2023

REPORT TO OUR COMMUNITY

MASONIC CANCER CENTER
UNIVERSITY OF MINNESOTA

NCI Comprehensive Cancer Center
A Cancer Center Designated by the National Cancer Institute


LYMPHATIC VESSELS
BRONCHUS


Cancer Fighters


MINNESOTA
CLINICAL TRIALS NETWORK

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Director's Message

Saying farewell to my role as director

Another year has flown by, and—as always—I am inspired by the incredible teamwork of our community of researchers, faculty, staff, and partners. Thanks to them, Minnesota continues to benefit from the Masonic Cancer Center's influence on cancer prevention, early detection, diagnosis, treatment, whole-of-life care, and survivorship innovation and support.

It's because of these powerful partnerships, deep collaborations, and spirit of innovation that I feel confident I am leaving Minnesotans in the best possible hands as I step down from my role as Director of the Masonic Cancer Center. There is an ongoing search for my successor and I'm committed to ensuring a smooth transition. Once a new director is named, I'll remain in my role as a professor of Medicine and Pharmacology and will continue to lead my lab team and participate in clinical research and care as a breast oncologist.

This past year I was thrilled to see our team opening clinical trials rapidly to ensure patients have access to state-of-the-art new therapies, addressing the potential environmental exposures associated with increased cancer risk, and taking positive steps in addressing disparities in cancer outcomes.

MCC is proud of the legacy we have built as a driver of life-saving and life-extending research, care, and policy influence, whether that's here in the Twin Cities or across the state. We are equally as proud of the impressive collection of partners, collaborators, and supporters who have joined us to invest in Minnesota's families and future by tackling the leading cause of mortality in our state.

To all of you, whether you've been in our community for a while or you're a new addition: thank you! We appreciate your help, support, and interest in our work. Together, we're working to write cancer's last chapter.

Douglas Yee, MD
Director, Masonic Cancer Center

About the Masonic Cancer Center

Our Mission

Our mission is to reduce cancer's burden in Minnesota and throughout the world. This mission is carried out through four priority areas: reducing the cancer burden; driving research discovery; accelerating the path to cures; and enabling research excellence.

Our Vision

We envision the Masonic Cancer Center as a preferred academic research hub for those seeking the best precision cancer treatment, clinical trials, and prevention measures informed by research from world-renowned experts and performed by top clinicians. We aim to attract and retain an exceptional workforce drawn to our academic excellence, equitable and collaborative environment, and focus on nurturing and developing the next generation of cancer researchers, health care providers, and educators.

We are part of the larger mission of the University of Minnesota:

Research and discovery

Teaching and learning

Outreach and public service

NOTABLE NEWS COVERAGE

from the past year

IS PROTEIN EXPRESSION THE KEY TO PERSONALIZED OVARIAN CANCER TREATMENTS?

V FOUNDATION

January 3 ,2023

CANCER TREATMENT IS A MINEFIELD OF BILLS, MEDS, AND JARGON. PATIENT NAVIGATORS CAN HELP PEOPLE OF COLOR FIND A PATH TO BETTER CARE.

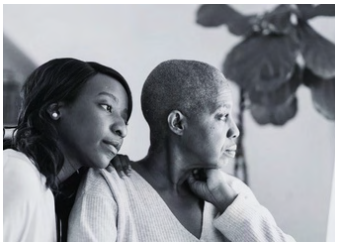
SAHAN JOURNAL

February 13, 2023

CASES OF COLORECTAL CANCER ON THE RISE AMONG YOUNGER AMERICANS

KARE 11

March 22, 2023



WHY WE NEED MORE BLACK AND HISPANIC WOMEN IN BREAST CANCER CLINICAL TRIALS

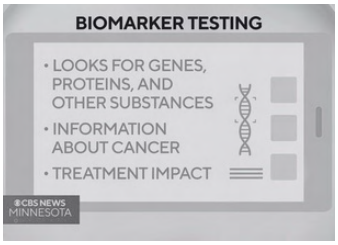
HEALTHY WOMEN

May 1, 2023

FOR UMN RESEARCHERS, FINDING A BETTER WAY TO EDUCATE ABOUT CANCER STARTS IN THE COMMUNITY

MPR NEWS

June 9, 2023



BIOMARKER TESTING MUST BE COVERED BY INSURANCE UNDER MINNESOTA LAW CHANGE

CBS NEWS

July 17, 2023

YOU PROBABLY AREN'T GETTING ENOUGH FIBER

THE NEW YORK TIMES

August 14, 2023

HOW MINNESOTA HELPS LEAD THE FIGHT AGAINST BREAST CANCER

MINNESOTA MONTHLY

October 4, 2023

10KFS RECEIVES $12M FROM NCI

RED LAKE NATION NEWS

October 23,2023

ORONO HIGH SCHOOL STUDENT RETURNS TO THE ICE AFTER OVERCOMING BRAIN TUMOR

KSTP EYEWITNESS NEWS

December 20, 2023

SCAN THE QR CODE TO SEE A LIST OF ALL OUR NEWS COVERAGE

2023 MCC FAST FACTS

OUR CENTER

26 years designated a Comprehensive Cancer Center by the National Cancer Institute

10 shared resources that provide cost-effective access to state-of-the-art technologies, expert guidance and training, and scientific consultation

614 research projects created and led by our scientists and doctors

668 cancer-related publications in peer-reviewed journals

$1.05M in pilot funding awarded to members

total sponsored funding

$85,485,728

2,735 participants enrolled in MCC-led clinical trials

therapeutic trials	364
non-therapeutic trials	2,371

310 clinical trials opened by MCC doctors and researchers

therapeutic trials	151
non-therapeutic trials	159

OUR COMMUNITY

5.7 million
the population of the area we serve: the entire state of Minnesota

24 locations
including Minnesota Cancer Clinical Trials Network sites

75 events
dedicated to cancer wellness education for our communities

9,520 reached
through cancer wellness education opportunities

Reducing the Cancer Burden

Cancer is the leading cause of death in Minnesota. That's why we're laser-focused on ensuring that the research and innovations originating from MCC are driving meaningful change in our communities.

Reducing the cancer burden is a team effort, and MCC is thoroughly committed to driving change in partnership with our community, health care providers, and other supporters and collaborators.

Whether it's uncovering the role that the environment plays in our physical health, piloting new studies that aim to help women learn how to self-test for HPV, or strategizing new ways to get more mobile cancer screening options into the hands of folks across the state, the bottom line is: MCC exists to support Minnesotans.

The Masonic Cancer Center serves the entire state of Minnesota. By engaging communities, we are able to share our life-changing and life-extending information on prevention, treatment, survivorship, and clinical research opportunities.

Amna Hussein, community outreach and engagement manager, speaks with event attendees.

MCC research identifies the role of air pollution in childhood cancers

In a new study led by the Masonic Cancer Center and the U of M Medical School, researchers found that exposure to air pollution and vegetation may impact childhood cancer development.

The study, led by MCC researchers Lindsay Williams and David Haynes, examined over 6,000 children with cancer and 109,000 children without cancer in Texas. The study found that over a period of about 15 years, increasing exposure to a type of air pollution called particulate matter (PM2.5) during the birth year increased the risk of developing any childhood cancer and specifically lymphoid leukemia, lymphoma, ependymoma, retinoblastoma, and thyroid carcinoma.

"As a childhood cancer epidemiologist, I am always concerned with identifying factors that increase risk of cancer development in kids," said Williams. "There is growing evidence that air pollution during pregnancy and fetal development increases the risk of developing some diseases in children, including cancer."

Williams, Haynes, and team decided to take a look at what environmental exposures might reduce the risk of childhood cancer development. And they uncovered something interesting.

A family poses in front of the falls at Minnehaha Regional Park in south Minneapolis.
Photo/Minnehaha Creek Watershed District

The team examined the association between residential greenness—or vegetation density around the home—and childhood cancer risk, as plants can remove up to 20 percent of PM2.5 from the air. They found that increasing exposure to residential greenness reduced the risk of developing ependymoma and medulloblastoma—the two most commonly diagnosed cancerous brain tumors in children.

Williams and team stress that exposures to both air pollution and greenness are things that can be modified or targeted as risk reduction and prevention strategies through policy measures or changes in environment, like planting more trees and vegetation in residential areas.

Williams, Haynes, and team are excited to continue their research to examine more specific timing of exposures during pregnancy as well as the role other air pollutants might play in childhood cancer development.

Spotlight

Community Outreach and Engagement

Connecting with our community

The Office of Community Outreach and Engagement (COE) at MCC works to reduce the burden of cancer in Minnesota by engaging communities and providing them access to knowledge and information about cancer prevention, early detection, treatment, survivorship and caregiving, and clinical research opportunities.

Kiara Ellis, director of community outreach and engagement for MCC, puts it this way: "Working in community outreach, we serve as a key bridge in developing best practices that will be impactful."

She adds, "There are centers that do a lot of work with their patient population—how do we approach them about clinical trials? How do we share information about these complicated cancers? What is it they want to know? It's the outreach offices that drive that work. Being able to bring relationships to the cancer center anchors the center in the community."

"Community outreach—in any space, not just cancer centers—sometimes is a topic that can be glossed over," Kiara says. "But our offices are essential. And centers that support this outreach and engagement infrastructure have a leg up in pushing forward and making a large impact in the communities we serve, which is our ultimate goal."

Kiara Ellis, MCC's director of community outreach and engagement.

DONATE TO OUTREACH EFFORTS

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cancer.umn.edu/donate

Spotlight

Bringing the experts to you

Fireside Chats: Your inside look at cancer research and care, directly from our doctors

These free, monthly virtual sessions are used to educate our community on cancer, research, and other health-related topics—and they are presented by experts in an easy-to-understand format. Each presentation is followed by a discussion that allows community members to engage in moderated conversations with experts from the University and other community organizations.

We cover everything from the various types of cancers, to the best ways to prevent the disease in your daily life, what it means to be a survivor and the types of support available to survivors and their loved ones, as well as the new therapies and medicines created by our doctors and scientists.

No matter where you are in life, cancer has probably touched your life in some way. Through Fireside Chats and many other engagement opportunities, we're here to be a resource for you.

Learn more about upcoming Fireside Chats and sign up to attend at **z.umn.edu/fireside-chats**.

Are you a cancer survivor or caregiver who would be interested in sharing your story as a special guest for a Fireside Chat? Contact Amna Hussein, husse045@umn.edu, to discuss possibilities.


Goldy vs
CANCER
Masonic Cancer Center


COLON CANCER
Malignant (cancerous) growth in the
lining of the colon. The key to early
detection is regular colon
screenings. Most patients survive
colon cancer if it is found
early and removed.
MALIGNANT
POLYP
CROHN'S

Spotlight

Pursuing equity in science and medicine



From left to right: Dr. Rahel Ghebre, Heidi Eschenbacher, and Daanis Chosa.

MCC's latest investments in diversity, equity, and inclusion (DEI)

Investing in DEI is an investment in excellence for our cancer center that benefits all of us. The Masonic Cancer Center's DEI strategy aims to attract people who are under-represented in science and medicine to advance cancer research. This work engages everyone at MCC to address equity in our structures, systems, environment, and actions. In the words of Dr. Rahel Ghebre, associate director for DEI: "All of us do DEI work."

In Minnesota, American Indians have high rates of cancer—and there are very few American Indian cancer researchers. The Center for American Indian and Minority Health (CAIMH), and MCC are working to remedy this by welcoming Native and American Indian students and early career professionals into cancer careers. In September 2023, we received funding to hire Daanis Chosa as an American Indian and Alaska Native Training Navigator to help MCC implement training navigation, a National Cancer Institute program. Daanis is from the Keweenaw Bay Indian (Chippewa) Community in Michigan and is an enrolled member of the Bois Forte Band of Chippewa in Minnesota. This work has strengthened our collaborations with American Indian health providers, researchers, and communities across the state.

The DEI team, led by Heidi Eschenbacher, PhD, has also been focusing on strengthening our infrastructure to welcome people of all backgrounds as contributors to cancer research, particularly enhancing diversity in clinical trials and other research. All of this in turn helps us ensure that all Minnesotans can benefit from the most recent innovations in cancer research.

Stay tuned for further updates as we strive for diversity in who we are, equity in what we do, and inclusion in our interactions and environments to advance cancer research.

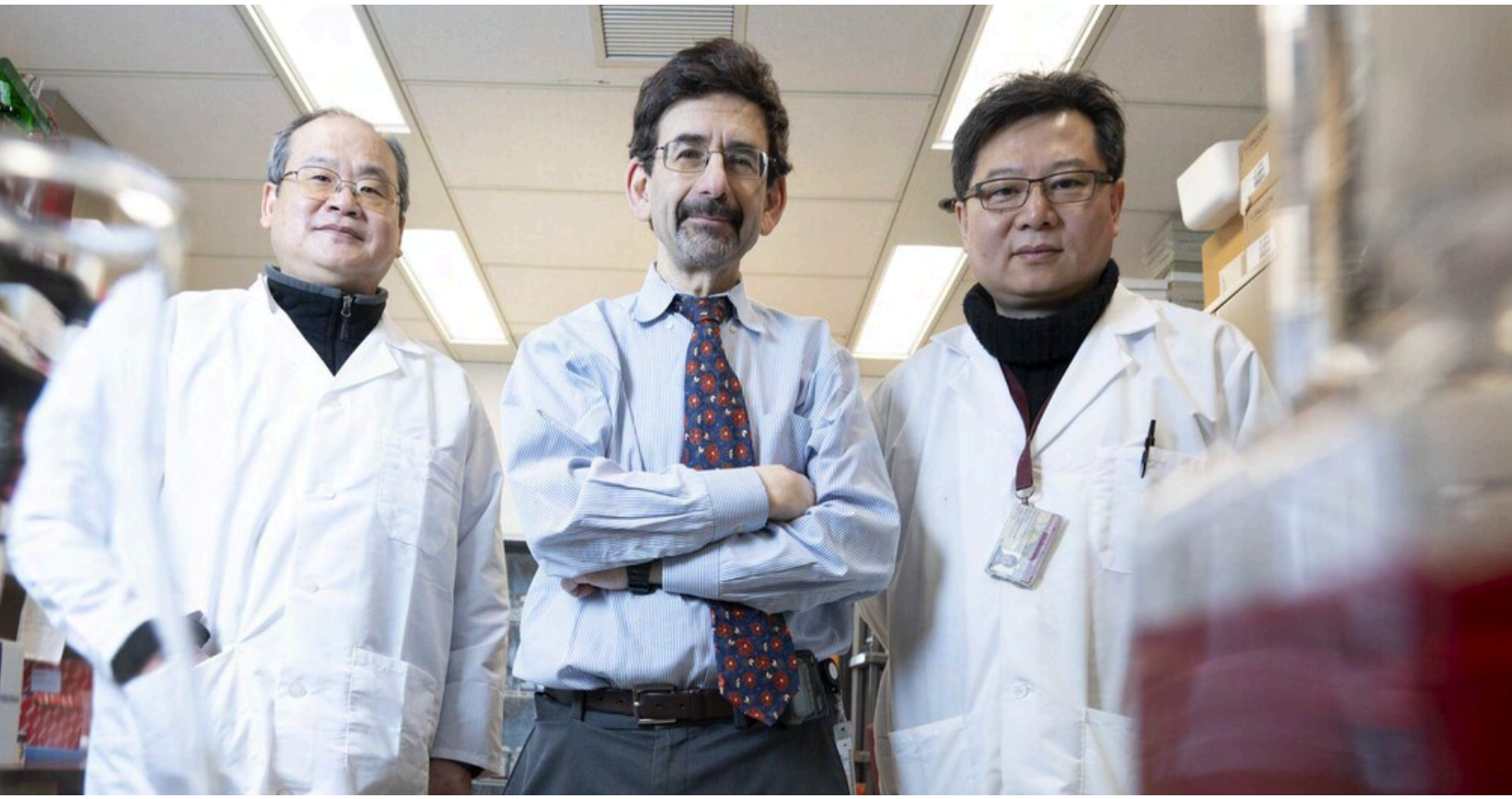
Driving Research Discovery

MCC has a deep legacy of over 30 years of research innovation, and we're only getting more ambitious.

Our spring and fall 2023 Internal Grants Program provided hundreds of thousands of dollars in pilot grant funding for studies led by Masonic Cancer Center researchers.

Our researchers have used this funding to pursue deeper knowledge and advanced treatment strategies across a wide expanse of cancer and health issues. These projects include: cardiovascular health in breast cancer survivors, anal cancer screening strategies, reducing shisha smoke exposure in Somali homes, special treatments for patients with advanced prostate cancer, and much more.

Thank you to each and every one of our generous supporters—including Minnesota Masonic Charities, Killebrew Thompson Memorial Fund, the Randy Shaver Cancer Research and Community Fund, and countless other groups and individuals—for helping these projects come to life.



David Potter, MD, PhD (center), and his research partners, Zhijun Guo, PhD, and Jianxun Lei, PhD, are developing a new way to help those diagnosed with treatment-resistant breast cancer.

Putting out breast cancer's biggest fires

At the Masonic Cancer Center, we translate scientific breakthroughs into lifesaving clinical treatments with unparalleled ambition and urgency.

Across our cancer center, our scientists and doctors are making these scientific breakthroughs in several different ways, and for several different types of cancer.

Dr. David Potter, a breast oncologist, has his own approach: He's going after the baddest, meanest breast cancers he can find.

"We want to go beyond treating easy-to-kill cancer cells," Potter says. "We want to kill the toughest of the tough."

Thanks to improving therapies and earlier detection, survival rates for breast cancer have never been higher—but certain subsets of the disease are resistant to treatment and remain as deadly as ever.

To tackle these extra-tough tumors, Potter and his team are using biguanides, a class of drugs originally designed to fight diabetes but recently shown to work against tumors as well. These drugs attack tumor cells and activate the immune system's ability to fight the tumor.

Potter likens immune T cells that fight cancer to firefighters saving a home from an automotive fire in a garage.

"Imagine that the resistant tumor is like a burning car with a powerful engine consuming oxygen and producing toxic fumes," he says. "The biguanides are like a hand that turns off the car's engine. By activating our 'firefighters'—in this case the body's immune system—we're able to smash our way into that garage and get the biguanides in to shut off the ignition, and then have the 'firefighters' drag that car out of the garage to save the occupants of the house."

Potter and his collaborators are assessing this treatment in animal models and hope to translate it to human clinical trials in the near future. Gifts from donors like the Taylor Family Foundation and the Randy Shaver Cancer Research and Community Fund have been integral in his team's research progress thus far.

"None of this would have been possible without their support," Potter says.

This story has been adapted from the original version authored by Zach McCormick.

Cancer-fighting boot camp

Branden Moriarity might technically be a cancer biologist. But in some ways, he's the most life-changing boot camp instructor you've ever met.

Moriarity, an associate professor of pediatric hematology and oncology at the University of Minnesota Medical School, spends his days helping ill-equipped immune cells get into shape to fight back against cancer.

His method of choice? A type of cancer treatment known as adoptive cell therapy.

Adoptive cell therapy is centered on the idea of beefing up the body's existing immune cells in just the right way so that they're able to kill cancer cells more effectively.

"We take immune cells from a patient or a healthy donor and then we engineer them to better attack cancer," Moriarity explains.

Adoptive cell therapy is a type of immunotherapy that is reshaping the field of cancer care and giving more people a chance at a cure. Moriarity and his team are exploring several kinds of adoptive cell therapies—including chimeric antigen receptor (CAR) T-cell therapy, tumor-infiltrating lymphocyte (TIL) therapy, T-cell receptor (TCR) therapy, and natural killer (NK) cell therapy—that have shown promise in treating even the most aggressive forms of cancer.

Branden Moriarity, PhD.

Using leading-edge gene editing tools like CRISPR, Moriarity and company are able to activate, strengthen, or multiply a person's existing immune cells and then redeploy them for maximum anti-cancer effect.

Fueled by philanthropic support, including from the Brave Like Gabe Foundation and the Randy Shaver Cancer Research and Community Fund, the team has launched several clinical trials assessing various forms of adoptive cell therapy. Moriarity says the potential of these treatments cannot be overstated.

"It has cured people of cancer who otherwise should not have lived," he says. "These are highly metastatic patients who have exhausted every other treatment option, and these adoptive cell therapies have come in and actually cured them."

Get a look at the process on the next page!

This story has been adapted from the original version authored by Justin Harris.

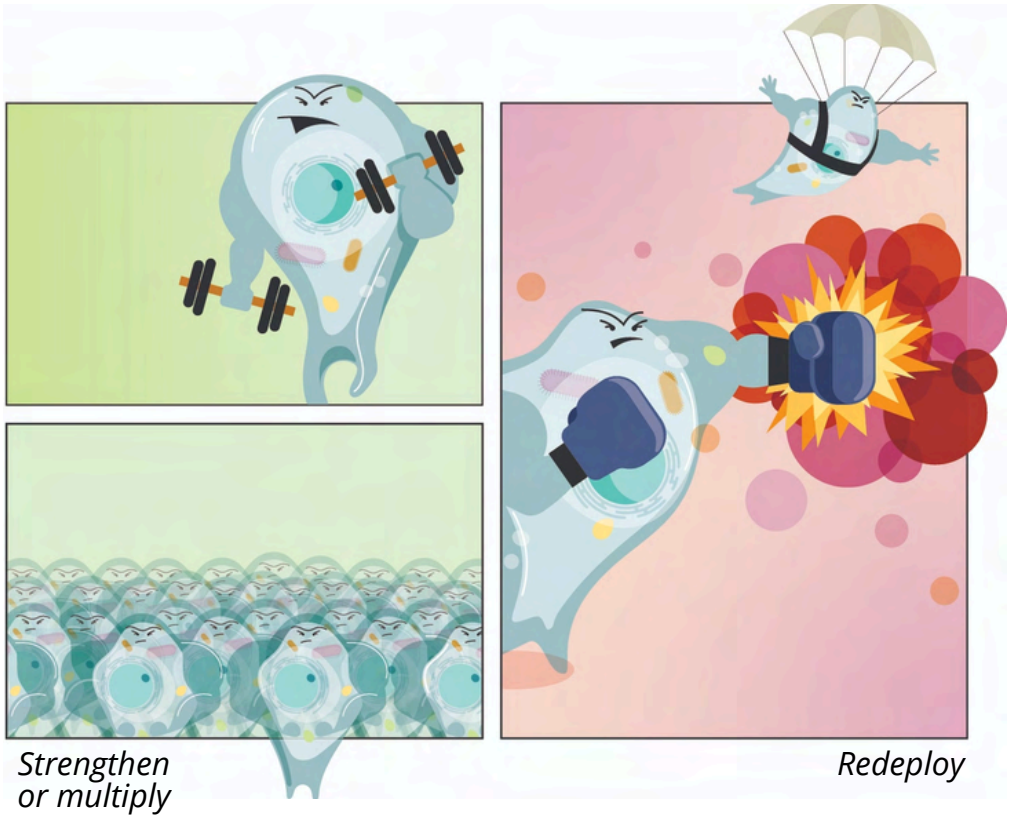
Spotlight

Immunotherapy innovations

Illustration by Lisa Haines

Enlist

Activate



Strengthen or multiply

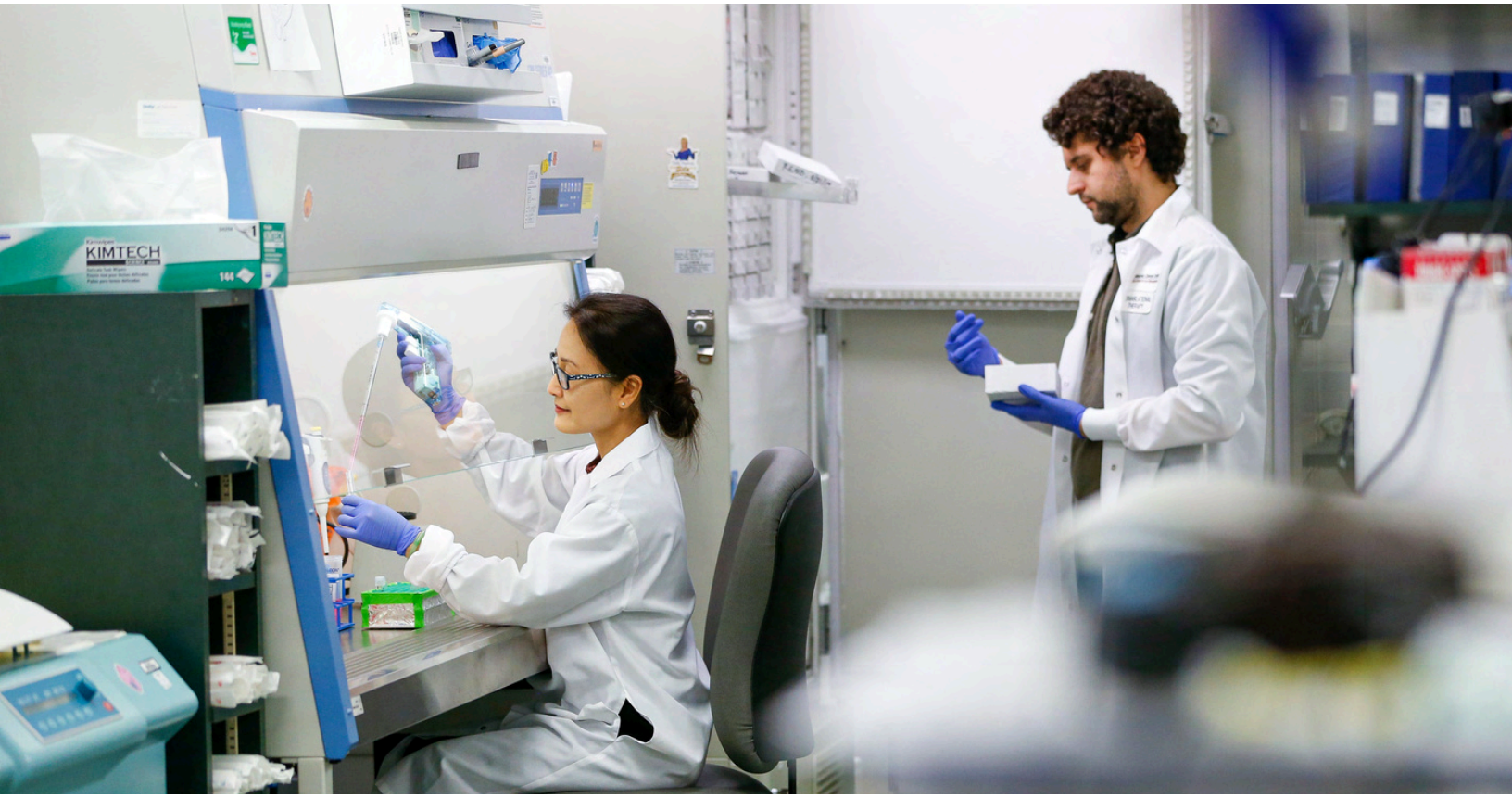
Redeploy

Accelerating the Path to Cures

Translating research into clinical trials and products that could create new standards of care is crucial—because it means taking new ideas from the lab and turning them into potential cures. At the Masonic Cancer Center, this process is supported largely by our Cancer Research Translational Initiative (CRTI).

From identifying ideas with significant clinical and scientific potential to transforming them into clinical trials and publishing the results, our translational mechanism empowers researchers to translate their research swiftly and safely. Thanks to a number of comprehensive support services at MCC, there is a built-in pathway for ensuring that promising research from our doctors and scientists moves efficiently from the lab to the clinic, leading to the development of new treatments, enhanced patient care, and advancements in medical science.

The motto for this area of our work is: **"Today's research is tomorrow's hope for a cure."**



MCC researchers testing out new theories and strategies in our Translational Therapy Laboratory.

The role of community physicians in cancer clinical trials

Investing time and effort in clinical trial partnerships between community and academic cancer centers like MCC begins with opening sustained lines of communication between community oncologists, academic oncologists, and their patients. This creates long-term relationships that increase the scope of clinical research and brings us closer to the ultimate goal of providing high-quality, accessible care to all patients with cancer.

In an April 2024 interview with OncLive®, MCC's Associate Director of Translational Research Dr. Emmanuel Antonarakis and Medical Director for the M Health Fairview Masonic Cancer Clinic Dr. Gautam Jha discussed potential strategies for maximizing patient accrual to clinical trials as well as potential barriers to partnerships between community and academic cancer centers. Importantly, they discuss how crucial it is to keep patient care at the forefront of all clinical research endeavors, regardless of where patients receive treatment.

For MCC, the ECLIPSE trial—a phase 3 trial that evaluated a new therapy against standard of care hormone therapy in patients with a specific type of prostate cancer—was the vehicle that helped bridge some relationships

From left to right, Drs. Gautum Jha and Emmanuel Antonarakis.

between the UMN cancer research community and community doctors in Minnesota. Dr. Antonarakis puts it this way: "When university physicians such as myself collaborate closely with community physicians such as Dr. Jha, everyone benefits, not just the patients. We benefit as physicians because we have two opinions on every patient."

"Plus," he adds, "everyone feels more like a community. Our research nurses on the university campus and the research nurses at the satellite, or community, clinics feel like a part of the same team." Together, Drs. Jha and Antonarakis and their teams are looking at other clinical trials that may benefit from this partnership model.

"We as physicians and oncologists should keep doing what we've always done, which is keeping the patient at the center—whether their care is conducted in a community clinic or university medical system," said Dr. Antonarakis.

This story has been adapted from the original version authored by Ashling Wahner.

Tackling new strategies for canine bone cancer

Osteosarcoma, the most common form of bone cancer in dogs, is a tumor that usually affects the limbs of middle-aged to older large-breed dogs and carries a dire prognosis. As cancerous cells replace the normal bone causing swelling, pain, and increased risk of fracture, there is a greater need for innovative treatment strategies.

That's where our MCC researchers come in, helping study and design new therapies that can treat and even prevent bone cancer in dogs.

In typical, standard treatment, the primary tumor is removed via amputation of the affected limb or various salvage techniques. This is paired with chemotherapy to address cancer cells that have spread to other parts of the dog's body. Unfortunately, less than half of dogs receiving standard treatment survive more than a year after diagnosis, which means there is a consistent need to try new methods of treatment that will yield better results.

What's more, osteosarcoma in dogs shares many characteristics with osteosarcoma in humans (most often diagnosed in adolescents)—which means our insights into treating canine bone cancer may have the potential to significantly advance our understanding of and treatment approaches for both dogs *and* kids.

These fresh ideas and approaches come from both seasoned and new researchers alike who can build on our current understanding of canine bone cancer and use evolving technologies to improve outcomes for affected dogs.

Thankfully, this work is happening daily at the Masonic Cancer Center courtesy of researchers funded by the American Kennel Club Canine Health Foundation (AKC CHF). Below, hear about how they are testing bold, new strategies to fight bone cancer and their favorite aspects of belonging to the veterinary medicine community.

JAIME MODIANO, professor
"Our team members come from many walks of life. Their individual life experiences and motivation are a constant source of new ideas."

CAITLYN CALLAGHAN, vet student
"Cancer treatment options for dogs are definitely increasing. I want to make sure dog owners know that they have access to these options."

JULIA MEDLAND, assistant professor
"The more we learn, the more complex osteosarcoma appears. We are reframing how we treat the disease to benefit dogs and people."

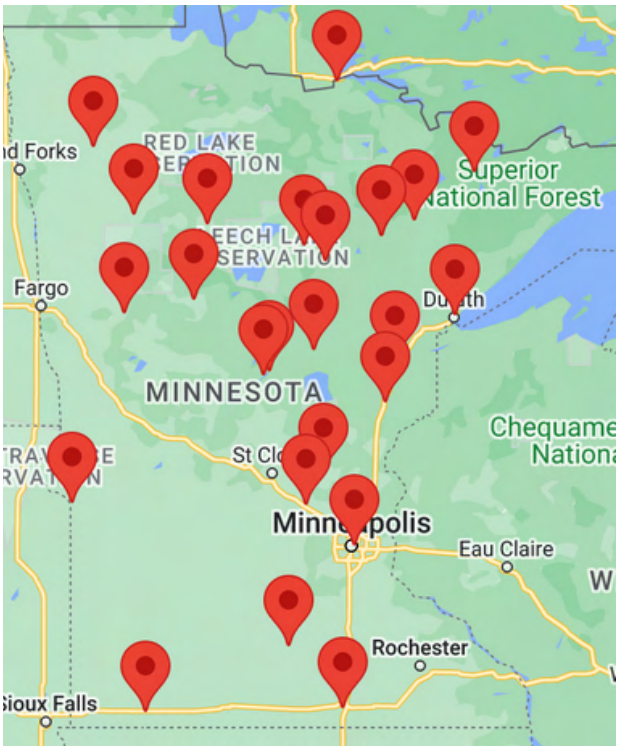
COURTNEY LABE , vet student
"I am thankful for classmates and instructors who value continued improvement in patient outcomes and critical analysis of new research."

Minnesota Cancer Clinical Trials Network

The Minnesota Cancer Clinical Trials Network (MNCCTN) aims to improve cancer outcomes for all Minnesotans through greater access to cancer clinical trials in prevention and treatment.

MNCCTN works toward this mission by bringing cancer clinical trials from academic institutions like the Masonic Cancer Center to 24 site locations statewide via partnerships between the MNCCTN HUB at the Masonic Cancer Center and five clinical partners: Essentia Health, M Health Fairview, Mayo Clinic Health System, Metro-Minnesota Community Oncology Research Consortium, and Sanford Health.

MNCCTN is also dedicated to building a culture of research and increasing knowledge and comfort with clinical trials across Minnesota's communities through education initiatives, community outreach and engagement, social media, and events.



MNCCTN sites reach across the entire state, serving patients at 24 different clinics.

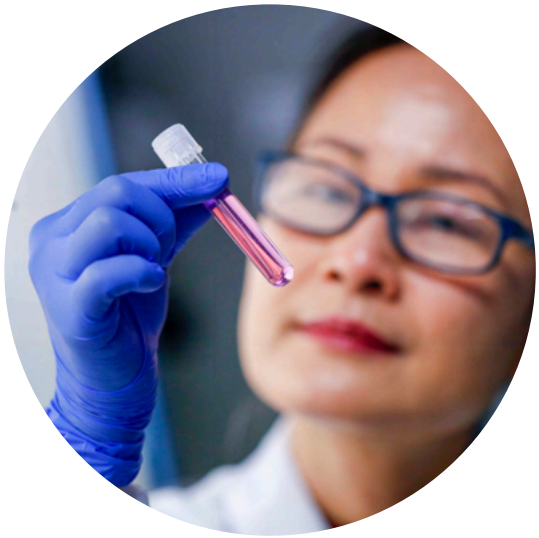
This year, MNCCTN launched a Community Advocates program in collaboration with the MCC. The program allows community members to bring their expertise, lived experience with cancer, and perspectives to multiple areas of cancer research at MNCCTN and MCC.

In addition to new initiatives, MNCCTN has also continued to grow over the past year, with two new roles added to the HUB Team, one new site in Moose Lake, and multiple new trials in development. As of March 2024, 63 clinical trials were open, in start-up, or in development across the network. Since its inception, MNCCTN has enrolled a total of **4,158 participants** in clinical trials.

Enabling Research Excellence

Addressing the cancer burden through research, community programs, and clinical trials requires a solid foundation to drive success. MCC's commitment to enabling research excellence drives every other facet of our work: from reducing the cancer burden, to accelerating the path for cures, and driving research discovery.

This foundation of research excellence is achieved through a number of different priorities, including engaging the communities we serve, further embedding diversity, equity, and inclusion into our recruiting pipeline and internal representation, promoting cancer career growth and development, and actively building and nourishing partnerships with key stakeholders across the state of Minnesota. Most importantly, this foundation would not be achievable without the generous support of our donors, supporters, and collaborators.



Thank you to each and every person and organization who champions the work of the cancer center, whether it be financially, within the community, at the legislature, on social media, or with neighbors and loved ones.

We've said it before, and we'll say it again: Solving the problem of cancer is a collaborative effort. We could not do this work without you. Thank you for your ongoing support.

IGCPR hosts World Health Organization event to strengthen global tobacco control efforts

Over 50 people from 21 countries traveled to Minneapolis in December 2023 for the 2023 Plenary Meeting of the World Health Organization's Tobacco Laboratory Network (TobLabNet).

Established by the World Health Organization (WHO) Tobacco Free Initiative in 2005, TobLabNet is a global network of independent laboratories that develop and validate methods and standard operating procedures for testing the contents and emissions of nicotine and tobacco products.

Hosted for the first time by the University of Minnesota's Institute for Global Cancer Prevention Research (IGCPR), the five-day gathering brought together professionals from a variety of fields, including medical practitioners, public health officials, tobacco control specialists, and WHO regional representatives. The event was separated into two parts: three days of plenary sessions in downtown Minneapolis, followed by two days of training workshops for some of the attendees in the Masonic Cancer Center's laboratories on the UMN campus.

The group gathered at the plenary sessions.

Irina Stepanov, professor at the UMN School of Public Health (SPH) and IGCPR's director, said that hosting the event and developing the training workshops was a perfect fit given IGCPR's dual mission of conducting cutting-edge, translational research in cancer prevention and control, and serving as a training ground for aspiring researchers from around the globe.

With the support of MCC, SPH, and the UMN Medical School, IGCPR recently established a new laboratory that uses the latest techniques and develops new methods to monitor the levels of harmful chemicals in traditional and emerging tobacco products and other carcinogenic exposures. The new lab is also equipped to identify biomarkers that signal exposure to environmental toxicants and carcinogens and will enable researchers to investigate how carcinogens metabolize and damage DNA to gauge a person's cancer risk.

This story has been adapted from the original version authored by Virgil McDill.

Spotlight

Pathways to cancer careers

Training the next generation of cancer doctors, researchers, and care providers

Equipping and exciting the next generation of health care professionals and researchers is a huge priority in cancer research and care.

And at MCC, we're doubling down on dedicating a large portion of our energy to STEM-related training that opens up pathways to cancer careers for youth in our communities.

STEM refers to science, technology, engineering, and mathematics. By coaching and equipping young students who are interested in these fields, we have an opportunity to help develop future generations of doctors, nurses, scientists, educators, and other care providers.

For the Education and Training team at MCC, this type of investment is crucial. "This is how our science gets out into the community and prepares the next generation of leaders in cancer research and care," says Cathleen Drilling, education and training manager for MCC.

MCC's Education and Training initiatives have recently ramped up, but a staple offering of the last 15 years is our intensive high school and undergraduate internship programming, currently called the M-ASCEND program. Short for "Minnesota-Advancing Science, Enhancing Diversity", M-ASCEND is designed to support the academic persistence of high school and undergraduate students who are under-represented in science and medicine and promote their progress toward future careers in cancer research.

Chris Pennell (far right), an M-ASCEND program leader, speaks with a student at an April 2023 event.

And the programming boasts impressive numbers: Of the total undergraduate students who have gone through the program, 80 percent have remained in a science, health, or medical-related field.

Recently, the program has expanded to support educators as well. "We've been working with Minnesota teachers to help them plan and implement curriculum changes that will excite their students about cancer biology and relevant career pathways. This has allowed us to expand our partnerships with local schools as well," says Cathleen. "We've even hosted some of those schools at our cancer research facilities on the University of Minnesota Twin Cities campus and shown students the ins and outs of our lab work."

Christopher Pennell, PhD, a program leader for M-ASCEND and associate director of training and education for MCC notes, "Diversifying the cancer research workforce is critical to addressing the pressing needs of increasingly diverse patient populations in Minnesota and across the U.S. We're thrilled to play our part in advancing these efforts right here in the Twin Cities."

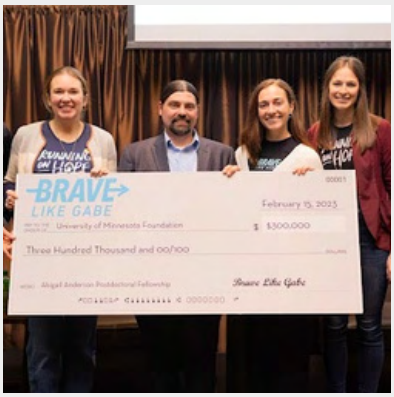

Goldy vs. CANCER
#GOphezACure
Goldy vs. CANCER
MASONIC CANCER CENTER
UNIVERSITY OF MINNESOTA
Goldy vs. CANCER
MASONIC CANCER CENTER
UNIVERSITY OF MINNESOTA
Is a killer hiding right under your nose?
A 5 MINUTE SCREENING COULD SAVE YOUR LIFE!


Goldy vs. CANCER
Goldy vs. CANCER


Radiation Therap
Cancer Center

A year of partnership and generosity

We extend our deepest thanks to our community for making 2023 such an impactful year in our 30-year history. What makes the year truly special, though, are the possibilities created by the people who gave, including many former patients, current patients, family members, and other longtime supporters.



Photos provided by the University of Minnesota Foundation.

2,961

# of philanthropic donors in 2023

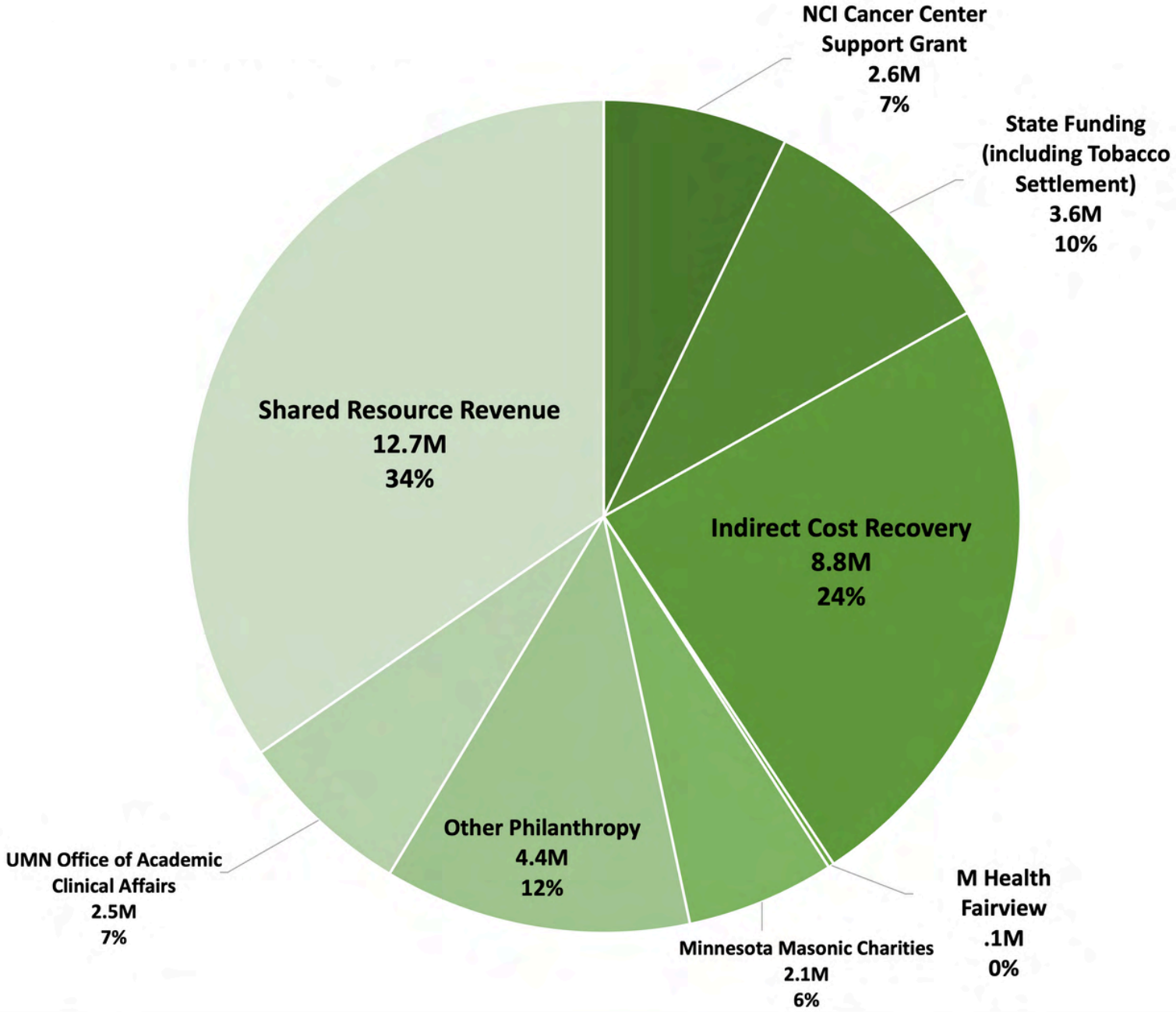
$8,768,606

donated by MCC supporters in 2023

Financial Summary

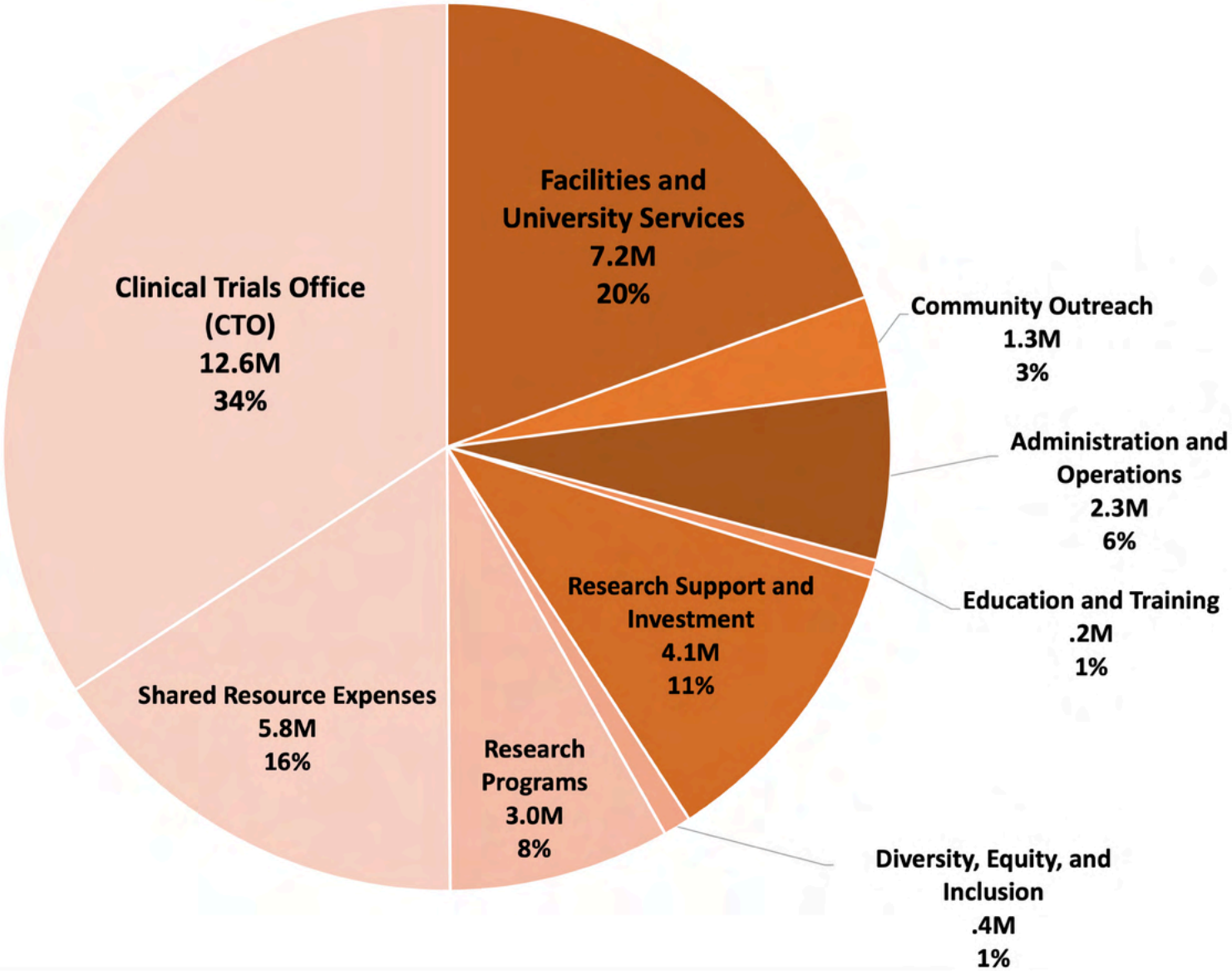
FY24 MCC Funding Sources

TOTAL: $36.4M



FY24 MCC Spending Categories

TOTAL: $36.4M



Top: Minnesota Masonic Charities leaders pose alongside UMN leaders at the 2024 Masons Annual Dinner.
Bottom left: Douglas Yee, MCC director, and Eric Neetenbeek, former CEO of Minnesota Masonic Charities.
Bottom right: Douglas Yee, MCC director, unveils the original MCC logo at a Minnesota Masonic Charities event.

A legacy of giving: Minnesota Masonic Charities

When it comes to advancing life-changing cancer research, few donors have done as much as Minnesota Masonic Charities.

From the Masons' earliest gift to the University of Minnesota in 1955, which built the 80-bed Masonic Memorial Hospital, to their landmark commitment to the Masonic Cancer Center, University of Minnesota in 2008, Minnesota Masonic Charities has been a pillar of support and a beacon of hope for the people of Minnesota and beyond—having given nearly $100 million to fuel discoveries, improve care, and create a brighter future for people facing cancer.

The Masons' steadfast partnership has allowed University of Minnesota physicians and scientists to find solutions to some of society's most vexing challenges and move closer to our shared goal: a world without cancer.

MINNESOTA
MASONIC
CHARITIES

MCC Pilot Grants

SPRING AND FALL 2023

Area of research funded	Number of awards	Total amount invested
Translational Research	4	$300,000
Women's Cancers	1	$50,000
Colon Cancer	2	$50,000
Pediatric Cancer	1	$50,000
Sarcoma	1	$50,000
Junior Faculty Research*	4	$160,000
Interdisciplinary Cancer Research**	2	$200,000
Community-Engaged Research	2	$200,000

* American Cancer Society Institutional Research Grant pilot awards support junior faculty in initiating cancer research projects so they can obtain preliminary results that will enable them to successfully compete for national research grants.
** These pre-R01 brainstorm awards foster interdisciplinary cancer research projects, with the ultimate goal of obtaining new R01s (or equivalent) from federal sources.

Recipients

Jeremy Allred
Emmanuel Antonarakis
Elliot Arsoniadis
Martina Bazzarro
Erin Dickerson
Justin Drake
Fang Lei
Paolo Goffredo
Arjun Gupta
Leena Hilakivi-Clarke
Hai Dang Nguyen
William Pomerantz
Subree Subramanian
Stefani Thomas
Thu Truong
April Wilhelm
Beshay Zordoky

Our People

Senior Leadership

Douglas Yee, MD, Director

Jeffrey Miller, MD, Deputy Director; Co-Leader, Immunology Program

Aaron Schilz, MPA, Associate Director for Administration

Emmanuel Antonarakis, MD, Associate Director for Translational Research

Silvia Balbo, PhD, Co-Leader, Carcinogenesis and Chemoprevention Program

Anne Blaes, MD, Co-Leader, Screening, Prevention, Etiology, and Cancer Survivorship (SPECS) Program

Melissa Geller, MD, MS, Associate Director for Clinical Research

Rahel Ghebre, MD, MPH, Associate Director for Diversity, Equity, and Inclusion

Daniel Harki, PhD, Co-Leader, Cellular Mechanisms Program

Stephanie Huang, PhD, Co-Leader, Genetic Mechanisms Program

Carol Lange, PhD, Associate Director for Basic Sciences

Heather Nelson, PhD, MPH, Associate Director for Cancer Prevention and Control

Frank Ondrey, MD, PhD, FACS, Co-Leader, Carcinogenesis and Chemoprevention Program

Helen Parsons, PhD, MPH, Co-Leader, Screening, Prevention, Etiology, and Cancer Survivorship (SPECS) Program

Christopher Pennell, PhD, Associate Director for Training and Education and Flow Cytometry

Jen Poynter, PhD, MPH, Associate Co-Director for Community Outreach and Engagement

Rebekah Pratt, PhD, Associate Co-Director for Community Outreach and Engagement

Kaylee Schwertfeger, PhD, Co-Leader, Cellular Mechanisms Program

Yoji Shimizu, PhD, Co-Leader, Immunology Program

John Wagner, MD, Leader, Transplantation and Cellular Therapy Program

Masato Yamamoto, MD, PhD, Co-Leader, Genetic Mechanisms Program

Shared Resource Directors

Kenneth Beckman, PhD, Co-Director, Cancer Genomics

Martin Felices, PhD, Co-Director, Translation Therapy

Timothy Griffin, PhD, Director, Proteogenomics

Timothy Hallstrom, PhD, Director, Mouse Genetics Lab

Betsy Hirsch, PhD, Co-Director, Cancer Genomics

Branden Moriarity, PhD, Co-Director, Genome Engineering

Christopher Pennell, PhD, Director, Flow Cytometry

Davis Seelig, DVM, PhD, Director, Comparative Pathology

J. Sunil Rao, PhD, Director, Biostatistics

Peter Villalta, PhD, Director, Analytical Biochemistry

John Wagner, MD, Co-Director, Translational Therapy

Jinhua Wang, PhD, Director, Cancer Informatics

Beau Webber, PhD, Co-Director, Genome Engineering

Our People

Administrative Team

Administrative Leadership

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Megan Johnson
Elizabeth Kerr
Laura Klein
Deepa Kolaseri
Erica Orcholski
Megan Pingry
Marie Rahne
Susan Rottschaefer
Briana Sajan
Dedra Schendzielos
Marina Sladojevic

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Jessie Alkire
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Andi Bartz
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Kevin Coyle
Liz Danley
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Hannah Ford
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Amirah Gray
Amna Hussein
Emily Kraeske
Kyle Kummer
Sydney Lusardo
Kylie Lydon
Katie Manthey
Leigha Markuson
Lissa Martinez-Huebner
Edie Nelson
Laurel Nightingale
Amy Nos
Katherine Novak
Ashley Pohlenz
Brittany Pulkrabek
Kenzie Randolph
Adam Salzwedel
Mona Santa Ana
Irene Schulte
Alisha Seay
Lei Simmons
Mai Thao
Shaneka Thomas
Michiah VanSyckel
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Thank you for your ongoing support of the Masonic Cancer Center.

Make a gift to MCC.

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MASONIC CANCER CENTER

UNIVERSITY OF MINNESOTA

NCI Designated Comprehensive Cancer Center

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