The Impact of Research Champions

Your generosity is transforming healthcare and saving lives.

As a Seattle Children’s Research Champion, you are transforming pediatric healthcare. Philanthropy fuels change, and your generous gifts are helping us find cures for some of the most devastating childhood diseases and building the foundation for a new era of community health and wellness. You are truly our champions — thank you!
At Seattle Children’s, many children and young adults with cancer are finding hope in T-cell immunotherapy — an experimental treatment that uses a patient’s own immune system to fight their disease.

Our researchers are leading clinical trials, fueled by thousands of donors like you, in which a patient’s T cells are reprogrammed to express a chimeric antigen receptor (CAR) on the surface of the cell. The CAR is like a puzzle piece that’s designed to attach perfectly to a specific antigen or marker on the cancer cell. When they attach, the CAR T cells attack the cancer cells as if they were fighting an infection.

In just five years, Seattle Children’s cancer immunotherapy program has grown tremendously to include trials that target leukemia, brain and spinal cord tumors, and solid tumors. What follows are two ways your research dollars are making immunotherapy available faster, for more kids.

An accelerated timeline from idea to patient trial
To make new CAR T-cell immunotherapies available for pediatric patients who desperately need them, Seattle Children’s has developed an innovative system to streamline the research cycle. Historically, conceptualizing and launching a new cancer clinical trial has taken 10 years or more. The new system is expected to reduce that development time to five years — and just two years if a CAR target has already been proven to work in a certain type of cancer.

Transforming trials with data
Equally important to the CAR T-cell products researchers develop in the lab are ways to evaluate the safety and efficacy of immunotherapy in patients. Seattle Children’s has a team of experts that collects, manages and analyzes data for every patient in every clinical trial, from start to finish.

“The only way to transform pediatric cancer treatment is by having data to prove immunotherapy is safe and effective,” says Cristin Gordon-Maclean, who manages this team. “Children aren’t always included in clinical trials, so it’s really motivating to move the needle forward in an area that shows such promise for a population that is not usually first in line.”

Immunotherapy Patient Comes “Home” to Help Patients
Diagnosed with acute lymphoblastic leukemia at age 8, Milton Wright III went through years of rigorous cancer treatment before becoming the second patient in Seattle Children’s first T-cell cancer immunotherapy clinical trial in 2013.

Now 24 and healthy, Wright is a certified nursing assistant in Seattle Children’s Pediatric Intensive Care Unit and feels rewarded by helping kids with serious illnesses like he once faced.

“When I’m with a patient, it’s all about comforting them,” Wright says. “I want to do something that’s worthy of my life being saved.”

Thanks to immunotherapy, Wright is planning a future that includes working as a nurse in the hospital he considers his second home.

“To be at the hospital where my life was saved — I can’t even count how many times — is incredible. It is rewarding to inspire hope in patients and families, and show them that they, too, can have a fulfilling life.”

— Milton Wright III
This fall, Seattle Children’s Research Institute joined forces with the Center for Infectious Disease Research (CIDR), the oldest and largest independent non-profit organization in the country solely focused on infectious disease research. This combined team of renowned researchers is leveraging the strengths of each organization to develop vaccines, therapies and diagnostics to fight infectious diseases that disproportionately impact children and those in poverty and pose risks to communities around the world.

Together, under the banner of the Seattle Children’s Research Institute Center for Global Infectious Disease Research, these acclaimed scientists are carrying forward the significant contributions both organizations have made to combating diseases including HIV/AIDS, tuberculosis, malaria, human papilloma virus and group B streptococcus.

“This is an incredible opportunity to pursue our shared vision of better understanding, treating, preventing and curing infectious diseases,” says Dr. Jim Hendricks, president of Seattle Children’s Research Institute. “Each day, 15,000 children die of infectious diseases worldwide. I’m excited that this group of amazing scientists is now addressing this problem together.”

“No we can accelerate our work on defeating the most difficult and deadly infectious diseases plaguing our world,” says Dr. John Aitchison, former president of CIDR and co-director of the Center for Global Infectious Disease Research. “We are building a world-class research institute focused on global infectious diseases.”

The shared knowledge and resources brought together by this collaboration makes new avenues of scientific discovery possible. Joining Seattle Children’s bench-to-bedside capabilities with CIDR’s expertise in systems biology brings new opportunities to study the complex interactions between infectious agents and their hosts and translate these findings into clinical care — and cures.

“Understanding infections at a molecular level is a complicated process that involves looking at large data sets as well as immune functions,” says Dr. Lisa Frenkel, co-director of the Center for Global Infectious Disease Research. “The expertise of CIDR scientists perfectly complements our clinical-based studies.”

“Our aim is to make fundamental scientific advances that will lead to vaccines, drugs and diagnostics we’ve been talking about for years — and we’ll be able to get those advances to the people who need them most.”

— Dr. John Aitchison, co-director, Center for Global Infectious Disease Research
Building Immune Systems for Kids Like Ezra, Who Was Born Without One

Dr. Aleksandra Petrovic is the principal investigator of a new clinical trial using a novel gene therapy to treat X-linked severe combined immunodeficiency (XSCID) in newborns.

One of every 60,000 babies enters the world without a fully functioning immune system, leaving them vulnerable to even the most common infections. Children with this rare life-threatening condition, which includes a group of inherited disorders known as severe combined immunodeficiency (SCID), have the best chance at a healthy future if they undergo a stem cell transplant before they are 3-1/2 months old.

Thanks to your gifts to research, Seattle Children's recently launched a clinical trial that is seeking a potentially safer, less aggressive and equally effective path to a cure by using gene therapy to fix the faulty gene that causes the most common type of SCID. Without treatment, children with SCID rarely live past age 2. Those fortunate enough to have a sibling match — about 25% — can undergo a bone marrow transplant with a high rate of success. Transplant from a parent or unrelated donor is the next best treatment option, but it sometimes provides only partial results.

Dr. Aleksandra Petrovic, a pediatric transplant specialist and researcher at Seattle Children's Research Institute, says the trial offers a new way to treat the most prevalent form of SCID in newborns with no sibling match.

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“Dr. Petrovic is leading a new clinical trial that uses gene therapy to treat X-linked severe combined immunodeficiency (XSCID) in newborns. This is a major breakthrough in the fight against SCID, a disease that affects thousands of children worldwide. The trial offers a safer, less aggressive, and equally effective path to a cure, and it is truly inspiring to see the progress being made in this field.”

Ezra (right), now a healthy 4-year-old and his brother Judah, 6, play in the yard of their family home.

Researcher Envisions Easier Road for Infants Born With SCID

In 2014, results from a newborn screening test revealed that Rachel and Zach Dixon’s seemingly healthy newborn, Ezra, had severe combined immunodeficiency (SCID). They brought him to Seattle Children’s for a bone marrow transplant with cells donated by his older brother Judah. Even with mild chemotherapy needed for the procedure, Ezra developed an extensive rash and gastrointestinal sores that made eating painful, so doctors had to feed him through a tube. Ezra is now a healthy 4-year-old living with his family in Spokane, Washington. Doctors hope gene therapy can be used to help babies born with SCID like Ezra build a strong immune system while avoiding side effects from chemotherapy and other transplant problems.

“’When I learned about gene therapy I got super excited. You would never know by looking at our energetic, healthy son that he went through hell the first two years of his life, and I am thrilled to learn that researchers are finding ways to spare other families that painful journey.’”

— Rachel Dixon, Ezra’s mom
After participating in a tumor paint trial for kids with brain tumors, Liesel Von Imhof was inspired to pursue a degree in biomedical engineering. Thankful for the lifesaving treatment she received at Seattle Children’s, she aims to bring healthcare advances to children around the world. Born and raised in Alaska, Liesel is currently a sophomore at Harvard College. She is pictured above in the hospital with Dr. Amy Lee, one of her neurosurgeons, and mountain biking with her family last summer.

Your yes powers progress.

For generations, people like you have said yes to kids at Seattle Children’s. When we opened Seattle Children’s Research Institute in 2006, you joined us in our commitment to push beyond treating pediatric diseases to pursue cures. Last year, you stepped forward again when we publicly launched It Starts With Yes: The Campaign for Seattle Children’s, because childhood health is a cause close to your heart.

Nearly half of all campaign gifts to date have been earmarked for research by donors like you. This philanthropic momentum propels our work to develop cures personalized to each child and move beyond treating symptoms to focus on eliminating the root cause of disease. Your visionary support of Building Cure, which will open next year in downtown Seattle, gives our scientists an additional 540,000 square feet of space where we can develop future cures for many childhood diseases — from cancer and diabetes to sickle cell and HIV.

With this campaign, we’re also moving forward with revolutionary advances in brain health, community health and immunotherapy research.

Thank you for saying yes to a healthier future for all kids.

The Campaign at a Glance

- Advancing Our Core Mission to Care for Every Child
- Delivering on the Power and Promise of Immunotherapy
- Ensuring families can count on us today and always through legacy gifts
- Unlocking the Mysteries of the Developing Brain
- Launching a New Era for Community Health and Wellness

Learn more at seattlechildrens.org/yes
In 2016, Seattle Children’s Autism Center joined the Simons Foundation Autism Research Initiative project known as SPARK, the nation’s largest autism study. Researchers are collecting DNA from children with autism and analyzing genetic markers known for contributing to an autism diagnosis. Hundreds of Autism Center families signed up to participate at the initial launch, which now has more than 100,000 individuals enrolled across the country.

“With this broad database, doctors will be able to identify children with autism who have similar genetic backgrounds. Those families may be able to support each other, and our approach to treatment can be better tailored to fit each kid and family,” says Raphael Bernier, PhD, executive director of Seattle Children’s Autism Center and a national leader in unraveling the role genetics plays in autism. “Clinical trials are driving more than just science, they’re driving cutting-edge care.”

Looking ahead, Bernier dreams of a philanthropic flood tide that accelerates research, expands community outreach, supports telemedicine consults regionwide and makes family services even stronger.

Alex Franklin (shown here with her mom, Seetong Franklin) has an autism spectrum disorder that blocked her ability to communicate until intensive speech therapy at Seattle Children’s Autism Center opened doors to new words and new worlds.

Each year, more than 4,000 kids are diagnosed and treated at Seattle Children’s Autism Center — where families and scientists together are leading the charge for genetic discovery through participating in the nation’s largest autism study.

Thank You Research Champions Sponsors!

These companies have generously given to the Research Discovery Fund. Platinum sponsors gave $25,000 or more; gold sponsors gave $10,000 or more. To learn more, please contact Mandy Hanousek at mandy.hanousek@seattlechildrens.org.

Platinum Level

Gold Level