FELLOWSHIP TRAINING PROGRAM IN NEONATOLOGY

The Albany Medical Center

The Albany Medical Center is the regional academic health science center of northeastern New York. Comprised of the Albany Medical Center Hospital and the Albany Medical College, the Albany Medical Center provides tertiary patient care and is the seat of medical education and biomedical research for a 24-county region serving nearly 2 million people. The Children's Hospital at Albany Medical Center houses our 50 bed Neonatal Intensive Care Unit (NICU); construction has begun on a new 60-bed NICU.

The Children's Hospital at Albany Medical Center

The Children's Hospital at Albany Medical Center is a "hospital within a hospital" providing care and expertise in pediatric medical and surgical subspecialties. The Children's Hospital includes the NICU, which admits over 750 neonates each year and a 61-bed inpatient unit with 2400 admissions annually; there is 15-bed PICU and a Pediatric Cardiac Surgery Program. The emergency department has 9,000 pediatric visits per year. The Department of Pediatrics, chaired by David Clark, M.D., has over 40 faculty members and an accredited 3-year pediatric residency program as well as 4-year combined training program in Internal Medicine and Pediatrics.

The Neonatal/Perinatal Program

The Albany Medical Center Neonatal/Perinatal Program is the regional referral center for high risk obstetrical patients and critically ill neonates for an area with 30,000 births per year. The Albany Medical Center has ~2500 births annually, with high risk patients accounting for approximately 40%. The Department of OB/GYN has an active high-risk obstetrical service which accepts over 600 maternal transports while neonatology provides ground and air transport services for about 300 neonates each year. Neonatology staff/fellows provide prenatal consultation to most high-risk families.
The NICU is covered by 9 neonatologists on the faculty of the Department of Pediatrics. All are actively involved in patient care activities and teaching, and have diverse clinical, research and administrative interests and responsibilities. A team approach to patient care incorporates the expertise of the highly skilled NICU nursing staff (including Neonatal Nurse Practitioners), the NICU family care coordinator and social worker, residents as well as the neonatal fellow and attending staff. A major emphasis is placed on the education of house officers from pediatrics, Med/Peds, family practice and anesthesia residency programs.

The full term nursery, managed by the general pediatric service and area pediatricians admits about 2000 newborns each year. The neonatology service provides consultative coverage to the full term nursery for acute clinical problems.

**The Neonatology Fellowship Program**

The Division of Neonatology at Albany Medical Center offers a fully-accredited 3-year neonatology fellowship program, last accredited in 2008. The program aims to provide a well-balanced education in the competencies of clinical neonatology and clinical or basic science research. Importantly, the **clinical service is not fellow-dependent for its function**, allowing fellows substantial scheduling flexibility to meet their educational needs.

The **first year** focuses on acquisition of clinical expertise, selection of a faculty mentor, familiarization with ongoing clinical research projects, identification of a research mentor, and selection of a Scholarship Oversight Committee (SOC). Clinical outcomes research and multiple quality improvement projects are possible with a customized NICU database, as well as through participation in NY State's Regional Perinatal Data System and the Vermont-Oxford Network.

The **2nd and 3rd years** include **substantial protected time for research**. Clinical and basic science research opportunities is provided by the faculty in neonatology and the basic science and clinical faculty in other disciplines. There is particular depth in areas of vascular biology such as vascular injury and regulation of vasomotor tone, and in clinical outcomes research. Alternatively, fellows may pursue a clinical research track, with the opportunity to enroll in the Master’s Program in Clinical Bioethics at Albany Medical Center, or the Master of Public Health program at SUNY – Albany, School of Public Health. The fellowship program has one fellow position per year.

**Clinical Experience**

The NICU at Albany Medical Center is the **only State-designated Level IV Regional Perinatal Center in the area**. The 50 bed NICU unit is divided into 31 intensive care beds and a 19-bed intermediate care nursery. The NICU uses a philosophy of family-centered care, and includes technological capabilities such as high-frequency oscillation and jet ventilation, and nitric oxide therapy.

Together with the on-service attending
neonatologist, fellows conduct morning work rounds, supervising and teaching the housestaff who rotate through the NICU. Fellows' responsibilities are gradually increased during the training program. During the 2nd and 3rd years, fellows spend at least one clinical service month as a "co-attending".

**On-call schedule:** every 5th night during the first year and every 6th night in the second and third years of training, all with in-house attending coverage.

Fellows participate in the clinical research studies in progress in the NICU. They are also expected to develop clinical research and/or quality improvement projects of their own. Assistance in study design, protocol submission, project execution, data analysis as well as publication submission is provided by the neonatal faculty and Research Nurse Coordinators. Fellows are members of the NICU QIT (Quality Improvement Team), participate in meetings and learn quality management techniques, including **computer database administration and analysis**, as part of practice-based learning.

A **Cardiology and Cardiothoracic Surgery rotation** in the 2nd or 3rd years supplements the experience acquired during NICU rotations. Fellows round on neonates with pre- and post-operative congenital heart disease, with the Pediatric Cardiologists, Cardiothoracic Surgery team, and Pediatric Intensivists. They also participate in prenatal and postnatal consultations, attend catheterizations and the weekly congenital heart disease conference. The curriculum includes basic instruction on functional echocardiography.

The **Newborn Follow-up Program** is under the direction of Anthony Malone, M.D., Clinical Associate Professor and Director of Child Development. Fellows participate in follow-up clinic at least one Monday each month, and may elect to use a substantial part of their time in research projects or acquisition of expertise in neonatal development and follow-up.

**Teaching Conferences**
Weekly teaching conferences include:

- **Neonatology Conference** - a rotating schedule of Journal Club, M&M review, developmental physiology topics, and research updates by second and third year fellows and neonatology or guest faculty
- **Pediatric Grand Rounds**
- **Pediatric Case Management Conference** - animated, well-attended conference on pediatric cases from all subspecialties, including neonatology
- **Daily Radiology Conference** including ultrasound review
- **Didactic teaching sessions**, 2 - 3 days/week, by attending (or fellow), for the NICU team

Additional scheduled conferences include a monthly Perinatal Conference with the Department of Ob/Gyn and Pediatric subspecialties, and a monthly Perinatal Ethics Conference, with faculty from the Bioethics Department. Other lectures are added to cover the fellowship core curriculum, which includes topics in physiology, biostatistics, Boards review, and development of written, poster and spoken presentation skills. Topics covering general practice issues (e.g., medicolegal, sleep management, impaired physicians) and the core ACGME competencies are included in an annual series from the Graduate Medical Education Department). Regular research conferences are also held by the laboratory research groups with which the fellow may be associated.

**Research Experience**
In the first year, fellows identify an area of interest for research and find a preceptor with whom they develop a research project which they will work on over the following two years. They are
also assigned a Scholarship Oversight Committee, and take a course through which they become credentialed in Human Research Ethics and HIPAA compliance. Fellows must attend and present at national meetings, and submit original work for publication in peer reviewed journals.

Various clinical and basic science research opportunities are available to fellows. Current expertise within the division is strongest in clinical research, perinatal epidemiology, quality improvement, outcomes research and clinical bioethics. Our research interests focus primarily on surfactant therapy, prevention of infection, necrotizing enterocolitis, hypothermia treatment for HIE, PDA management, procedural safety, and informed consent. In addition, basic research training is available under the supervision of investigators in basic science disciplines at the Albany Medical College, particularly in the Center for Cardiovascular Sciences. Another basic research opportunity stems from our close proximity to the major research facility of the New York State Department of Health. There are ongoing quality improvement projects in intubation safety, hypothermia prevention during DR stabilization of VLBW neonates, and processes to minimize medication errors. The NICU is a member of the Vermont Oxford Network and the New York Statewide Perinatal Data System. Please see the link under the faculty web page for representative publications.

The Faculty

The Division of Neonatology includes the following full-time faculty members (with respective areas of expertise):

David Clark, M.D. Professor and Chairman, Department of Pediatrics
  Intestinal maturation, protein digestion/absorption, intestinal microflora, intestinal inflammation NEC

Marilyn A. Fisher, M.D., M.S. Associate Professor of Pediatrics

Michael J. Horgan, M.D. Professor of Pediatrics; Head, Division of Neonatology
  Lung injury, surfactant therapy. Control of neonatal infections. Treatment of Hypoxic-ischemic injury

Rubia Khalak, M.D. Assistant Professor of Pediatrics
  Infectious diseases and immunizations in premature infants. Relationship of oxygen therapy practices to bronchopulmonary dysplasia.

Upender Munshi, M.D. Associate Professor of Pediatrics
  Intestinal inflammation, NEC

Joaquim Pinheiro, M.D., M.P.H. Professor of Pediatrics
  Director, Neonatal-Perinatal Medicine Fellowship Program

Angel Rios, M.D. Clinical Professor of Pediatrics
  Respiratory physiology, neonatal ventilation and neonatal nutrition

Associate Faculty

Carolyn R. Levine, M.D. Clinical Assistant Professor of Pediatrics
  Neonatal lung injury, anti-inflammatory therapies

Phillip D. L. Pan, M.D. Clinical Assistant Professor of Pediatrics
  Perinatal/Neonatal Genetics, Perinatal ethical and legal issues

Newborn Follow-up Clinic

Anthony Malone, M.D. Clinical Associate Professor of Pediatrics
  Infant development. Neonatal brain injury and outcomes

Judy Lucas, M.D. Assistant Professor of Pediatrics
Albany is nestled in New York's Hudson River Valley between the Adirondack and Catskill mountains. The diversity of the region's landscape generates four seasons of beauty, outdoor activities and entertainment: hiking, bicycling, skiing, boating, sailing and other fresh water sports on nearby mountain lakes, thoroughbred horse racing, minor league baseball and hockey, soccer and arena football, in addition to nationally ranked college basketball and hockey. The Pepsi Arena, Saratoga Performing Art's Center (SPAC), Tanglewood, and dozens of theater groups provide an outlet for enthusiasts of ballet, the theater, the symphony, live rock and contemporary concerts. SPAC serves as the summer home of the New York City Ballet and the Philadelphia Orchestra.

As the state capital, Albany is the seat of state government. The Albany area has a wide range of affordable housing, much within 10-20 minutes of the Medical Center. The Capital District has a thriving academic community featuring a variety of colleges and universities. Many of the local elementary schools are ranked among the best in the nation.

Albany is at the cross roads of Interstates 90 and 87, and is serviced by the Albany International Airport and a major Amtrak train station. The scenic Catskill, Adirondack and Berkshire mountains are a short drive away, and New York City, Boston and Montreal are easily reached by train or automobile.
Medical Center and Department Benefits

For further details and updates, please check our website or contact us. Notable benefits include:

- Health care coverage
- Malpractice coverage
- Workmen's compensation
- Hospital subsidized day care facilities, for ages 8 weeks through kindergarten
- Vacation (3 weeks per year)
- Annual expenses to attend a national meeting in which the fellow presents research. Meeting time is not counted under vacation.
- Educational stipend toward the purchase of books/journals and membership in professional organizations
- Secretarial assistance and computer access
- Meals in the hospital cafeteria during the nights on-call
- Schaffer Medical Library privileges, including access to resources from home

Eligibility of candidates for fellowship training:

Fellowship applicants must complete pediatric residency training in an accredited program in the US or Canada before beginning their fellowship.

Candidates must be US citizens or permanent residents, or J-1 visa holders. Candidates bearing H-1 work visas are not presently eligible to train at our institution.

The Albany Medical Center is an equal opportunity employer.

If you need any other information, please visit our website at: www.amc.edu/Academic/GME/programs/Neonatology/index.html, or contact:

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