

Pediatric Infectious Disease Fellowship

The Pediatric Infectious Disease fellowship program provides an intensive training experience in the care of children with infectious diseases. The goal of the program is to train excellent academic pediatric infectious disease specialists. Twelve months of training is devoted to intensive clinical training with service time covering the inpatient ward, PICU, and NICU at the Cleveland Clinic Children's Hospital. The busy inpatient consult service provides exposure to a wide range of both general community acquired pediatric infectious disease problems such as meningitis, osteomyelitis and respiratory infectious as well as experience in the management of infections in patients with complicated surgical, neurosurgical, transplant and intensive care related infections.

Our busy outpatient clinic provides fellows with an opportunity to care for children with acute infectious disease problems and to longitudinally follow children with chronic immunodeficiencies and recurrent infections throughout their fellowship.

Training in the management of pediatric tuberculosis and pediatric HIV infection is enriched by rotations on these services at MetroHealth Medical Center. Training in microbiology includes a 6 week rotation in the Cleveland Clinic's state of the art clinical microbiology laboratory.

A rich didactic experience includes a weekly pediatric infectious disease conference and joint conferences and infectious disease rounds with adult infectious diseases. The Center for Pediatric Infectious Disease is well respected for their central role in pediatric education in the medical school curriculum, excellent teaching and clinical care. The members of the division have been recognized by the receipt of several recent distinguished teaching awards and are recognized by their peers as being among the best Pediatric Infectious Disease physicians in Cleveland.

Approximately two years of the training program are devoted to an intensive laboratory or clinical research project. Fellows are encouraged to select a hypothesis driven project related to their specific area of interest and their long term goals in pediatric infectious disease. Research projects may be mentored by a member of the Center for Pediatric Infectious Disease, a Staff member in the Lerner Research Institute, or when appropriate by a faculty member at another research institution in the Cleveland Area. Each fellow is provided with an oversight committee and emphasis is placed on identification and selection of a suitable research mentor. Past and current fellows have selected both basic science and clinical mentors.

Members of the Center for Pediatric Infectious Diseases have both basic and clinical research interests:

- Charles Foster, MD — Molecular biology of selenoproteins; the role of micronutrients in inflammation, cancer and sepsis.
- Lara Danziger-Isakov, MD, MPH— Infectious outcomes after organ transplantation; the impact respiratory viral infections on immunity after pediatric lung transplantation (Clinical Trials in Organ Transplantation in Children for Pediatric Lung Transplant recipients funded by the National Institute of Allergy and Infectious Diseases); beta herpesvirus infection in transplant recipients (funded by the American Society of Transplantation).

- Johanna Goldfarb, MD — Betaherpesvirus infection in pediatric cancer patients (funded by the Thrasher Research Fund); congenital cytomegalovirus; infection control.
- Camille Sabella, MD — Clinical infectious diseases; immunizations in healthy and immunocompromised children; undergraduate and graduate medical education.

The Lerner Research Institute (link) offers fellows numerous additional opportunities to develop a basic or translational research project related to an area of Pediatric Infectious disease. Area of expertise at LRI include chronic inflammation, innate host defense, sepsis and host -pathogen-environment interactions, various aspects of viral pathogenesis, innate defenses against viruses and cancer, interferon signaling, Toll-like receptor signaling, oxidative stress, transplant immunology, neuroinflammation, and personalized or genomic medicine.

Recent Fellows and their projects:

- Kim Swindell (2006-2009).
- The Effect of Parenteral Lipid Emulsion on Growth and Biofilm formation of *Candida Albicans*. (Manuscript in preparation).
- Stephanie Yee-Guardino (2003-2006).
- Mentor: Johanna Goldfarb
- Yee-Guardino S, Gowans K, Yen-Lieberman B, Berk P, Kohn D, Wang FZ, Danziger-Isakov L, Sabella C, Worley S, Pellett PE, Goldfarb J. Beta-herpesviruses in febrile children with cancer. *Emerg Infect Dis*. 2008 Apr;14(4):579-85.

Additional information about our staff:

Charles Foster, MD
Lara Danziger-Isakov, MD, MPH
Johanna Goldfarb, MD
Camille Sabella, MD

Additional colleagues:

Microbiology

Geraldine Hall, PhD
Gary Procop, MD

Virology

Belinda Yen-Lieberman, PhD

MetroHealth Medical Center

Naza Abughali, MD

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Applications available through Graduate Medical Education at Cleveland Clinic at <http://www.clevelandclinic.org/education/gme/applicants.htm>.