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“We are stewards entrusted with futures well beyond our own: the lives of patients, the preparation of our own surpassers, and the advancement of biomedical innovation.”

Message from the Chair

My second year began with the graduation of a superlative class of residents, the product of untold hours of study, practice, mentoring, and devotion. Commencement marks the opening of new vistas of possibilities previously unrealizable, literally “beginning now only at the end.” I see and feel the inspiration and potential of Pediatrics at Children’s Hospital of Pittsburgh of UPMC and know no bounds. And yet, it is humbling to take stock surrounded by so much accomplishment. Even by our standards—to become the worldwide leader in pediatric health care, education, and discovery—so far have we come, and yet so far to go.

The end of all our efforts is child health; tending to the health and well-being of children justifies efforts in education and research. Thus, progress is measured in terms of child health. In Pediatrics, a victory is a young person graduating from high school on time, healthy, and thriving. Children rightly deserve no less.

To the children in our care, victory is all important. It is similar for our students and trainees working to earn the next level of responsibility. But for faculty and staff, the metaphor in which we reveal ourselves is not winning wars or playing to win. We are not heroes in their struggles; we are planters and tenders of trees, under whose shade we do not expect to rest. We are servants, healers, teachers, and seekers. We labor, ultimately, for others. We are stewards entrusted with futures well beyond our own: the lives of patients, the preparation of our own surpassers, and the advancement of biomedical innovation. We work for the benefit of those who need us most while wishing that they never have cause to call on us, but when they do, they spare us not a backward glance as they race off into futures still theirs because we saw them past their need for the hope of doing so.

We suffer no lack of seeds to plant. Tending seedlings is unrelenting and insistent; we do the best we can with what we have and always look to have better to offer. We reach out to the community as many times as it takes to foster relationships that advance child health. We stand meticulously measuring fluid into rows of tubes, working toward providing a better future. We put on one more smile to recruit another family to participant in a study.

“In pediatrics, a win wears a smile and holds a diploma ...”

All too often, we get but one shot per seed, and then, each is not watered but once. So, sometimes we are forced to settle for hope, but, mostly, we make progress. Clinically, we have a decent handle on acute and chronic care, and thus the responsibility to move past decent and pivot toward caring for *health* in addition to tending to illness.

We are seeding research under the slogan, “*Healthy Minds. Healthy Bodies. Healthy Families.*”

- For “*Healthy Minds*,” the **Children’s Neuroscience Institute** will focus on preservation of brain function following acute brain injury and brain cancer. The thrust will be discovery of diagnostics, therapeutics, and rehabilitation practices.
- For “*Healthy Bodies*,” the **Institute for Infection, Inflammation, and Immunity**, the I4Kids, will pursue the complexities of personalized vaccination, diabetes, the microbiome, and congenital infection.
- For “*Healthy Families*,” the **Children’s Community Health Collaborative** will study the barriers to implementation of evidence-based community health interventions. Targets include acute asthma, violence reduction, nutrition, and opioid issues.
- We are installing a translational core facility called **sciVelo-CHP** to facilitate development and shepherd biomedical discoveries and inventions to bedsides and communities. **Bioinformatics** and **biorepository** core facilities are on the way.

The seeds of *health* research are going into the ground as **The Pittsburgh Study**. We are looking for the determinants of health. The Framingham Study is why everyone knows the word cholesterol. Following that model, the Pittsburgh Study will be why everyone knows the words that determine child health. This will be a longitudinal, birth cohort, population *health* study of Allegheny County with as many cohorts and as broad a spectrum of data as we can assemble. When we find gems, they will be spun off as targeted interventions.

In pediatrics, a win wears a smile and holds a diploma, and with the rest of the graduating class is ready to commence with what comes next. We are looking to run up the score!

For the year to come, our sleeves are rolled up, an amazing array of seeds is already in the ground, more have been added in the past year, and there are many more to come—seeds of care, seeds of education, and seeds of discovery. I offer the pages that follow as a witness to the works under way and as a glimpse of the fruits to come from our expanding grove. Turn the page and tour the arbor!

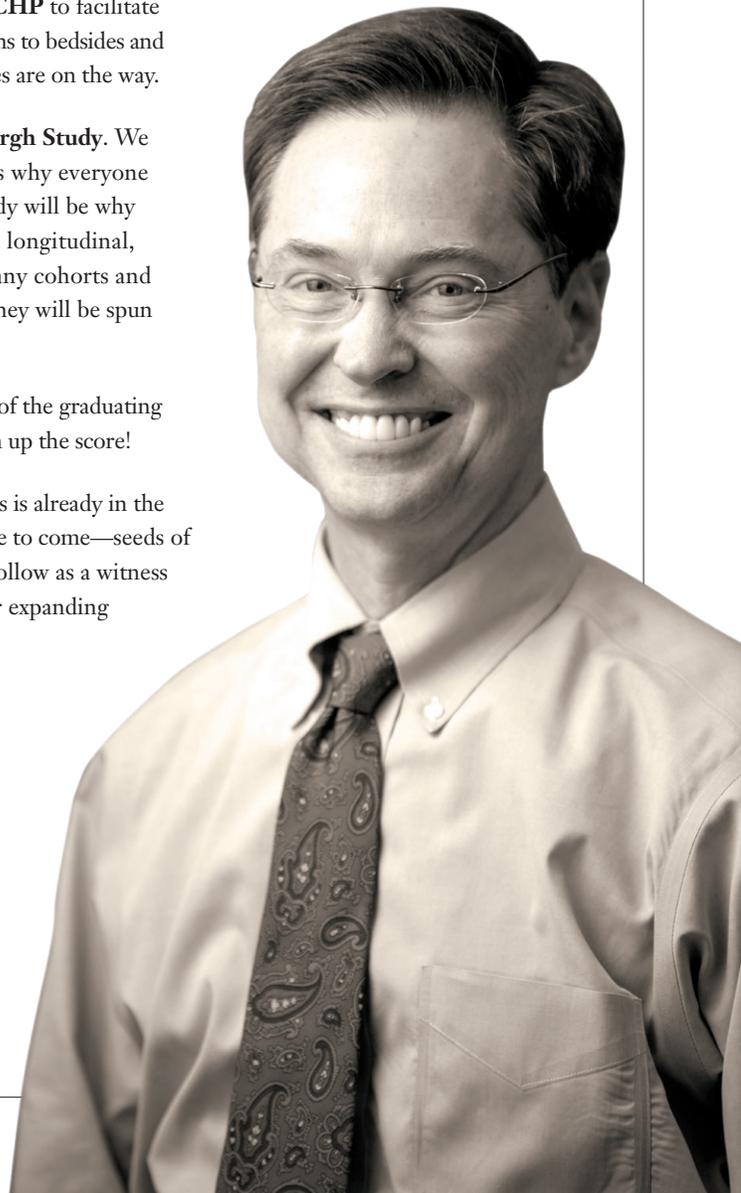
Hail to Pitt!



Terence S. Dermody, MD

Vira I. Heinz Professor and Chair of Pediatrics
University of Pittsburgh School of Medicine

Physician-in-Chief and Scientific Director
Children’s Hospital of Pittsburgh of UPMC



“We are far from done. We are poised to seize opportunities at the bench, at the bedside, and in the community.”

Executive Summary

The Department of Pediatrics continues to advance toward its mission to become the worldwide leader in pediatric health care, education, and discovery. Pediatrics is 1,143 strong, consisting of 21 divisions and centers assembled from more than 320 faculty, 200 clinical trainees, 95 research trainees, almost 200 research staff, more than 300 clinical staff, and only 33 administrators supporting the rest. We recruited 38 faculty, of whom nine are underrepresented minorities and the majority of whom are women. The ten-year revenue trend was 6% growth, which made possible \$11 million to support research. Children’s Hospital was named to *U.S. News & World Report’s* Honor Roll of America’s Best Children’s Hospitals for the seventh consecutive year. There is much that makes us proud.

We had unprecedented volume. Children’s Hospital is licensed for 315 beds. The average daily census was a record-breaking 276, or 88% of capacity. On our busiest day, our census was 340, 25 over bed count. Total visits for the Emergency Department exceeded 80,000. Express Care came in at 66,700 visits. The NICU count has leveled off, because it is completely and constantly full. We are recruiting to keep pace with demand and, in the future, will be planning a new bed tower.

Excellence in education continued to be a departmental hallmark. We look forward to the accomplishments of our 40 new interns even as we seek to retain as many as possible of this year’s 19 University of Pittsburgh School of Medicine seniors who are applying in pediatrics.

The department and the larger biomedical community recognized our faculty’s contributions. Thirteen faculty members earned promotions. Total compensation tracked the rise in total number of faculty at approximately a 4.5% growth rate. Accolades for professional service and scientific excellence were bestowed on our faculty, e.g., Juan Celedón became the president-elect of the American Thoracic Society, Kishore Vellody was inducted as the president of the National Down Syndrome Congress Executive Committee, and Stacey Cook and Damara Ortiz earned UMPC ACES Awards as top clinical performers.

Discovery is how we offer hope to children who have little now. Pediatrics published 440 peer-reviewed papers, of which too few can be highlighted here. Carolyn Coyne and her team advanced our understanding of how the placenta impedes Zika virus infection, which may lead to new strategies to increase placental pathogen resistance (*PNAS*). Alejandro Hoberman and his team set the standard of care for acute otitis media (*NEJM*). Jerry Vockley and Lisa Pan found neurometabolomic paths forward in treating previously unresponsive forms of depression (*American Journal of Psychiatry*). Our breakthroughs are big and numerous.

Funding undergirds hope’s discovery. The department’s extramural budget has held fast at \$50 million for the past three years. This year, two-thirds came from the NIH despite tightening federal budgets. This year, our faculty earned three new NIH K awards, three NIH T32 grants, and 10 new grants at or above the half-million-dollar mark. Clinical research funding has increased seven-fold since 2011 to \$7 million, supporting more than 200 studies. Pediatrics anticipates future funding growth consistent with our expanding faculty. The Research Advisory Committee’s research support budget was about \$830,000. The Children’s Hospital Foundation’s exemplary efforts brought in more than \$18.2 million from 35,167 donors this year. The only limits to advancing care for children through research are the limits of our imagination!

Pediatrics added the Division of Health Informatics under the direction of Srinivasan Suresh. We applauded Vivek Allada’s interim service in Cardiology as we welcomed Jackie Kreutzer as the new division director. As Tom Diacovo is joining us to direct Newborn Medicine, we laud the heroic efforts of Richard Saladino as interim director. Drew Feranchak is now leading Gastroenterology, Hepatology, and Nutrition, and we owe a debt of gratitude to David Keljo for his interim service.



The department added the Center for Microbial Pathogenesis under the direction of Carolyn Coyne and the Center for Pediatric Research on Obesity and Metabolism under the direction of Silva Arslanian. We are developing the following strategic research initiatives.

- The **Children's Neuroscience Institute** will focus on preservation of brain function following acute brain injury and through brain cancer. The thrust will be discovery of diagnostics, therapeutics, and rehabilitation practices.
- The **Institute for Infection, Inflammation, and Immunity**, the I4Kids, will pursue the complexities of personalized vaccination, diabetes, and congenital infection.
- The **Children's Community Health Collaborative** will study the barriers to implementation of evidence-based community health interventions. Targets include acute asthma, violence reduction, nutrition, and opioid issues.
- We are installing a translational core facility called **sciVelo-CHP** to facilitate development and shepherd biomedical discoveries and inventions to bedside and communities. **Bioinformatics** and **biorepository** core facilities are on the way.
- **The Pittsburgh Study** will find the determinants of health. It will be a longitudinal, birth cohort, population health study of Allegheny County with as many cohorts and as broad a spectrum of data as we can assemble.

We are far from done. We are poised to seize opportunities at the bench, at the bedside, and in the community. We invite you to follow your curiosity through the pages to follow.

Hail to Pitt!

A handwritten signature in black ink, reading "Terence S. Dermody". The signature is fluid and cursive, with a long, sweeping underline.

Terence S. Dermody, MD

Vira I. Heinz Professor and Chair of Pediatrics
University of Pittsburgh School of Medicine

Physician-in-Chief and Scientific Director
Children's Hospital of Pittsburgh of UPMC

Leadership



Chair
Terence S. Dermody, MD



**Adolescent and
Young Adult Medicine**
Elizabeth Miller, MD, PhD



**Blood and Marrow Transplantation
and Cellular Therapies**
Paul Szabolcs, MD



Child Advocacy
Rachel Berger, MD, MPH



**Neurology and
Child Development**
Ira Bergman, MD, PhD



**Gastroenterology
(Interim)**
David Keljo, MD, PhD



General Academic Pediatrics
Alejandro Hoberman, MD



Hematology/Oncology
Linda McAllister-Lucas, MD, PhD



Infectious Diseases
John V. Williams, MD



Medical Genetics
Jerry Vockley, MD, PhD



Nephrology
Carlton Bates, MD



**Newborn Medicine (Interim)
and Emergency Medicine**
Richard Saladino, MD, PhD



Cardiology (Interim)
Vivek Allada, MD



**Endocrinology, Diabetes,
and Metabolism**
Radhika Muzumdar, MD



**Pulmonary Medicine,
Allergy, and Immunology**
Juan Celedón, MD, DrPH



Rheumatology (Interim)
A. Kim Ritchey, MD



**Richard King Mellon
Foundation Institute**
Jay Kolls, MD



**Paul C. Gaffney
Diagnostic
Referral Service**
Basil Zitelli, MD



**Weight Management
and Wellness Center**
Silva Arslanian, MD

Administration

