

## Seattle Children's Research Institute

# Center for Childhood Infections and Prematurity Research

### Our Vision

Through scientific study we will understand, prevent and treat pediatric infections, including infections during pregnancy that cause preterm birth. Our research teams will develop effective solutions so children can grow up to be healthy adults.

### Acting Director

F. Bruder Stapleton, MD

### Associate Director

Lisa M. Frenkel, MD

### Members

Serge Barcy, PhD

Marta Bull, PhD

Jane L. Burns, MD

Soren M. Gantt, MD, PhD

Rachel A. Katzenellenbogen, MD

Lakshmi Rajagopal, PhD

Timothy Rose, PhD

Arnold Smith, MD

Thor A. Wagner, MD

Scott J. Weissman, MD



## Improving the Health of Children through Research

The Center for Childhood Infections and Prematurity Research is making a difference around the world by performing basic research that lays a foundation for developing new antibiotics, vaccines for children and antiviral agents. Under the leadership of Dr. F. Bruder Stapleton acting director, the center focuses on translating basic biology to strategies for the diagnosis, treatment and prevention of infectious diseases and conditions that impact children locally, nationally and globally. The center will research conditions such as respiratory and perinatal infections, investigate how microbes become resistant to common antimicrobial agents and study infections in immunocompromised children. Multidisciplinary research teams will also investigate the mechanisms of infection-related premature birth and the social, environmental and genetic factors that predispose women to preterm labor and delivery. The center focuses on training and mentoring pediatrician-researchers in a range of specialties, each with an infectious-disease component. What distinguishes our program is a commitment to training, a strong global presence and our complementary research areas.

### Learn More:

[www.seattlechildrens.org/research/childhood-infections-and-prematurity/](http://www.seattlechildrens.org/research/childhood-infections-and-prematurity/)

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Hope. Care. Cure.™

Center for Childhood Infections and Prematurity Research

“We attract the highest caliber of researchers because of our partnerships with UW and the Hutch,” says Dr. F. Bruder Stapleton, Children’s chief academic officer. “Our researchers are attracted to Seattle Children’s because of the long-term financial commitment to research facilities and space for ultimately improving clinical outcomes.”

— F. Bruder Stapleton, MD,  
Acting Director



### Programs

- Infections in immunocompromised individuals
- Host-pathogen interactions during acute and chronic infections
- Potential infectious etiology of inflammatory diseases and malignancies
- Global and emerging infectious diseases
- Natural history and pathophysiology of infectious diseases
- Mechanisms of microbial drug resistance
- Discovery and testing of antimicrobial agents
- Vaccine discovery and evaluation
- Respiratory infections in childhood
- Development of new technologies to diagnose and improve treatment of disease
- Perinatal infections
- Etiologies of still birth and premature birth

### Partners

- University of Washington
- BioTraces
- Fred Hutchinson Cancer Research Center
- Institute of Translational Health Sciences (ITHS)
- North Coast Biologics
- Seattle Biomed

### International Initiatives for Healthier Children

Our researchers draw on expertise in specialties ranging from adolescent medicine to virology as they make discoveries and implement new solutions to help children thrive:

- Dr. Jane Burns manages our internationally renowned Cystic Fibrosis Microbiology Lab that works with investigators and pharmaceutical companies in the development of new antibiotics for the treatment of cystic fibrosis.
- Dr. Lisa Frenkel, co-director of the Pediatric Infectious Diseases Virology Clinic, is a national and international leader in studying HIV drug resistance in children.
- Dr. Soren Gantt seeks to understand the role of infant immune response and the risk of HIV acquisition during breastfeeding.
- Dr. Rachel Katzenellenbogen conducts NIH-sponsored research on high-risk human papillomavirus infection, which is linked to cervical cancer.
- Dr. Lakshmi Rajagopal studies a bacterium causing perinatal infections, including stillbirth and prematurity.
- Dr. Timothy Rose researches the role of the Kaposi’s sarcoma-associated herpes virus and related simian viruses in the etiology of AIDS-related malignancies.
- Dr. Arnold Smith’s work in vaccine development focuses on pediatric vaccines needing no refrigeration to improve their application in developing countries.
- Dr. Thor Wagner’s primary interest is chronic HIV infection, specifically how HIV persists during antiretroviral treatment, and he is working to develop strategies to target the remaining HIV-infected cells.
- Dr. Scott Weissman focuses on the evolution of antibiotic resistance in pediatric patients, using molecular typing.



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