

A photograph of a male scientist with grey hair, wearing glasses, a pink surgical mask, and a white lab coat. He is looking down at his work in a laboratory setting. In the background, there are shelves with various lab supplies and equipment. The overall lighting is bright and clinical.

LIFE-CHANGING RESEARCH

SickKids Research Institute
Peter Gilgan Centre for Research and Learning

SickKids
VS

2023 PROGRESS REPORT



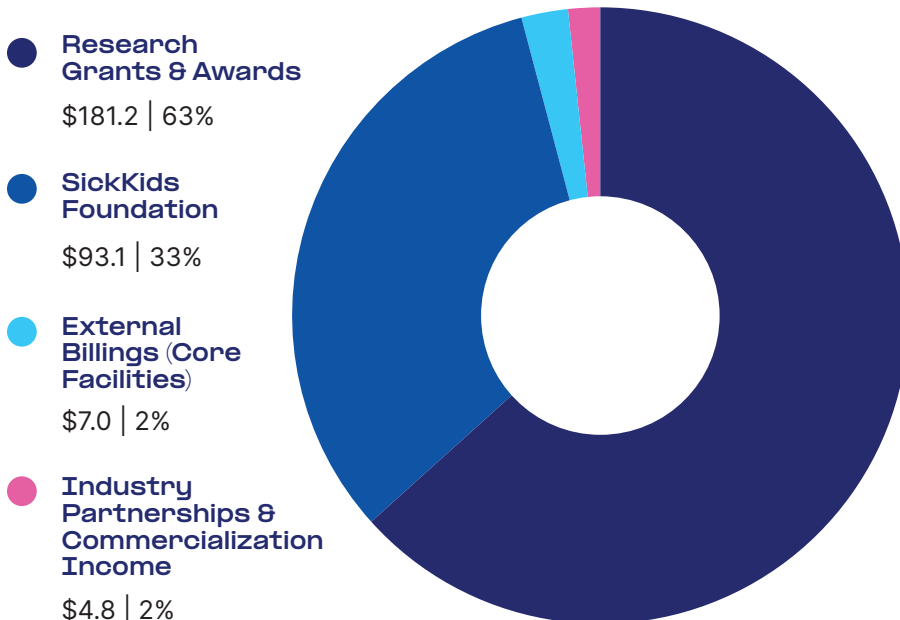
Dr. Stephen Scherer, Chief of Research
Northbridge Chair in Paediatric Research

MESSAGE FROM THE CHIEF OF RESEARCH

Thank you for so generously supporting research at SickKids. You enable us to answer clinical questions through discovery science, and to use research findings to treat and heal children. Philanthropy is a key source of funding for the SickKids Research Institute, helping us save children's lives, transform others, and give hope to families. Philanthropy is also driving the future of child healthcare through Precision Child Health, and research is vital to this evolution in healthcare. The stories in this year's report are just some of the advances made possible at SickKids thanks to donors like you.

RESEARCH FUNDING*

Funding amounts are in millions



BY THE NUMBERS*

\$298.6M
Total Research Spend

3,300
Research Institute Staff

37
Canada Research Chairs

60
Endowed Chairs

3,183
Open Research Studies

2,794
Staff Publications

#1 HOSPITAL IN CANADA
for Research Intensity

(Research Infosource)

* For 2022/23 fiscal year

WITH YOUR SUPPORT

Detect Earlier

Asthma is the leading cause of hospitalization in Canada's kids under five. Tests with skin pricks and blood draws are often avoided in little ones, so asthma can go undetected in pre-schoolers. SickKids respirology doctor and clinician-scientist Dr. Padmaja Subbarao hopes to change this with a new, non-invasive test called the [Childhood Asthma Risk Tool \(CHART\)](#), proven to detect asthma risk in children as young as two. CHART was developed with data from 2,354 participants in the donor-supported [CHILD Cohort Study](#)—Canada's largest birth cohort study—with 91 percent accuracy at predicting kids with a persistent wheeze (a primary indicator of asthma) by age five.

In the era of precision healthcare, big and ethnically diverse datasets like CHILD's are prized. As one of the lead scientists with CHILD since 2008 and co-lead of [Precision Child Health](#) today, Dr. Subbarao is working to establish CHILD as a discovery platform for research on healthy childhood and chronic disease prevention.

Treat Smarter

New, more effective treatment drives health research, but the process of identifying and testing biological targets and therapeutic molecules is time-intensive and error-prone. [SPARC Drug Discovery](#), on the research tower's 21st floor, is accelerating this vital research. Using precision instruments and robotics, the team* conducts "high-throughout screening" of multiple compounds at a time to test their impact against cancers, cystic fibrosis, infectious diseases, and other illnesses. SPARC Drug Discovery is enabling Precision Child Health and the discovery of individualized therapies. Donors support this work by helping fund the Research Institute's core scientific facilities.

* Led by scientific co-directors Drs. Roman Melnyk and Daniela Rotin, and managed by Christopher Fladd.

Diversify Research

Actor. Public speaker. Active 10-year-old. SickKids patient with a tracheostomy and feeding tube. All are facets of Cristiano today. His life started with multiple medical complexities, extreme prematurity, and health concerns that kept him in intensive care at SickKids—and his parents close by—until he turned 18 months and

went home for the first time. Cristiano's mom, Francine, left her demanding career to be with him in hospital. His parents faced agonizing decisions about surgeries and challenges figuring out how to navigate his care with so many specialists.

When he left SickKids for home with a ventilator, oxygen, and feeding tube, Cristiano couldn't walk or communicate. Doctors were unsure of what his future held. He went on to exceed all expectations. Francine attributes Cristiano's successes to the hard-fought partnerships she developed at SickKids. This inspired her to pursue a PhD, focused on shared decision-making between health professionals and parents of children with medical complexities. She combined her lived experience and research expertise in a new role with the SickKids Precision Child Health team to better engage families in research. Now she's shifting mindsets and involving patients, families, and communities as research partners from the start.



| Francine and Cristiano

"My singular goal was to keep my child alive, healthy, and safe. But then you want to make meaning of the experience, you want to make it better for others."

– Francine, Patient & Family Engagement Program Manager

As Cristiano's mom and a trained researcher, Francine sees the two sides of patient engagement in research as a single process that privileges listening to and learning from the lived experiences of our families and communities alongside staff. The Precision Child Health team is working to deliver research that's done *with* patients, families, and communities not *to* them. That's what Francine advocates and enables—and the visionary change that donors who support our research are helping SickKids attain.



THANK YOU

Your generous support helps fund the scientists, teams, core facilities, and operations behind breakthroughs and discoveries that are saving children's lives and transforming others.



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