-derived short chain fatty acids (SCFA) in normal human physiology and disease. Blood levels of SCFA like butyrate arise primarily from ingesting complex carbohydrates that are later fermented by bacteria normally present in the intestine. These fermentation byproducts get absorbed into the blood stream in levels sufficient to alter gene expression in remote tissues throughout the body, including peripheral and central nervous system. At birth, bacterial flora are typically acquired from the mother and may vary in type or amount throughout life depending on diet, ingested organisms or use of antibiotics. At least three categorical processes are involved in creating the biological effects of SCFA: chromatin remodeling, *cis*- and *trans*-acting butyrate-dependent factors that regulate transcription of specific genes and regulation of mRNA stability.

We have shown that the production of the neurotransmitters dopamine, epinephrine and norepinephrine, is affected by SCFA in a dose-dependent manner in a tissue culture cell model. Given the higher incidence of autism after intrauterine exposure to elevated plasma SCFA following ethanol consumption, valproate therapy, or in infants of diabetic women, and the elevated monoamine concentration in the brain and blood of ASD patients we hypothesized that SCFA may directly influence brain catecholaminergic pathways. In collaboration with Dr. MacFabe (Canada) we are developing an animal model of autism to enable detection of ASD-relevant genetic networks regulated by SCFA and help identify potential novel targets for clinical intervention and future research. The studies employ a multidisciplinary approach using behavioral, biochemical, recombinant genetics and genome-wide expression profiling techniques.

Another venue of investigation relates to hypoglycemia associated autonomic failure (HAAF), a frequent complication of insulin-dependent diabetic patients, is characterized by attenuated sympathoadrenal responses to falling plasma glucose concentrations induced by recurrent hypoglycemia. The clinical impact of HAAF including its reversal by avoidance of hypoglycemia is well established, but its mechanisms are largely unknown. Our prior observations suggested that elevated SCFA alone or in combination with trans-synaptic activity may down regulate catecholamine biosynthesis and content; an interpretation consistent with the failure of the adrenal medulla to release epinephrine as a compensation for the low blood sugar following recurrent episodes of hypoglycemia typical of HAAF. Since changes in fatty acid metabolism occur as part of the counter-regulatory responses to hypoglycemia, we will examine whether modulation cholinergic neurotransmission by partial nicotinic receptor

agonists may preserve the epinephrine responses during hypoglycemia yielding important public health implications as translational therapy.

Selected Publications from last 5 years

D'Souza A, Onem E, Patel P, LaGamma EF, **Nankova BB**. Valproic acid regulates catecholaminergic pathways by concentration-dependent threshold effects on TH mRNA synthesis and degradation. *Brain Res.* 2009; 1247 (1) 1-10.

Parab S, **Nankova BB**, La Gamma EF. Differential regulation of the tyrosine hydroxylase and enkephalin neuropeptide transmitter genes in rat PC12 cells by short chain fatty acids: concentration-dependent effects on transcription and RNA stability. *Brain Res.* 2007; 1132(1):42-50.

Shah P, **Nankova BB**, Parab S, La Gamma EF. Short chain fatty acids induce TH gene expression via ERK-dependent phosphorylation of CREB protein. *Br Res* 2006, 1107: 13-23.

DeCastro M, **Nankova BB**, Shah P, Patel P, Mally PV, Mishra R and La Gamma EF. Short chain fatty acids regulate tyrosine hydroxylase gene expression through cAMP-dependent signaling pathway, *Molec Br Res* 2005, 142:28-38.

Patel P, **Nankova BB**, and La Gamma EF. Butyrate, a gut-derived environmental signal, regulates tyrosine hydroxylase gene expression via a novel promoter element, *Develop Br Res* 2005, 160:53-62.

Lance A. Parton, MD

- Genetic Foundations of Bronchopulmonary Dysplasia (C) & (B)
- Genetic foundations for the responsiveness of preterm infants with patent ductus arteriosus to medical treatment with ibuprofen
- Response to albuterol is determined by β_2 adrenergic receptor polymorphisms in infants with RSV bronchiolitis
- Comparison of the inflammatory response resulting from the administration of Curosurf and Survanta to premature infants requiring mechanical ventilation for respiratory distress syndrome (C)
- Cytokine production in nasal and tracheal aspirates in infants with Respiratory Syncytial Virus Bronchiolitis (C) & (B)
- Tumor necrosis factor alpha (TNFa) polymorphism and preterm premature rupture of the membranes (PPROM) (C) & (B)
- Role of apoptosis in prematurity, intrauterine growth retardation, and cervical shortening (C) & (B)
- Genetic Foundations of Autism (C) & (B)
- Effects of Music Therapy Interventions for Pre-mature Infants: A Multi-Site Study (C)

College:	University of California, Berkeley, CA	1973
Medical School	New York Medical College	1980

Internship:	Georgetown Univ. Hospital, Washington, DC	1981
Residency:	Childrens Hospital of Los Angeles	1983
	Chief Resident in Pediatrics	1984
Fellowship	Childrens Hospital of Los Angeles, Neonatal & Peds Pulmonology	1987
Post Doc:	SUNY, Stony Brook, NY, Dept. of Pharmacological Sciences	1990
Pediatric Boards:		1985
Neonatal-Perinatal Boards:		1991

Lance A. Parton, MD, FAAP, is Professor of Pediatrics, Obstetrics and Gynecology and Anesthesiology at New York Medical College and Maria Fareri Children's Hospital at Westchester Medical Center. His research investigates the genetic foundations of conditions that contribute to prematurity as well as the complications of prematurity. Specifically, his laboratory has investigated the role of single nucleotide polymorphisms (SNPs) in the development of preterm prolonged rupture of membranes (PPROM), intrauterine growth retardation (IUGR), and preeclampsia in collaboration with Obstetrics and Maternal Fetal Medicine. The complications of preterm infants such as bronchopulmonary dysplasia (BPD) and patent ductus arteriosus (PDA) are also active areas of investigation. Susceptibility to respiratory syncytial virus (RSV) bronchiolitis as well as variability of responsiveness to albuterol in infants with RSV bronchiolitis has been undertaken in collaboration with Pediatric Pulmonology. Studies of the genetic foundations for autism were performed in collaboration with General Pediatrics. Clinical areas of investigation include comparative studies of surfactants, high frequency ventilation, and exhaled nitric oxide in ventilated preterm infants, as well as the effects of music therapy on preterm infants, the latter in collaboration with music therapist Laurie Park.

Other responsibilities

Associate Director of RNICU	Resident Education Committee
Liaison with Anesthesiology	Research OB/MFM
Director, Lab for Personalized Medicine	NYMC Admissions Committee
Critical Care Sub-committee of WMC	Medical Student Electives
Medical Operations Committee MFCH	Fellows' Orientation Program
Executive Curriculum Committee NYMC	Faculty Senate
Credentials Committee WMC	

Selected Publications from last 5 years

Haleem A, Zia MT, Mishra R, **Parton LA**, Stringel G, La Gamma EF. Bedside lung mechanics identifies the ability to survive in hypoplastic lung disease, submitted.

Harrington JW, Colson S, Law S, Sanner IL, Crestea IA, Strassberg S, **Parton LA**. The single nucleotide polymorphism for IL8 (-251), but not TNF α (-308) is associated with Autistic Spectrum Disorder, submitted.

Robinson R, Hsu C-D, Chesebro A, Nguyen J, Noorjahan A, Maramreddy H, **Parton LA**. A single nucleotide polymorphism of the maternal Fas gene is associated with Intrauterine Growth Retardation, submitted.

Banquet A, Amin N, Welter JJ, Dozor AJ, Ali N, Pham C, Koai E, **Parton LA**. The Single Nucleotide Polymorphism Arg/Gly-16 in the β_2 -Adrenergic Receptor Gene Influences Responsiveness to Albuterol in Infants with RSV Bronchiolitis, submitted.

Decastro M, El-Khoury N, **Parton L**, Ballabh P, LaGamma EF. Postnatal Betamethasone vs. Dexamethasone in Premature Infants with Chronic Lung Disease: A Pilot Study. *J Perinatol*. 2009;29:297-304.

Ballard PL, Truog WE, Merrill JD, Gow A, Posencheg M, Golombek SG, **Parton LA**, Luan X, Cnaan A, Ballard RA. Plasma biomarkers of oxidative stress: relationship to lung disease and inhaled nitric oxide therapy in premature infants. *Pediatrics*. 2008;121(3):555-61.

Truog WE, Ballard PL, Norberg M, Golombek S, Savani RC, Merrill JD, **Parton LA**, Cnaan A, Luan X, Ballard RA; Nitric Oxide (to Prevent) Chronic Lung Disease Study Investigators. Inflammatory markers and mediators in tracheal fluid of premature infants treated with inhaled nitric oxide. *Pediatrics* 2007;119(4):670-8.

Strassberg SS, Cristea IA, Qian D, **Parton LA**. Single nucleotide polymorphisms of tumor necrosis factor-alpha and the susceptibility to bronchopulmonary dysplasia. *Pediatr Pulmonol*. 2007;42(1):29-36.

Ballard P, Merrill J, Truog W, Godinez R, Godenez M, McDevitt T, Ning Y, Golombek S, **Parton L**, Luan X, Cnaan A, Ballard R. Surfactant Function and Composition in Premature Infants Treated with Inhaled Nitric Oxide. *Pediatrics*. 2007; 12(2):346-53.

Parton L, Strassberg S, Qian D, Galvin-Parton P, Cristea I. "The Genetic Basis for Bronchopulmonary Dysplasia." *Front Biosci*. 2006; 1:1854-1860.

Fuks A, **Parton LA**, Polavarapu S, Netta D, Strassberg S, Godi I, Hsu C-D. Polymorphism of Fas and Fas ligand in preterm premature rupture of membranes in singleton pregnancies. *Am J Obstet Gynecol* 2005; 193(3):1132-6.

Kakker DK, Siddiq MM, **Parton LA**. Interleukin-1 balance in the lungs of preterm infants who develop bronchopulmonary dysplasia. *Biol Neonate* 2005; 87:82-90s.

Boriana Parvez, MD

- Short Bowel Syndrome: Incidence, Morbidity, Mortality and Predictive Factors for Survival (C)
- Coxsackie Virus Infection in Newborn: An Important New Cause of Significant Pulmonary and Neurologic Dysfunction (C)
- Prostacyclin for refractory PPHN (C)
- Gut Priming and Neonatal Adaptation to Enteral Nutrition in the Micropremie: The effect of Protein Type on Feeding Advancement and Growth Rate (C)
- Prevention of nosocomial and line sepsis (C)
- Extended use of UVC (C)

Medical School:	Medical Academy, Sofia, Bulgaria	1985
Residency:	Long Island College Hospital, Brooklyn, NY	1996
Fellowship:	SUNY, Stony Brook, NY	1999
Fellowship:	Hospital for Sick Children, Toronto, CA	2001
Pediatric Boards:		1996
Neonatal-Perinatal Boards:		2003

Dr. Parvez is an Assistant Professor of Pediatrics at New York Medical College and Maria Fareri Children’s Hospital. Her primary research interest includes prevention of nosocomial sepsis and investigating the risk factors leading to short bowel syndrome and the various management strategies to treat this disease. She holds university and industry sponsored research grants.

Dr. Parvez takes great interest in the education and mentoring of the Neonatal Fellows and medical students. She is actively involved in the development of the Fetal Care Center. She is also a faculty member of the International Neonatal Fellowship program. In this capacity, she teaches Fellows at Fudan University in Shanghai, China.

Other responsibilities

Fellowship Training & Policy Manual	Credentialing Program
Fellowship Recruitment	Medical Operations Committee
Graduate Medical Education Committee	Residents Education Committee
Fellows’ Conference Mentor	Fellowship Program Coordinator

Selected Publications from last 5 years

Maramreddy H, Fisher J, Slim MS, LaGamma EF, **Parvez B**. Delivery of Gastroschisis Patients Before 37 Weeks Gestation is Associated with Increased Morbidities. J Ped Surg 2009 Accepted.

Morag I, Epelman M, Daneman A, Moineddin R, **Parvez B**, Schechter T, Hellman J. Portal vein thrombosis in the neonate: risk factors, course, and outcome. J Pediatr 2006; 148(6): 735-39.

Taddio A, Lee C, Yip A, **Parvez B**, McNamara PJ, Shah V. Intravenous morphine and topical tetracaine for treatment of pain in (corrected) neonates undergoing central line placement. JAMA 2006; 15;295(7):793-800. Erratum in: JAMA 2006 5;295(13):1518.

Eulmesekian P, Cutz E, **Parvez B**, Bohn D, Adatia I. Alveolar capillary dysplasia: a six year single center experience. J Perinat Med. 2005; 33(4):347-552.

Michael O. Petrella, MD

- Perfusion and tissue hypoxia in newborns (C)
- Late pre-term outcomes (C)
- Newborn resuscitation and delivery room care (C)

College:	Boston College	1993
Medical School:	St. George’s University School of Medicine, Grenada, WI	1998

Residency:	Jersey Shore University Medical Center, NJ	2002
Fellowship:	Morgan Stanley Children's Hospital of NY, Columbia University Medical Center	2008
Pediatric Boards:		2002
Neonatal-Perinatal Board Eligible		

Michael O. Petrella, MD, is an Assistant Professor of Pediatrics at New York Medical College who is board certified in Pediatrics and board eligible in Neonatology. Dr. Petrella is currently an Attending Neonatologist at Good Samaritan Hospital in Suffern, NY which is part of the regional network of the Maria Fareri Children's Hospital and Westchester Medical Center.

His research interests include perfusion and alterations of blood flow and oxygen delivery to the tissues in premature infants and term newborns. He has studied perfusion post-operatively using newer technologies such as near-infrared spectroscopy and visible light spectroscopy in term neonates with congenital heart disease who have undergone surgical repair. Dr. Petrella hopes to expand his studies of perfusion and hypoxia to include late pre-term and term newborns in an effort to monitor alterations in blood flow and predict hypoxic events non-invasively and before significant neurodevelopmental impairments occur.

Other responsibilities

Good Samaritan Hospital Pharmacy Committee

Selected Publications from last 5 years

None

Stephen Piazza, MD

- Neonatal Follow-up of Drug Exposed Fetus

College:	Long Island University, Bklyn, NY	1972
Medical School:	Guadalajara Medical School, Mexico	1976
Residency:	Kings County Hospital, Brooklyn, NY	1978
	North Shore University Hospital, L.I.	1981
Fellowship:	North Shore University Hospital, L.I.	1983
Board Eligible		

Dr. Stephen Piazza is an Assistant Clinical Professor at New York Medical College and has been affiliated with Westchester Medical Center since 1981. He serves as the NICU Site-Director at Sound Shore Medical Center in New Rochelle, New York. He has shown interest in the treatment and follow-up of infants from mothers who have suffered from substance abuse and has been following these infant since coming to Westchester Medical Center. He conducts investigation and research in treatment of these infants and their outcome; as well as finding new avenues of treatment, e.g., acupuncture for signs of withdrawal.

Other responsibilities

Teaching neonatal fellows and medical students

Selected Publications from last 5 years

None

Sonya Strassberg, MD

- Single Nucleotide Polymorphisms and Risk of Chronic Lung Disease (B)

College:	Tufts University	1994
Medical School:	UMDNJ-New Jersey Medical School NJ	1998
Residency:	Atlantic Health Systems, Morristown, NJ	2001
Fellowship:	New York Medical College/WMC	2004
Pediatric Boards:		2001
Neonatal-Perinatal Boards:		2005

Sonya Strassberg, MD, FAAP, is an Assistant Professor in the Department of Pediatrics at New York Medical College. She has studied the association of proinflammatory markers and premature lung disease. Specifically, she is investigating a link between patients' genetic code and their risk for developing chronic lung disease of the newborn.

Selected Publications from last 5 years

Harrington JW, Colson S, Law S, Sanner IL, Cristea IA, **Strassberg S**, Parton LA. The single nucleotide polymorphism for IL8 (-251), but not TNF α (-308) is associated with Autistic Spectrum Disorder, submitted.

Strassberg SS, Cristea IA, Qian D, Parton LA. Single nucleotide polymorphisms of tumor necrosis factor-alpha and the susceptibility to bronchopulmonary dysplasia. *Pediatr Pulmonol.* 2007; 42(1):29-36.

Parton L, **Strassberg S**, Qian D, Galvin-Parton P, Cristea I. "The Genetic Basis for Bronchopulmonary Dysplasia." *Front Biosci.* 2006; 1:1854-60.

Fuks A, Parton LA, Polavarapu S, Netta D, **Strassberg S**, Godi I, Hsu C-D. Polymorphism of Fas and Fas ligand in preterm premature rupture of membranes in singleton pregnancies. *Am J Obstet Gynecol* 2005; 193(3):1132-6.

Alice Valencia-Castillo, MD

- Long-term Neurodevelopmental Outcome (C)

College:	University of the East, Manila, Philippines	1984
Medical School:	University of the East, Manila, Philippines	1988
Residency:	Metropolitan Hospital Center, New York	1996
Fellowship:	New York Medical College/WMC	1999
Pediatric Boards:		1996
Neonatal-Perinatal Boards:		1999

Dr. Alice Valencia-Castillo is an Assistant Professor in the Department of Pediatrics at New York Medical College. She is one of the dedicated Neonatologists

serving the mid- and late premature infants at Sound Shore Medical Center, New Rochelle, NY. She has great interest in infants of diabetic mothers and looks forward to conducting research specifically in the long term outcomes of infants of diabetic mothers.

Selected Publications from last 5 years

None

Muhammad Zia, MD

- **Free Radical Mediated Brain Damage (B)**

Medical School:	Sind Medical College, Karachi, Pakistan	1987
Residency	Brookdale University & Medical Center, Brooklyn, NY	1999
Fellowship:	New York Medical College/WMC	2003
Pediatric Boards:		2007
Neonatal-Perinatal Boards:		2008

Dr Muhammad Zia is an Assistant Professor of Pediatrics at New York Medical College. He is the Site-Director at Hudson Valley Hospital Center's affiliated program. His research is focused on "free radical generation in brain of premature infants with intraventricular hemorrhage (IVH)". Oxidative stress resulting from IVH is known to cause brain injury in premature infants. Dr. Zia and his colleagues are unlocking the mechanisms of free radical production after IVH in these infants and thus, are utilizing mechanism-based strategies to prevent brain damage by suppressing oxidative stress. His group has exploited a rabbit model of IVH to test neuroprotective strategies to prevent brain damage attributed to excess free radical generation.

In a recent study, Dr. Zia and his associates observed that NADPH enzyme (free radical generator enzyme) has key roles in generation of free radicals and suppression of this enzyme by apocyanin reduced the brain damage caused by IVH. Dr Zia's research is supported by Castle Krob Fund of New York Medical College and his work is under review in a high impact journal.

Selected Publications from last 5 years

Haleem A, **Zia MT**, Mishra R, Parton LA, Stringel G, La Gamma EF. Bedside lung mechanics identifies the ability to survive in hypoplastic lung disease, submitted.

Zia M, Csiszar A, Labinsky N, Hu F, Vinukonda G, LaGamma E, Ungvari Z, Ballabh P. Oxidative –Nitrosative Stress in a Rabbit Pup Model of Germinal Matrix Hemorrhage: Role of NAD(P)H Oxidase. Stroke 2009. In press.

Division of Newborn Medicine Research Support

Principal Investigator	Funds	Dates	Account Name
Ballabh, P	\$10,000	2008-2009	Effects of Hyperoxia on Germinal Matrix Hemorrhage (NYMC)
	\$180,000	2007-2009	Neuroprotective Roles of Postnatal Celecoxib (Pfizer)
	\$100,000	2007-2009	Role of Integrins in Germinal Matrix Hemorrhage (UCP)
	\$435,000	2006-2007	Pericytes in Pathogenesis of Germinal Matrix Hemorrhage (NIH)
	\$121,000	2005-2006	Development of a Premature Rabbit Pup Model of IVH (Q Therapeutics)
Brumberg, H	\$2,000	2009	Quality improvement collaborative "Updates on the MOD Prematurity Report Card: A Hudson Valley Regional Response (MOD)
	\$350,000	2006-cont.	Children's Hospital Foundation (CHF): Regional Perinatal Forum
	\$1,050,000	2006-2011	Lower Hudson Valley Perinatal Network
	\$160,000	2006-2009	Westchester County Invest in Kids Program Grant, "Healthy from Birth for Life Program"
	\$111,125	2005-2007	Developing the Lower Hudson Valley Perinatal Network (MOD)
	\$120,000	2005-200	Preventing premature deliveries through regional collaborative perinatal public health initiative (ECRIP)
	\$75,000	2004-2005	Creating a perinatal network for Dutchess, Putnam, Rockland and Westchester counties (MOD)
	\$150,000	2002-2006	NYS Dept of Health Regional Perinatal Center Program Grant WMC (NYS DOH)
Golombek, SG	\$56,000	2002-2003	Synagis (MedImmune)
	\$30,000	2002-2008	Low Dose Inhaled Nitric Oxide for Prevention and Treatment (NIH)
	\$10,000 max per subject	2009-2012	Micafungin for Neonatal Candidiasis (Astellas) Enrollment not commenced as of April 2009; estimated enrollment is 1-2 patients per year.
Kase, JS	\$22,000	2004-contin.	March of Dimes

Principal Investigator	Funds	Dates	Account Name
Parton, L (cont'd)	\$120,000	2005-2007	Genetic factors that increase the susceptibility to Respiratory Syncytial Virus bronchiolitis (ECRIP)
	\$30,000	2002-2006	Cytokine Production in Nasal and Tracheal Aspirates (MedImmune)
	\$25,000	2002-2006	Comparison of the Inflammatory Response (Dey Labs)
	\$21,000	2003-2005	Randomized, Double-blinded study of Ibuprofen L-Lysine IV solution in premature infants for treatment of PDA (Farmacon)
	\$30,000	2001-2005	Inhaled Nitric Oxide in the Prevention of CLD (NIH)
	\$10,000	2000-2001	A multi-center randomized, controlled trial comparing safety...with Surfaxin to standard care for treatment...in newborns (Discovery Labs)
	\$10,000	2000-2002	Targeted Pulmonary Gene Therapy to Prevent CLD of Infancy (NYMC)
	\$5,000	2000-2003	Pulmonary Cytokines following the use of different surfactant preparations (Forrest Laboratories)
	\$15,000	1998-2003	Early Non-tidal versus Tidal Ventilation Study in VLBW Infants (Neonatal Ventilator Study Group)
Parvez, B	\$11,000	2009-cont.	Omegaven for the Management of Short Bowel Syndrome (Div of Neonatology/
	\$6,000	2009-cont.	Prenatal Erythromycin and Feeding Intolerances in ELBW infants (NYMC)
	\$6,000	2008-cont.	CLABSI: Central Line Associated Blood Stream Infection (MFCH)
	\$52,650	2008-cont.	Tissue Saturation in VLBW Infants (Somanetics)
	\$62,700	2008-cont.	VLS for Measurement of Intestinal Hypoxia (Spectros Corp)
	\$88,050	2007-2008	A Multi-center Safety Study of Pantoprazole Delayed Release (Wyeth)
	\$4,000	2005-cont.	CLABSI: Central Line Associated Blood Stream Infection (NYS DOH)
	\$32,250	2004-2006	Veronate Study for Prevention of MRSA sepsis in VLBW Infants (Inhibitex)
Zia, M	\$10,000	2007-2008	Inhibition of Oxidative Stress in a Premature Rabbit (NYMC)
<i>Grants and dollar amounts listed represent actual funds received.</i>			

Department of Pediatrics Division of Newborn Medicine

Summary of Vital Statistics for Faculty of 25

	Year	#
Number of Peer Reviewed Faculty Publications	2005	10
	2006	15
	2007	16
	2008	13
	2009	27
Number of peer-reviewed publications in last 5 years by Faculty	21	EF LaGamma
	15	SG Golombek
	12	LA Parton
	11	P Ballabh
	5	BB Nankova
	4	B Parvez
	3	S Strassberg
	2	H Brumberg, J Kase. M Zia
	1	M Ahmad, M DeCastro, A Haleem, X Li
0	G Alpan, J Hall, S Haram, M Katzenstein, P Kocherlakota, G Mendoza, M Mercado, V Mercado, M Petrella, S Piazza, A Valencia	
Fellowship Training Institutions	Cornell Childrens Hospital, LA Children’s Mercy, Kansas City Columbia Presbyterian, NY Medical College of Georgia Mt. Sinai, NY North Shore University Hospital New York University New York Medical College Stony Brook University of California Yale University	
“Best Doctors” designation	Golombek, Katzenstein, LaGamma, Mendoza	