

# Steadfast Support for Pediatric Cancer Research

### An impact report prepared for the Ted Mullin Fund • Spring 2023



For over 17 years, the Ted Mullin Fund has enabled innovative research and inspired the next generation of physicians and scientists.

Thank you to the Ted Mullin Fund and its generous donors for their leadership in driving pediatric cancer research, care, and education at the University of Chicago Medicine Comer Children's Hospital. We are proud of your long-standing partnership with us and honored by your steadfast support.

Additionally, the Ted Mullin Fund has provided hands-on laboratory and clinical experience for the most promising students to pursue careers in medicine and oncology. Your commitment to developing mentorship opportunities for undergraduates is unparalleled to any other UCM program available to novice researchers.

Your support is vital to our efforts and makes a tremendous difference in the lives of so many. Please accept our sincere gratitude for your partnership and commitment to supporting pediatric cancer patients and their families.

## **Investments in Pediatric Cancer Research**

The Ted Mullin Fund has generously supported various research projects and endeavors in the Section of Pediatric Hematology/Oncology. We are pleased to share a snapshot of the exciting efforts underway this year.



### Eric C. Beyer, MD, PhD

#### Professor of Pediatrics, Cell Physiology, Cancer Biology, and Molecular Medicine

Eric C. Beyer MD, PhD, is an expert in the care and treatment of children with all forms of cancer and blood diseases and heads an internationally recognized molecular and cellular biology laboratory. The financial support from the Ted Mullin Fund has made possible Dr. Beyer's recent research related to the roles of small extracellular vesicles in the pathogenesis of complications of sickle cell disease. The fund provided partial salary support for Joanna Gemel PhD (Research Associate Professor).



### Joanna Gemel, MS, PhD

#### **Research Associate Professor, Pediatrics-Hematology and Oncology**

Joanna Gemel, MS, PhD, has been a valued research partner to Eric C. Beyer, MD, PhD, and his laboratory for many years. Together, they have been investigating the process of intercellular communication, specifically the direct exchange of ions and small molecules between gap junction proteins called connexins. Their studies may lead to new pharmacologic or molecular approaches to cancer therapy by manipulating the exchange of drugs and drug metabolites between cells and the growth and viability of blood vessels. They also have major implications for other clinical areas including cardiac arrhythmias and cataracts. With the philanthropic support of the Ted Mullin Fund, Dr. Gemel has continued her work studying connexins expressed in the heart (Cx40 and Cx43), and their role in the most common cardiac arrhythmia, atrial fibrillation (AF). The goal of Dr. Gemel's study is to better understand the pathogenesis of AF in order to contribute to novel approaches to therapy.



The 17th annual Ted Mullin Hour of Power was a powerful demonstration of people coming together to raise awareness of and fight sarcoma. More than 6,000 athletes across the country and the world joined together for this cause.

Northside ISD Aquatics San Antonio



Ted Mullin



### Hour of Power Participants are Deeply Committed to the Cause Many first became involved as students and continued to participate as coaches:

Brogan Barr	Sienna College
Kate Brown	The Winsor School
Rachel Busch	Concordia University, St. Paul
Allie Clark	Carleton College
Karin Brown Colby	Swarthmore College
Rachel Curtiss	St. Lawrence University
Keri Golembeski	Chicago Athletic Clubs Masters
Kyllian Griffin	Macalester College
Wilson Josephson	Macalester Masters
Colin Meadows	West Virginia Wesleyan College
Max Niggel	Alleghany College
Luke Paquin	Minnesota Ice Swimming Club
Nick Polzin	Alma College
Cathleen Pruden	Trinity University
Spencer Scarth	Milligan University
Milana Socha	Dartmouth College
Aaron Zander	Luther College



Allie Clark is an extraordinary example of how involved Ted Mullin Scholars are in supporting the Hour of Power event. She is currently an assistant swim coach of the Williams College Men's and Women's teams, as well as the Purple Valley Aquatics Club in Williamstown, MA. Allie spent four years as a coach during the Williams College Hours of Power—she also coached for a year at Macalester College in St. Paul, MN. She has completed five HoPs as a college coach. Including her participation in HoP in high school and college, Allie has completed a total of 10 HoPs!

Allie's family is also deeply connected to the Ted Mullin Fund. Allie's dad (Andy Clark) is the Carleton College head swim coach and coached Ted when he swam at Carleton. Carleton College originated the Hour of Power in 2006 and has sponsored the event ever since.



### The 2022 Ted Mullin Scholars



#### Sabrina Comess, Amherst College '24

This summer, I had the privilege of working in Dr. Andrea Piunti's lab studying chromatin biology. The lab focuses on CATACOMB, a gene that was originally discovered in two rare cancers, posterior fossa ependymoma and endometrial stromal sarcoma. Much of the research I worked on had to do with exploring and manipulating CATACOMB expression and its effects in various cancer cell lines.

Throughout my time in Dr. Piunti's lab, I learned a huge array of research skills and techniques. Both Dr. Piunti and his research tech were wonderful mentors to me throughout the summer. **My time as a Ted Mullin Scholar provided me with my first formal research experience, a host of new skills, and a couple of great mentors.** It also gave me clarity. As I look towards the future, I feel more sure about the path I want to take. I plan to continue on the pre-med track at Amherst, spend more time in both research and clinical environments, and eventually go to medical school.



#### Elizavetta (Alisa) Makatsaria, Carleton College '23

Thanks to the Ted Mullin Fund, this summer I have been lucky enough to work in Dr. James LaBelle's lab doing research on a group of proteins key in the regulation of programmed cell death. The lab primarily works with a drug, Venetoclax, which helps induce cell death and is being used to treat patients with leukemia. I worked with Venetoclax to see how it affected different immune cells, not just tumor cells.

In addition to working in the lab, I was also able to shadow Dr. LaBelle on the pediatric floor. I am so grateful for the incredible experience the Ted Mullin fund provided me. I gained an immense amount of knowledge and skill that will only benefit me in my future endeavors. This opportunity has solidified my interest in pursuing a career in medicine. Thank you to the entire LaBelle lab for fostering a warm and supportive learning environment. Also, thank you to the Mullin family and foundation for the opportunity to participate in their incredible work.

### The 2022 Ted Mullin Scholars



Alexa Veliz, Mount Holyoke College '24

I'm immensely grateful for this wonderful opportunity. Being a Ted Mullin Scholar helped me get closer to my dreams. I had the opportunity to work in Dr. Applebaum's lab and learn about a pediatric cancer known as neuroblastoma and understand DNA damage as well as DNA repair. The project in which I worked studied the synergistic effect of chemotherapy and a Bromodomain and Extra-terminal Domain inhibitor (BETi) in tumor growth suppression.

Lab research was a rollercoaster of emotions. Theory and practice went hand in hand but sometimes the outcomes didn't come out as expected and there was space for improvement. Therefore, I not only gained research experience but also scientific communication skills and confidence to express my point of view. This was the best summer of my life and I'm more passionate than ever about epigenetics, positive to pursue an MD-PhD in genetics.



#### Megan Woelkers, University of Chicago '24

This summer I had the pleasure of working with Dr. Lapping-Carr and Dr. Wesevich on their clinical research project in sickle cell disease. We wanted to study a unique complication to sickle cell patients called Acute Chest Syndrome (ACS). From the data I collected, we were able to better understand the affected population and how lab values and oxygenation stats change over the course of an ACS episode. This data will help structure a future drug trial.

I found the work this summer meaningful because the data I was working with came from actual people, whose stories played out in the hospital charts I read. This experience has helped me better understand what it means to be a doctor and the multifaceted opportunities that exist for them to help patients. For now, I hope to continue the clinical research project into the fall, while I start my third year at the University of Chicago.

### **Continued Investments: Ted Mullin Scholar Alumni**

### Anna Zimmer, Carleton College '15

2013: Worked in Dr. Jill de Jong's lab. Researched major histocompatibility genes in zebrafish.

2015: Graduated from Carleton College and began working for Mercy Home for Boys and Girls. 2018: Second year of medical school at Emory University and enrolled in the dual Bioethics MD/MA.

2022: Completed an MA in Bioethics and began a residency at University of Washington, Neurology.

### Milee Nelson, Vassar College '16

2015: Worked in the Susan Cohn lab at the University of Chicago studying Neuroblastoma

2017: Worked as a research assistant in the Kandel lab at the University of Chicago.

2021: Fourth year of medical school at Emory Medical School. 2022: First-year resident in internal medicine at Emory University.

### Ruby Kazemi, Carleton College '19

2017: Worked in Dr. Jill de Jong's lab studying t-cell acute lymphoblastic leukemia. 2018: Volunteered at a center that provides health care to marginalized families in Rice County, MN. 2019: Worked in a lab at the University of Utah researching the biology of retroviruses.

2022: Third year of medical school at the University of Michigan.

### **Alumni Scholar Spotlight:**

Jason Xu, Pomona College '18 MD/PhD Candidate, University of Pennsylvania Mullin Fund Scholar Summer 2016

I am so grateful for the Ted Mullin Fund for its continual support and for Mary and Rick, who have pioneered a wonderful program that supports the next generation of clinicians and researchers. I recently defended my PhD, which was centered around single-cell genomic sequencing of chemotherapy refractory pediatric T-cell leukemia. I was so fortunate to have Mary and Rick as audience members of my thesis defense- one of many testaments to how much they care about continued mentorship. Lastly, I'm thankful to still be in touch with my Mullin Fund Mentor (Dr. Ken Onel), who supported me throughout my PhD, and lucky to connect with other Ted Mullin Scholars (including one who will be my resident at Penn!).

### **Ted Mullin Fund Investment by the Numbers**

# \$1,620,756.72

fundraised since 2006 by the Ted Mullin Fund to support the pediatric cancer research and scholar program at the University of Chicago Medicine Comer Children's Section of Hematology/Oncology.

This success is built on the generosity of the donors and participants of the Ted Mullin Fund Hour of Power Fundraisers held across the country. This total is the result of over 2,706 individual donations from 48 different states and the District of Colombia.

The University of Chicago Medicine Comer Children's Hospital has selected 43 undergraduate studentathletes as Ted Mullin Scholars from across the country. So far, 35 scholars have completed their undergraduate degree and 33 scholars work in or study biosciences . Scholars hail from 20 different universities across 9 different states and the District of Colombia.



#### **Scholars in the Biosciences**

