

# Seattle Children's Research Institute

## Center for Developmental Therapeutics

### Our Vision

From studies of childhood diseases and child development we learn fundamental principles that can be translated into improvements in the health of children. Our research approach takes us from bedside to bench to bedside.

### Director

Charles V. (Skip) Smith, PhD

### Members

Henry S. Berman, MD

Gordon A. Cohen, MD, PhD

Eric L. Effmann, MD

Sihoun Hahn, MD, PhD

Thomas N. Hansen, MD

Eugene Kolker, PhD

Mark B. Lewin, MD

D. Michael McMullan, MD

Philip G. Morgan, MD

Aaron K. Olson, MD

Michael A. Portman, MD

Lester C. Permut, MD

Gregory J. Redding, MD

C. Peter Richardson, PhD

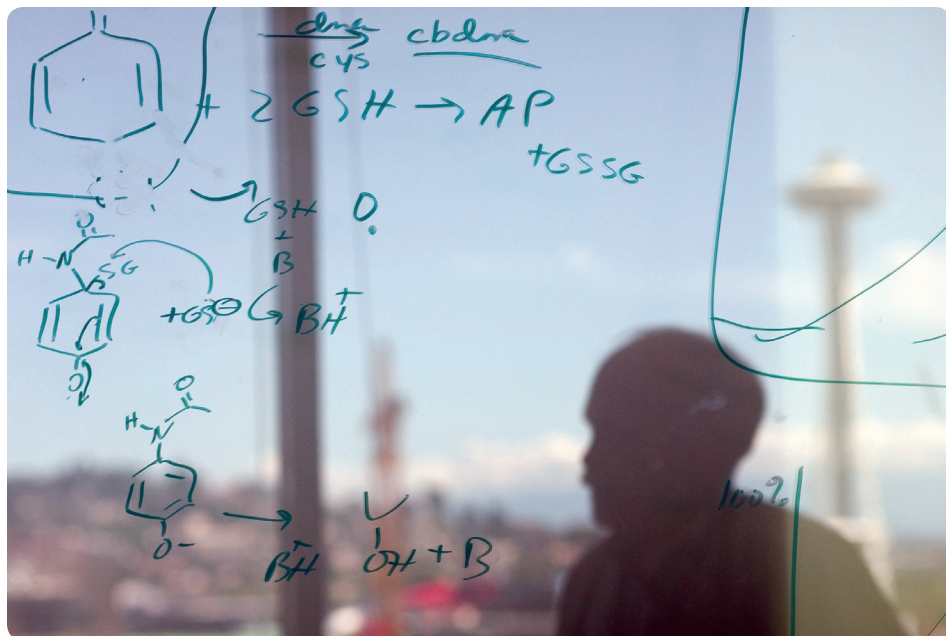
Craig E. Rubens, MD, PhD

Margaret M. Sedensky, MD

Kendra M. Smith, MD

Delphine Yung, MD

Jiang Zheng, PhD



## Understanding Disease Mechanisms Is Essential to Advancing Treatments

At the Center for Developmental Therapeutics, clinical problems inspire research studies to develop safe and effective treatments and preventions that improve children's lives. Our diverse team of experts is responsible for pioneering revolutionary therapies for Kawasaki disease, mitochondrial diseases, prematurity and stillbirth, thoracic disorders and environmental exposures. We explore research problems with international reach in an effort to help solve worldwide pediatric health crises. Our full-circle approach to research takes us from bedside to bench to bedside. By defining the fundamental principles and understanding the molecular mechanisms underlying pediatric diseases and conditions, we are better able to treat and prevent them.

### Learn More:

[www.seattlechildrens.org/research/developmental-therapeutics/](http://www.seattlechildrens.org/research/developmental-therapeutics/)



“We work to improve health around the world by tailoring therapies specific to the age and size of children, using tools ranging from molecular to mechanical.”

— Charles V. (Skip) Smith, PhD, Director

### Programs

- Bioinformatics
- Cardiovascular development and function
- Lung development and function
- Mitochondrial diseases
- Prematurity and stillbirth

### Partners and Alliances

PATH (Program for Appropriate Technology in Health)

GAPPS (Global Alliance for Prevention of Prematurity and Stillbirth)



### Pediatric Advances with Global Impact

At the Center for Developmental Therapeutics, we conduct innovative research that pushes the boundaries of scientific exploration to improve child health here and around the world:

- We developed a low-cost, low-maintenance mechanical ventilator for use in low-resource areas. This easy-to-use device has the potential to save hundreds of thousands of newborns in the developing world.
- Our Spine and Chest Wall Disorders Program is a world leader in thoracic structure and respiratory function research and in the evaluation of new technologies to restructure the growing spine and chest wall.
- We are at the forefront of Kawasaki disease research, investigating genetic differences that make typical treatments ineffective in 20% to 30% of patients; we are leading a multicenter clinical trial evaluating new therapies.
- In our world-class Mitochondrial Program, we are improving diagnoses of mitochondrial diseases by using state-of-the-art gene sequencing and genetic studies. We are also studying how to tailor perioperative and anesthetic care for patients with mitochondrial defects.
- In collaboration with the Global Alliance for Prevention of Prematurity and Stillbirth (GAPPS), we are studying mechanisms underlying stillbirths and preterm births while raising awareness about the magnitude of these problems.



**Seattle Children's**  
HOSPITAL • RESEARCH • FOUNDATION

**Center for Developmental  
Therapeutics**

Hope. Care. Cure.™