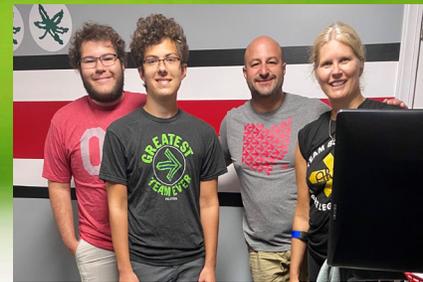


TURNING CANCER DISCOVERIES INTO TREATMENTS

# FRONTIERS

PELTONIA SPECIAL EDITION 2020

*Pivoting While Staying Focused on One Goal*



The James

 THE OHIO STATE UNIVERSITY  
COMPREHENSIVE CANCER CENTER

**NCI** Comprehensive  
Cancer Center

A Cancer Center Designated by the  
National Cancer Institute

## LEADERSHIP PERSPECTIVE

The COVID-19 pandemic has changed our lives in many ways, but one thing it hasn't changed is the need for science-based and compassionate cancer care. We still face the stark reality that one in three women and one in two men will be diagnosed with some form of cancer and that many will die of it. The American Cancer Society estimates there will be 1.8 million new cancer diagnoses and over 606,500 cancer deaths in the United States this year.

Fortunately, another thing that has been unaltered by the pandemic is the collective resolve of everyone at the OSUCCC – James and in the Pelotonia community to end cancer and realize our shared vision of a cancer-free world.

In 2020, Pelotonia—the annual cycling event that raises millions of dollars for cancer research at Ohio State—transformed its usual mass ride into a more personalized platform called My Pelotonia, in which individuals or small groups created their own fundraising experiences in safer settings that were compliant with social distancing recommendations designed to prevent the spread of COVID-19.

To everyone's credit, we have adapted to our global circumstances extremely well and have continued the Pelotonia tradition with admirable ingenuity. Pelotonia 2020 drew more than 11,000 participants who raised over \$10.5 million and boosted the 12-year Pelotonia fundraising total to more than \$217 million — 100% of which goes directly to cancer research at Ohio State thanks to Pelotonia's major sponsors.

As you will read in this special issue of *Frontiers* devoted entirely to Pelotonia, the money raised by riders, virtual riders, volunteers and donors supports projects that address many aspects of cancer, including prevention, diagnosis, treatment, psychosocial issues, accelerated drug development and large initiatives that help change the landscape of cancer care.

Everyone associated with Pelotonia should be proud of all that you have helped us accomplish through your generosity as we continuously strive—come what may—to offer help and hope to patients and families from around the world.

THE OHIO STATE UNIVERSITY COMPREHENSIVE CANCER CENTER – ARTHUR G. JAMES CANCER HOSPITAL AND RICHARD J. SOLOVE RESEARCH INSTITUTE (OSUCCC – JAMES)

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# FRONTIERS

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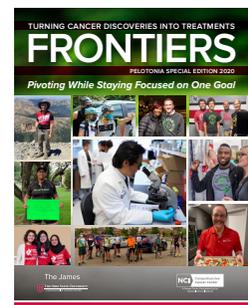
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*Some of the images on the cover are from Pelotonia events that took place before the COVID-19 pandemic.*



Read *Frontiers* online or download an issue at [cancer.osu.edu/Frontiers](https://cancer.osu.edu/Frontiers).

## FINANCIAL REVIEW

# Pelotonia 2020 Fundraising Boosts 12-Year Total to More Than **\$217 Million**

*The COVID-19 pandemic has changed the world in many ways, but it has proven to be no match for the spirit of Pelotonia.*

While it's true that the need for social distancing to reduce the coronavirus threat prevented Pelotonia 2020 from holding the traditional heavily attended ride weekend, planners and participants modified the event in such a way that it remains a hugely important and effective force in the OSUCCC – James' continuing quest to create a cancer-free world.

Pelotonia 2020, the 12th installment of this popular event, drew more than 11,000 participants under a new format called My Pelotonia, in which individuals creatively defined their own experiences and fundraising goals in lieu of the three-day ride weekend, which had been set for Aug. 7-9.

Instead, a livestreamed virtual Opening Ceremony Celebration took place on Aug. 7 to honor and celebrate the impact of the Pelotonia community, which raised \$10,502,362 for Pelotonia 2020 and boosted the 12-year fundraising total to over \$217 million. Fundraising for Pelotonia 2020 ended on Oct. 31.

With the My Pelotonia platform, participants set personal one-time or cumulative activities to ride, walk, run, volunteer or take part in some other activity of their choice to honor and support cancer research at the OSUCCC – James and thus embody Pelotonia's 2020 Be Legendary campaign. My Pelotonia provided an online community for people to share their training and fundraising ideas or simply cheer one another on, while also sharing their inspirational stories of everyday "legends" pushing forward despite challenges.

Also for this year, the Pelotonia registration fee was waived along with required fundraising commitments that historically have been tied to riding distances, and there was no minimum age requirement for participants.

***“The Pelotonia community has come together in profound ways over the past 12 years, and this year is no different,” says Pelotonia President and CEO Doug Ulman.***

“Our legendary community is unwavering in Pelotonia's goal to fund accelerated cancer research, united in a shared sense of duty to those diagnosed with this disease,” Ulman says. “While so much has changed, the need for critical research funding and the goal of Pelotonia have not. My Pelotonia is an experience that is more inclusive and personal, with more ways to participate than ever before.”

“As the global scientific community has shifted its focus to the important work of navigating through and overcoming COVID-19, it is paramount that we ensure that scientific discovery continues in cancer,” adds OSUCCC Director **Raphael E. Pollock, MD, PhD, FACS**. “We must maintain momentum in basic, translational, clinical and population research studies so that we can continue to improve our cancer prevention and bring new clinical therapies to our patients, which will ultimately lead to better outcomes for our community. We are grateful for the support and efforts of the Pelotonia community of riders, corporate partners, donors and volunteers.”

# 11-Year Pelotonia Financial Summary

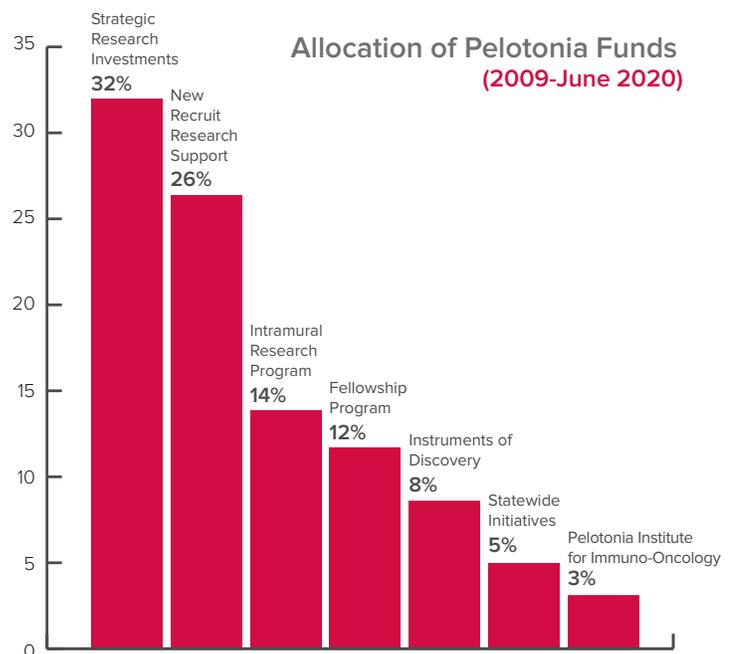
Pelotonia funding supports projects that address many aspects of cancer, including prevention, diagnosis, treatment, psychosocial issues, accelerated drug development and large initiatives that help change the landscape of cancer care. Pelotonia dollars support seven major areas:

- **Pelotonia Institute for Immuno-Oncology (PIIO)** – Established in 2019, the PIIO was made possible by a Pelotonia pledge of \$102,265,000 over five years. The largest portion of this pledge, \$65 million, is funding the PIIO. Immuno-oncology is widely considered to be the next frontier in cancer prevention and treatment;
- **Intramural Research Program** – This program, extensively supported by Pelotonia and other sources, funds Idea Grants, clinical trials and other initiatives proposed by teams of faculty researchers who need to gather early data for innovative projects that may lead to larger external grants;
- **Fellowship Program** – This program enables Ohio State students in any discipline or level of scholarship to conduct cancer research with faculty mentors;
- **New Recruit Research** – Pelotonia funds can help newly recruited researchers continue their work upon arrival at Ohio State;
- **Instruments of Discovery** – This program supports purchases of sophisticated equipment needed for cutting-edge cancer research;
- **Statewide Initiatives** – These large projects take aim at specific cancer types by working with community hospitals throughout Ohio to promote prevention, early detection and better outcomes for patients;
- **Strategic Research Investments** – Large investments support such initiatives at the OSUCCC – James as the Drug Development Institute, Digital Pathology and the Total Cancer Care® protocol.

## Bringing Knowledge to Bear in the Fight Against Cancer

Pelotonia research funding has been allocated to investigators in 11 of the 15 colleges at Ohio State, as well as at Nationwide Children’s Hospital in Columbus and Cincinnati Children’s Hospital Medical Center:

- College of Medicine
- College of Public Health
- College of Nursing
- College of Dentistry
- College of Pharmacy
- College of Veterinary Medicine
- College of Food, Agricultural and Environmental Sciences
- College of Law
- College of Education and Human Ecology
- College of Engineering
- College of Arts and Sciences



# Pelotonia Institute for Immuno-Oncology (PIIO) Makes Big First-Year Strides

Soon after the Pelotonia Institute for Immuno-Oncology (PIIO) was established in July 2019, PIIO Founding Director **Zihai Li, MD, PhD**, said he and colleagues within the institute “are not going to sit still. We have to push ahead.”

And pushing ahead they are. In just over a year since its establishment with support of a five-year, \$102,265,000 pledge from Pelotonia, the PIIO has developed a strategic plan and recruited eight staff members and 10 scientists with expertise ranging from development of cancer vaccines to bioinformatic and statistical modeling for high-throughput immunogenomic screening. These scientists bring the total number of researchers working on immuno-oncology approaches to clinical trials at the OSUCCC – James to over 60.

Moreover, PIIO members have obtained \$16 million in annual funding from new grants (including \$13 million from the NIH), published more than 265 peer-reviewed articles, launched some 20 clinical trials, added 10 technologies to the institute’s Immune Monitoring and Discovery Platform (IMDP), and entered research agreements with corporations such as Alphasab Oncology, Heat Biologics, Genentech and others. In addition, the PIIO has initiated a cancer immunotherapy cohort database that will help scientists determine risk factors associated with efficacy and adverse drug events related to cancer immunotherapies.

Li is proud of the first-year accomplishments of the PIIO, a comprehensive bench-to-bedside research initiative focused on harnessing the body’s immune



*Zihai Li, MD, PhD*

system to fight cancer at all levels—from prevention to treatment and survivorship. “We are passionate, curious and driven in our pursuit of unleashing the potential of immunotherapy in cancer care,” he says. “Today we have a strong framework and enhanced research capabilities that position our team to make big strides in the coming years. Now it is time to do the next phase of fundamental and translational work.”

That work includes plans to open up to 130 immuno-oncology clinical trials over the next five years and to create a pipeline of novel cancer immunotherapeutics, many of them driven by Ohio State discoveries that will be tested at patient bedsides.

The PIIO has already opened clinical trials aimed at making immuno-oncology drugs safer and more effective for patients. It also has initiated a first-in-human trial to evaluate the use of a monoclonal antibody that may

sensitize patients toward antitumor immunity. This trial is being tested in patients with locally advanced and metastatic solid tumors at the OSUCCC – James.

“We’re developing superior capabilities in immune-monitoring, artificial intelligence and immuno-informatics to accelerate the development of cancer immunotherapies. This work will ultimately result in treatments that are more effective and less toxic, perhaps even resulting in cures. It’s a very exciting time to be part of this research,” says Li, who expects to recruit an additional 20 researchers to the PIIO over the next two years.

Scientists recruited to Ohio State and as members of the PIIO in the past year include:

- **Yiping Yang, MD, PhD**, professor and director of the Division of Hematology;
- **Bei Liu, MD, MPH**, professor in the Division of Hematology;
- **Ephraim Ansa-Addo, PhD**, assistant professor in the Division of Medical Oncology;
- **Feng Hong, MD**, assistant professor in the Division of Medical Oncology;
- **Chan-Wang “Jerry” Lio, PhD**, assistant professor in the Department of Microbial Infection and Immunity;
- **Xingjun Wu, PhD**, research assistant professor in the Division of Medical Oncology;
- **Gang Xin, PhD**, assistant professor in the Department of Microbial Infection and Immunity;
- **Dongjun Chung, PhD**, associate professor in the Department of Biomedical Informatics; and

- **Margaret Gatti-Mays, MD, MPH, FACP**, assistant professor in the Division of Medical Oncology.

To guide the research efforts of PIIO scientists, the institute has organized into four interconnected centers of research excellence:

- **Cancer Immuno-Genomics**, a program conducted in partnership with Nationwide Children's Hospital that involves understanding the relationship between cancer genomics and immune evasion and includes epigenetics, neo-antigen vaccine, epitope prediction, TCR repertoire analysis, HLA typing and CRISPR screening;
- **Cell Therapy**, where immune cells are collected from a patient's blood, engineered and returned to that patient to target and eradicate cancer—this includes adoptive cell therapy with T cells and natural killer (NK) cells;
- **Systems Immuno-Oncology**, which seeks a better understanding of cellular systems to create more efficient and effective immunological tools to fight cancer and includes immune regulation, microbiome, NK and T-cell biology, and tumor microenvironment;
- **Translational Immuno-Oncology**, an area that focuses on transforming immuno-oncology discoveries into new or improved cancer treatments applicable at patient bedsides. This team works with the Drug Development Institute at the OSUCCC – James on developing new drug therapies.

Integral to each center of research excellence are:

- **Immuno-Informatics (Data Science)**, where big data and quantitative science are used to improve immuno-oncology research—this includes machine learning, neo-antigen discovery, spatial statistics, etc.;

- **Immune Monitoring and Discovery**, which is backed by a new facility with technology that allows scientists to get a 360-degree view—down to the single-cell level—of what happens in the immune system during treatment with immuno-oncology agents.

Recent PIIO research highlights include:

- A study led by the laboratory of **Thomas Mace, PhD**, of the Translational Therapeutics Program at the OSUCCC – James, that revealed a mechanism for *CD200* gene expression in the pancreatic tumor microenvironment (TME) to promote immunosuppression. This study discovered elevated expression levels of *CD200* in the pancreatic TME and increased expression of the receptor (CD200R) by myeloid-derived suppressor cells (MDSC) in patients. Antibody blockade of *CD200* in preclinical animal models of pancreatic cancer was found to limit tumor growth, reduce intra-tumoral MDSC and enhance checkpoint blockade immunotherapy. The findings were reported in the *Journal for the Immunotherapy of Cancer (JITC)*.
- The Ohio State University Corporate Engagement Office granted **Zhiwei Hu, PhD, MD**, and his team an Accelerator Award for their project titled “Targeting Pathological Neovasculature for Treatment of Advanced Triple-Negative Breast Cancer (TNBC) Using Tissue Factor-Recognizing Chimeric Antigen Receptor (CAR)-Engineered Natural Killer and T Cells.” This technology, specific to a new target in TNBC, may prevent recurrences and have fewer side effects than current treatments.
- **Ephraim Ansa-Addo, PhD**, and his collaborators published in the journal *Science Advances*

an article titled “RNA Binding Protein PCBP1 is an Intracellular Immune Checkpoint for Shaping T-Cell Responses in Cancer Immunity.” This study demonstrated a critical role for the PCBP1 protein as an intracellular immune checkpoint for maintaining T<sub>H</sub>1 cell functions in cancer immunity. Ansa-Addo's lab seeks to define how cellular and molecular regulators determine the functions of Tregs in the tumor microenvironment and to use these insights to leverage current treatment approaches in cancer immunotherapy.

- The PIIO also is assisting in immunotherapeutic studies relating to the COVID-19 pandemic. Li's lab, for example, is participating in a multi-center onco-immune phase III clinical trial of CD24Fc to treat patients hospitalized with COVID-19. The novel coronavirus SARS-CoV-2, which causes COVID-19, promotes inflammation that worsens clinical symptoms. CD24Fc is a first-in-class biologic that fortifies an innate immune checkpoint against excessive inflammation caused by tissue injuries. This study is assessing CD24Fc safety and efficacy in patients exhibiting severe clinical symptoms.

Pointing out that the PIIO is a vast team effort, Li expresses gratitude to all who have contributed.

“We thank OSUCCC – James leaders, our external and internal scientific advisory boards, our strategic planning committee, and the faculty and staff who make up the PIIO for all of their hard work,” he says. “Most importantly, we thank the Pelotonia community—the riders, virtual riders, volunteers, donors and cancer survivors who are raising funds for cancer research. By working together to advance the promising discipline of immuno-oncology, we are pursuing our shared vision of a cancer-free world.”

## IDEA GRANTS

# Inspiring Innovation

*Idea Grants Enable Scientists to Pursue New Approaches to Cancer Research*

Each year, the OSUCCC – James awards several Idea Grants that enable teams of faculty scientists with innovative ideas for cancer research to gather early data so they can later apply for larger grants for this work from sources such as the National Cancer Institute (NCI).

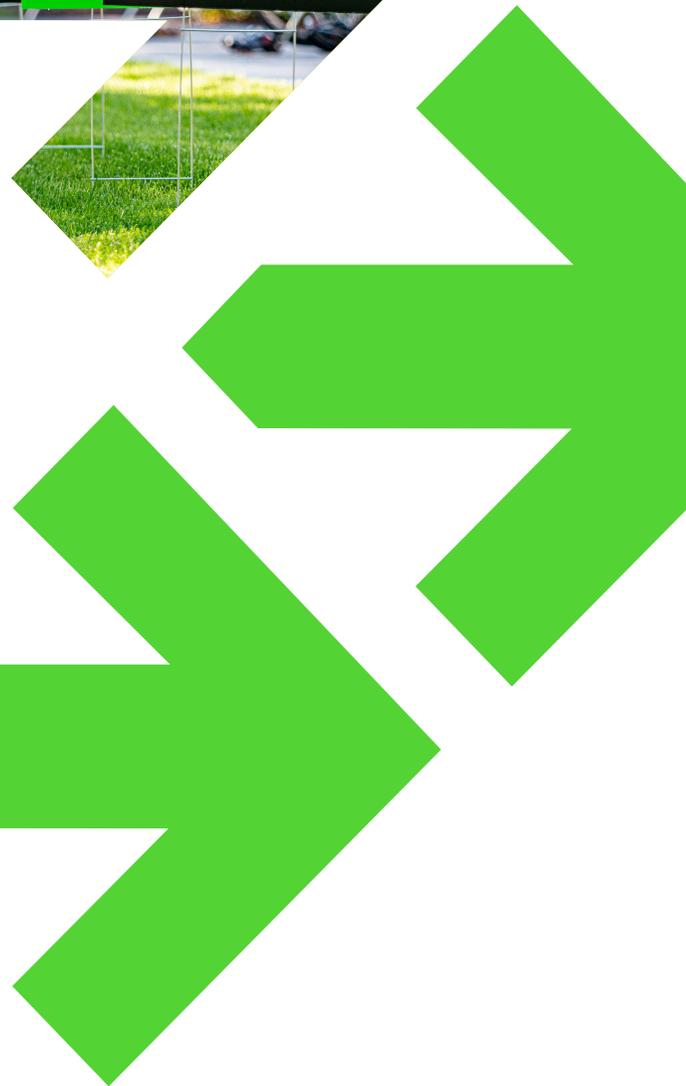
The Idea Grants are funded by the OSUCCC – James Intramural Research Program (IRP), which receives extensive support from Pelotonia and other sources. This funding is extremely helpful to these teams because it is difficult to acquire grant funding from the NCI and other outside sources for projects that are still in early development.

Since 2010, the OSUCCC – James has awarded 175 Idea Grants totaling \$20.9 million for more than 180 investigators across nine of the 15 colleges at Ohio State, as well as at Nationwide Children’s Hospital and Cincinnati Children’s Hospital Medical Center. These competitive awards provide support for two years and for up to \$200,000 each.

“These grants enable our scientists to build momentum for moving their emerging ideas forward into research projects that stand a better chance of landing external funding,” says OSUCCC Director **Raphael E. Pollock, MD, PhD, FACS**. “Our community of Pelotonia participants—including riders, virtual riders, volunteers, donors, corporate sponsors and everyone who this year contributed through personal My Pelotonia activities—should take pride in helping to fund Idea Grants that ultimately advance cancer research.”

The latest round of IRP-funded Idea Grants, awarded in July, consists of nine grants totaling \$1.5 million. Eight of these grants received Pelotonia support and one received support from the Stefanie Spielman Fund for Breast Cancer Research at the OSUCCC – James.

On the next three pages are summaries of these nine awards. Each summary is listed with the project title, the associated team of investigators, and the OSUCCC – James research program with which each investigator is affiliated, if applicable. An asterisk beside a name indicates that person is the “contact” principal investigator.



## Adipose Tissue Contributions to Pancreatic Cancer Development

**Investigators:** Martha Belury, PhD, Molecular Carcinogenesis and Chemoprevention (MCC) Program; Joshua Blakeslee, PhD; Zobeida Cruz-Monserrate, PhD\*, MCC Program; Mary Dillhoff, MD, Translational Therapeutics (TT) Program; Terence Williams, MD, PhD, Cancer Biology (CB) Program

Obesity is a risk factor for developing pancreatic cancer. This team will determine whether adipose (fatty) tissue affects the pancreatic cancer tumor components that can contribute to promoting cancer development, progression and tumor growth. The team will then develop strategies to identify obese individuals who are at risk of developing pancreatic ductal adenocarcinoma (PDAC). Study results will provide insights to guide new preventive, early detection and treatment approaches to obesity-associated pancreatic cancer.

## Platelet-Derived Growth Factor-B as a Metastasis Promoter in Breast Cancer

**Investigators:** Vincenzo Coppola, MD, and Gina Sizemore, PhD\*, both of the CB Program

Women diagnosed with breast cancer-associated brain metastases (BCBM) have an unacceptable median overall survival rate of 10-11 months. A major knowledge gap in the BCBM field is the functional interplay between tumor cells and the metastatic brain tumor microenvironment. This proposal will test whether mammary epithelial expression of the paracrine mediator, platelet-derived growth factor-B (PDGFB), promotes breast cancer progression with a propensity for brain metastatic spread. Completion of this work could improve survival for women whose tumors exhibit enhanced PDGFB signaling by providing insight for novel prognostic and therapeutic strategies.

(Note: This project was funded by IRP money from the Stefanie Spielman Fund for Breast Cancer Research at the OSUCCC – James.)

## Senolytic Agents as Mitigators of Delayed Radiation Toxicities

**Investigators:** Rajeswara Rao Arasada, PhD; Naduparambil Jacob, PhD\*, TT Program; Xiaokui Mo, PhD

Some lung cancer patients receive ionizing radiation as a main treatment modality, as it causes DNA double strand breaks that kill cancer cells. However, injury to normal tissue in the exposure field is unavoidable, causing such undesirable side effects as radiation pneumonitis and chronic radiation fibrosis. These effects can be particularly significant in the lungs, which are highly susceptible to inflammation and scarring. Increasing treatment-failure rates in lung cancer patients are attributed to the aggressiveness of this disease, which necessitates treatment with high doses of radiation that result in toxicities that are exacerbated by age. Cellular senescence or irreversible cell cycle arrest is linked with aging, and radiation injury worsens the aging process. Moreover, senescent cells accumulated in radiation-exposed lungs secrete factors that cause inflammation. This team will optimize novel strategies to clear senescent cells from the lungs, thus rejuvenating healthy surrounding tissue and improving organ health. They also propose novel blood-based diagnostics for early detection of senescent cells and lung inflammation, which will help guide timely mitigation.

## A Trial of Long-Chain Omega-3 Fatty Acids in a Murine Model of Complex Atypical Endometrial Hyperplasia

**Investigators:** Theodore Brasky, PhD\*, Cancer Control (CC) Program; Takeshi Kurita, PhD, CB Program (co-PI); Martha Belury, PhD, MCC Program; David Cohn, MD, MBA, TT Program; Erinn Hade, PhD; and Joseph McElroy, PhD

Endometrial cancer is the most common gynecologic cancer and the fourth most common cancer among women. With increasing incidence rates, preventive strategies are needed. Chronic inflammation is thought to be important in endometrial cancer development, and there is evidence that anti-inflammatory agents may reduce risk. Long-chain omega-3 polyunsaturated fatty acids, which derive mainly from diets high in oily fish and fish oil supplements, hold anti-inflammatory properties and may reduce endometrial cancer occurrence. Results from Dr. Brasky's large studies in women indicate that omega-3 fatty acids may reduce endometrial cancer occurrence by 20%. The team's objective here is to generate preclinical data to support a future prevention trial among women, based on the hypothesis that omega-3 fatty acid-enriched diets will increase the concentration of fatty acids in the uterus and reduce markers of uterine inflammation. To test this, they will use Dr. Kurita's newly developed mouse model, which mimics the most common genetic mutations in early-stage endometrial cancer. The six-month trial supported by this Idea Grant will involve 52 mice randomized to an omega-3 enriched diet or a control diet. After the trial, uterine tissues will be removed and analyzed for fatty acid content and inflammation. This study could provide data needed to apply for an NIH grant to perform a trial of omega-3 supplementation in women for endometrial cancer.

## IDEA GRANTS



## Zebrafish Models to Characterize OCA2 Skin Cancer Risk Variants

**Investigators:** Bradley Blaser, MD, PhD, LR Program, and Amanda Toland, PhD\*, MCC Program

Variations in the *OCA2* gene that determine eye and skin color increase the risk for skin cancer. Dark pigment decreases skin cancer risk via protection from sun-induced mutations. There is new evidence that *OCA2* may be protective for skin cancer beyond its role in pigment. This team will use zebrafish to test this by characterizing the impact of *OCA2* DNA variants found in patients on pigment levels, melanoma development and other tumor-related phenotypes, such as blood vessel growth. These data will provide evidence that loss of *OCA2* impacts melanoma development and will inform studies to prevent and treat *OCA2*-related skin cancers.

## A Pilot Phase I Trial of IL-21 Expanded, Off-the-Shelf, Third-Party Natural Killer (NK) Cells in Combination With Mogamulizumab in Patients With Cutaneous T-Cell Lymphomas or Adult T-Cell Leukemia/Lymphomas

**Investigators:** Basem M. William, MD\*, LR Program; Catherine Chung, MD; Ying Huang; Dean Lee, MD, PhD, LR Program; Anna Vilgelm, MD, PhD, TT Program; and Sumithira Vasu, MD, LR Program

Cutaneous T-cell lymphoma (CTCL) and adult T-cell leukemia lymphoma (ATLL) are aggressive cancers that are usually incurable. This team has established a bank of natural killer (NK) cells—immune cells that have significant antitumor activity—from healthy donors. They will infuse those cells in combination with an antibody (immune protein) called mogamulizumab, which is currently approved for treating CTCL (in the United States) and ATLL (in Japan), in a pilot clinical trial of three to 12 patients with CTCL/ATLL. They expect to find that the combination of NK cells and mogamulizumab would be safe and work synergistically to kill cancer cells.

## A Phase Ib Dose De-Escalation Study of Atezolizumab and All-Trans Retinoic Acid in Patients With Advanced Non-Small Cell Lung Cancer

**Investigators:** William Carson, MD, TT Program; Gregory Otterson, MD, TT Program; Dwight Owen, MD\*, TT Program; Sandipkumar Patel, MD; Robert Wesolowski, MD, TT Program

Despite recent treatment advances, the median survival for patients with metastatic non-small cell lung cancer (NSCLC) remains approximately one year. Immunotherapy with checkpoint inhibitors has led to responses and improved survival in a subset of patients with advanced NSCLC, but nearly all patients eventually need additional therapies. The optimal treatment for patients whose cancer progresses after receiving immunotherapy—either alone or in combination with chemotherapy—remains unclear, so new strategies are needed. This team will evaluate a novel combination of therapies to target a component of the immune system called myeloid-derived suppressor cells (MDSC) that can interfere with immunotherapy. Specifically, they will study all-trans retinoic acid (ATRA) to target MDSCs in combination with atezolizumab, which is an approved immunotherapy. The investigators hope this combination of therapies will improve responses in patients with NSCLC who have already received standard treatment. From blood samples collected during this clinical trial, they also hope to discern the effect of this combination on levels of immune cells in the blood and to determine whether these changes can guide therapy.



## TP-0903 to Treat RAS-Mutated Relapsed/Refractory Acute Myeloid Leukemia (AML)

**Investigators:** Bhavana Bhatnagar, DO\*, LR Program; John C. Byrd, MD, LR Program; and Kristin Koenig, MD

Patients with AML whose disease doesn't respond to initial treatment, and those with relapsed disease, have poor outcomes following subsequent therapies. In recent years, the discovery of genetic mutations in AML has revolutionized the management of these patients. One such mutation involves the *RAS* gene, and 17.4% of AML patients who do not respond to their first treatment, or whose disease returns, have *RAS* gene mutations. AML patients with recurring disease and *RAS* mutations have a poor prognosis, and those with additional mutations in *IDH1* or *IDH2* genes fare even worse. Based on the hypothesis that elimination of the *RAS* mutations will improve prognosis for these patients, Bhatnagar and colleagues will conduct a clinical trial evaluating a novel oral drug called TP-0903 to determine its safety and activity in treating AML patients with *RAS* mutations when taken alone or in combination with other treatments (venetoclax, ivosidenib or enasidenib). The trial will be open to AML patients 18 or older who do not respond to initial treatment or who have recurrent disease. If the investigators find a safe dose of TP-0903 along with the other drugs, they can study whether these combinations improve prognosis for these patients.



## Early Detection of Cardiotoxicity After Lower Thoracic Radiotherapy

**Investigators:** Daniel Addison, MD, CC Program; Ragavendra Baliga, MD; Arnab Chakravarti, MD, TT Program; Ning Jin, MD, TT Program; Michael Knopp, MD, PhD, TT Program; Eric Miller, MD, PhD\*, TT Program; Ryan Robb; Patrick Ruz; Orlando Simonetti, PhD; Lai Wei, PhD; Terence Williams, MD, PhD, CB Program; Chadwick Wright, MD, PhD, TT Program

Radiation therapy is a primary treatment for many thoracic malignancies, including esophageal and lung cancers. Being nearby, the heart is often exposed to high amounts of radiation despite basic reduction strategies. Recent high-profile studies in lung and esophageal cancer have demonstrated cardiotoxicity events begin to occur within two years of completing radiation when patients are monitored closely. Further, recent advances in treatment have resulted in improvements in survival for patients with esophageal and lung cancer, making radiation toxicity a significant source of morbidity and mortality for survivors. As a result, cardiotoxicity, including arrhythmias, heart failure and coronary disease, has emerged as a leading cause of non-cancer deaths after radiation for these patients. There are no available tools to help identify patients at risk for or with impending signs of these heart events. This team will use cutting-edge imaging techniques and blood markers to identify early adverse changes in the heart of patients with thoracic malignancies both during radiation therapy and shortly after completing treatment. This will allow identification of patients at high-risk for cardiotoxicity and lay the foundation for a clinical trial on a preventive strategy for these potentially devastating events.

# Training the Next Generation

## *Pelotonia Fellowship Program Helps Student Cancer Researchers Contribute*

The Pelotonia Fellowship Program annually allots \$2 million to support Ohio State students in any discipline or level of scholarship who want to conduct cancer research under the guidance of faculty mentors at the OSUCCC – James.

Since the program began in 2010, it has awarded 567 fellowships for projects undertaken by 262 undergraduates, 168 graduates, 131 postdoctoral fellows and six medical students. It also has provided Ohio State undergrads with international research experiences in India and Brazil and has enabled students from those nations to help with cancer research at Ohio State.

Students apply competitively for the fellowships, which are peer-reviewed and issued by a committee of faculty cancer researchers chaired by Pelotonia Fellowship Program Director **Rosa Lapalombella, PhD**, an associate professor in the Division of Hematology at Ohio State and a member of the Leukemia Research Program at the OSUCCC – James.

*On this and the next three pages are profiles of three Pelotonia fellowship recipients, including an undergraduate, a graduate and a postdoctoral fellow. Although there was no mass cycling event in Pelotonia 2020 due to the COVID-19 pandemic, all three of these fellows participated and raised funds with My Pelotonia experiences of their own invention.*



Max Wilberding

**Max Wilberding**, a senior majoring in biomedical sciences with a minor in creative writing, had no idea his work as a Pelotonia Fellowship recipient would make an immediate impact.

An undergraduate researcher in the Precision Cancer Medicine laboratory of **Sameek Roychowdhury, MD, PhD**, Wilberding is studying the role of the olfactomedin-4 (*OLFM4*) gene in cholangiocarcinoma, a widely inoperable and deadly cancer of the bile ducts. Most patients with this disease are diagnosed in later stages when surgery is not an option and there are few viable chemotherapies.

“Given the rapid progression of the disease and the limited options for treatment, five-year survival rates for patients with cholangiocarcinoma are below 2%,” says Wilberding, who was born and raised near West Chester, Ohio.

He notes that Roychowdhury, a member of the Translational Therapeutics Program at the OSUCCC – James, and his lab team have found *OLFM4* to be dysfunctional in advanced cholangiocarcinoma. Wilberding is studying this dysfunction in different cells that he grows in the lab “to learn why *OLFM4* causes tumor formation and disease progression.”

“This study shows promise for future impact, as pinning *OLFM4* as a driver for cancers will allow us to work with pharmaceutical companies to create therapies that target this gene and prevent the cancer from growing,” he says, adding that, although such therapies are “still a long way off, I have hope that my research will one day provide hope to patients diagnosed with one of the worst cancers.”

He also has been inspired by meeting patients with cholangiocarcinoma who have benefited from research conducted in the Roychowdhury lab, including a woman in her 50s whom Roychowdhury, through a specialized genomic test, matched with a drug therapy that targets specific cancer-causing mutations. Wilberding says meeting patients on these clinical trials makes the research seem all the more important and impactful.

Another motivating factor is the realization that his research could help preserve family ties among generations. Before Wilberding was born he lost a grandparent to cancer, and his father spent most of his childhood without a mother. On a happier note, one of Wilberding’s grandmothers has twice beaten cancer.

“I’m so proud of her resilience and thankful for her presence in my life,” he says. “I emphasize the importance of that intergenerational experience of love that many families miss out on because of cancer. I continue to spend my time as a student—and hope to spend my career—working to give families that connection.”

Speaking of career, he has applied to medical school at Ohio State and hopes to interview later this year so he can enroll in the fall of 2021. He plans to pursue an MD and would like to become a cancer researcher.

**Melanie Krook, PhD**, also a Pelotonia rider, is a senior postdoctoral fellow who supervises Wilberding. Together they have written a blog about his research experiences.

In Pelotonia 2019, his first year of participation, Wilberding rode 45 miles as a member of Team Buckeye – Sameek’s Geeks, which consists of nearly every member of the Roychowdhury lab. His My Pelotonia experience for 2020 was continuing to train (via cycling) and to raise funds with his fellow teammates as if there were going to be a mass ride this year.

Wilberding enjoys working in the Roychowdhury lab and contributing to the OSUCCC – James vision to create a cancer-free world. “We have one of the best cancer teams in the world at Ohio State,” he says, “and I’d consider myself lucky to spend my life working here in Columbus to help this community that has embraced me as one of its own.”

*“My experiences with Pelotonia and the Roychowdhury Precision Cancer Medicine Lab have certainly steered me toward a career in oncology.”*



Ansel Nalin

After riding 45 miles in each of the past five Pelotonias, **Ansel Nalin**, a student in the Medical Scientist Training Program (MSTP) at Ohio State—where he is working toward an MD/PhD—was looking forward to cycling 100 miles in Pelotonia 2020.

But when the COVID-19 pandemic prompted Pelotonia officials to cancel this year's mass cycling event, Nalin, like thousands of other Pelotonia participants, created an individual My Pelotonia experience to serve his fundraising efforts for 2020.

"I've been a competitive distance runner for many more years than I've been a cyclist or triathlete, so most of my athletic goals are related to running," Nalin says. "When thinking of goals that would push me to excel, one I came up with was to run 2,020 miles, in honor of the year, retroactively from January first to August eighth, which would've been the day of the ride."

That ambitious goal would involve running an average of 65 miles per week, but he was confident he could do it because, when he set the goal, he hadn't

missed a day of running in 2020. He also anticipated riding his bike a lot this summer, so his My Pelotonia experience would include "putting on my jersey, getting on the bike, and spreading awareness and camaraderie for this great cause."

Nalin is in the Buckeye Student Riders (BSR) – Spin Doctors peloton, which is part of the Team Buckeye superpeloton.

"The Spin Doctors is a group of medical students who ride in Pelotonia," he says, adding that he is in his seventh year of the MSTP program, having completed two years of medical school and four years of PhD research. After his current and final academic year devoted to research, Nalin, who hails from Carmel, Indiana, will return to medical school for two years and earn his MD/PhD in May 2023.

His research mentor is **Aharon Freud, MD, PhD**, a member of the Leukemia Research Program at the OSUCCC – James, whose lab team seeks to understand how natural killer (NK) cells of the human immune system develop in healthy and diseased settings so that processes can be

modulated to promote effective NK cell anticancer functions.

Nalin says his Pelotonia Graduate Fellowship has enabled him to pursue his studies in human innate immune cell development in the Freud lab.

"NK cells have an important role in targeting and eliminating cancer cells," he says, explaining that his project has identified how a signaling pathway called Notch regulates NK cell development. "In particular, Notch is involved in promoting a specific step during development when NK cells become functionally mature. We have also identified the Notch receptors involved in this process."

In 2018 Nalin received an F30 predoctoral fellowship from the National Cancer Institute to support his final two years of graduate school. "In addition to supporting my ongoing work, this award has allowed me to pursue further studies of NK cell biology in the setting of cancer," he says. "The translational studies in our group focus on how NK cell development and function are dysregulated in cancers such as acute myeloid leukemia."

Nalin is interested in radiation oncology as a medical specialty. "After graduating from the MD/PhD program, I plan to enter residency to continue my clinical training, and also to maintain research efforts in cancer immunology," he says. "I'm working toward a career as a physician-scientist in hopes of leading translational efforts to discover new therapies for cancer."

Pelotonia is propelling him onward. "The enthusiasm I see every year at Pelotonia inspires me to continue to work hard toward achieving all of my goals."

**Amina Abdul-Aziz, PhD**, a postdoctoral researcher in the Experimental Hematology Lab (EHL) at the OSUCCC – James, knows that dollars are the fuel for successful cancer research.

“Every cancer research idea is impactful, and ‘impact’ in academia starts with obtaining prestigious funding,” says Abdul-Aziz, whose research was bolstered by a Pelotonia Fellowship award in 2019. “Pelotonia funding was incredibly valuable for my early-career development. It has helped me generate highly promising data that convinced the National Institutes of Health (NIH) to award me one of its coveted Early Career K99/R00 grants in January 2020.”

Abdul-Aziz says the NIH grant will support the next five years of her career, enabling her to finish her postdoctoral training in the EHL under the mentorship of **John C. Byrd, MD**, Distinguished University Professor in the Division of Hematology at Ohio State and co-leader of the Leukemia Research (LR) Program at the OSUCCC – James, and **Erin Hertlein, PhD**, assistant professor of Hematology and member of the LR Program. The grant also will help Abdul-Aziz apply later for faculty positions at Ohio State and other institutions.

Her Pelotonia-funded research project, which she is continuing with Byrd and Hertlein, seeks to understand the role of senescent (aging) bone marrow cells in the microenvironment of acute myeloid leukemia (AML), a disease that frequently results in death among older adults.

“This study proposes to investigate drivers of aging and senescence in the microenvironment of AML, with the aim of providing a quantitative measure of senescence in elderly AML



Amina Abdul-Aziz

patients and identifying therapeutic targets that can positively influence the treatment course of this devastating disease,” Abdul-Aziz says. She explains that the molecular basis for age-related alterations in AML bone marrow cells is poorly described, but if deciphered it could have implications for preventing and treating AML among the elderly.

“Molecular age and immune cell senescence have not been examined in AML patients to predict early morbidity with intensive therapy,” she adds. “If effective in discriminating patients who are more likely to have morbidity, this quantitative tool could be used to determine which patients should be offered intensive chemotherapy versus alternative treatment approaches.”

Abdul-Aziz was born in Vienna, Austria, grew up in Europe and the Middle East, and earned her PhD in biomedical sciences (cancer biology) at the University of East Anglia in the United Kingdom. She joined Byrd’s lab for postdoctoral training in 2017.

In 2019 she participated in her first Pelotonia as a virtual rider in the Team Buckeye – EHL peloton. This year, in the absence

of a mass ride and virtual ridership opportunities due to the COVID-19 pandemic, her My Pelotonia experience involved spreading one cancer awareness fact every day via social media, and donating \$2 to one Pelotonia profile per day from the date she set her goal until the Oct. 31 fundraising deadline.

“As a scientist, I am passionate about sharing knowledge, and that’s where my first My Pelotonia goal came from,” Abdul-Aziz says. “As for the second goal, I was funded by Pelotonia for six months before I went on an NIH fellowship, so the least I can do for my Pelotonia family is support other fundraising efforts.”

Her long-term goal is to establish her own research group and continue to work toward identifying new therapies for cancer patients. “I want to mentor young scientists, inspire them to do what they love and help them thrive in academic research,” she says.

On a personal level, she says, “Pelotonia is more than research support; it’s a family that believes in me and keeps me motivated and determined to contribute to a bigger effort toward creating a cancer-free world.”

# Pelotonia Ride & Events Revitalize Cancer Care Couple



*Dr. Roman and Laura Skoracki (both shown at right) pause with their sons (from left) Lukas and Alexander at a stop along the route of their 2020 My Pelotonia ride.*

Cancer is a formidable foe for everyone: patients, families, friends—and also for those who study and treat it.

**Roman and Laura Skoracki**, a married couple who have devoted their adult lives to the global cause against cancer, acknowledge the rigors of the discipline and welcome the respite provided by the annual Pelotonia cycling event, even in a year when the usual mass ride is thwarted by a viral pandemic.

“Working in cancer is hard, and Pelotonia is one place where we can stop, reflect, relate and share the losses and successes

of cancer together,” says Laura Skoracki, a physician assistant (PA) in the Department of Otolaryngology – Head and Neck Surgery at Ohio State who specializes in caring for patients with head and neck cancer. “I always enjoy the times when everyone is together, whether at the opening events, picking up our registration packets and listening to the keynote speakers, or being at the rest stops or final destination. And the talks from cancer survivors, their families and the guest speakers are truly inspirational.”

“Research particularly can become tedious at times, but Pelotonia is an incredible way to re-energize us and remind us that our efforts are having a direct impact on people’s lives,” adds Roman Skoracki, MD, professor in the Department of Plastic and Reconstructive Surgery at Ohio State, where he also directs the Division of Oncologic Plastic Surgery. “Seeing everyone work together and encourage each other during Pelotonia, against the backdrop of the larger goal of finding cures, puts the tedious tasks into a greater context, making them meaningful.”

The Skorackis, who came to Ohio State in 2014 from MD Anderson Cancer Center in Houston, say the thing they like best about their respective roles at the OSUCCC – James is the teamwork that underlies this institution’s science-based patient care.

“I enjoy being part of a multidisciplinary team,” Laura Skoracki says. “From our weekly tumor boards to our constant collaboration with other services, we are well armed with the best resources to fight cancer together. I like knowing that my skills are serving our patients to the fullest potential in a team environment that provides the best care possible.”

“The atmosphere of caring is palpable,” Dr. Skoracki adds. “Everyone is part of this incredible team whose mission is to improve the lives of every patient. It is a special environment, and I know our patients can feel it as well, making their treatment journey a shared process. This community that places the patient at its center is very special to me.”

His clinical focus is on reconstruction for cancer patients, particularly microsurgery and surgical treatment for lymphedema, an often painful and mobility-limiting swelling in the arms, legs, hands, feet, genitalia or head and neck that can occur when lymph nodes are removed as part of cancer treatment. He is one of only a few surgeons in the country who can perform two microvascular surgical treatments to relieve lymphedema symptoms by re-routing lymphatic channels to allow proper fluid drainage, or re-introducing lymph nodes to the affected region.

Dr. Skoracki’s research involves clinical outcomes of breast, sarcoma, and head and neck cancer reconstruction, as well as the pathophysiology and surgical treatment of lymphedema. “My clinical work and research are intertwined with a focus on improving quality of life,” he explains.

***“As a reconstructive plastic surgeon, I am rarely the person who removes the tumor, but I am a member of the care team, striving to re-establish normalcy for our patients. My research studies how well we are accomplishing this goal, with a constant eye on improvement.”***

As a PA in surgical reconstruction and cancer care, Laura Skoracki enjoys “helping our patients understand the disease process and the different treatment options available, as well as assisting them to the best of my ability in the operating room.” She notes that the OSUCCC – James “offers cutting-edge treatment, including clinical trials and targeted immunotherapy. As a high-volume center for cancer, we can fine-tune our surgical and radiation treatments so that they’re always improving. And our multidisciplinary tumor board meets weekly to discuss the best options for patients with advanced disease or recurrence.”

Dr. Skoracki first rode in Pelotonia in 2015, choosing a 100-mile route, and he has ridden in every Pelotonia event held since then. He inspired Laura to ride in 2016, when she and a neighbor who was a James patient rode 25 miles.

“It was such an amazing experience that we (she and her neighbor) increased our range to 45 miles in 2017 and 2018,” Laura says, adding that she couldn’t ride in 2019 due to a conflict with their children’s events (they have sons ages 15 and 13). The Skorackis were planning to ride this year along with their elder son, who would’ve made his inaugural ride had the event not been canceled. The couple plan to resume riding next year and hope the four of them can someday participate in the full-scale Pelotonia ride as a family.

For their 2020 My Pelotonia experience, the Skorackis planned to cycle as a family to John Bryan State Park near Yellow Springs, Ohio, with another family, camp overnight and return to Columbus—sharing the Pelotonia message along their route and wherever they stopped. They point out that their sons are skilled cyclists who have completed outings of up to 50 miles.

The Skorackis find all Pelotonia-related events inspiring and encourage anyone who is hesitant about joining the movement to give it a try.

“Anyone who’s interested in riding but has anxiety about getting started should find a friend who is interested and do it together,” Laura says. “To go 25-45 miles, you do not need a fancy bike or other equipment. And when you see the community come together and the supporters along the routes, you’ll be overwhelmed by the care and support we all have for each other.”

# Medical Scientists Hit the Rails-to-Trails in Support of Cancer Research

*It should come as no surprise that seasoned cyclists*

**Kari Kendra, MD, PhD, and Bill Kisseberth, DVM, PhD—**  
*a married couple who met through recreational cycling*  
*while in professional and graduate school in the '90s—*  
**have ridden in all 11 Pelotonias from 2009-19.**

Nor should it be astonishing that, in the absence of a 2020 Pelotonia mass cycling event due to the COVID-19 pandemic, the two jointly focused their personal My Pelotonia experience this year on long-distance cycling in support of cancer research at Ohio State.

“Our Pelotonia experience in 2020 was to explore the Rails-to-Trails bike paths in Ohio, with a goal of riding at least 10 of them,” Dr. Kisseberth says, referring to a nationwide network of public all-purpose paths established along former railroad corridors through a movement led by the Rails-to-Trails Conservancy (RTC), a non-profit organization based in Washington, D.C.

The RTC’s mission is to create these connecting corridors “to build healthier places for healthier people.” The RTC website states there are 23,000 miles of rail-trails around the country, including 105 rail-trails covering 1,028 miles in Ohio, and more than 8,000 miles of rail-trails are ready to be built nationwide.

“How much we cycle together has varied a lot over the years,” says Dr. Kisseberth, a professor in Ohio State’s College of Veterinary Medicine (CVM), Department of Veterinary Clinical Sciences. “This year, we are cycling most weekends.”

In past Pelotonias, Dr. Kendra—an associate professor and melanoma specialist in Ohio State’s College of Medicine, Department of Internal Medicine, Division of Medical Oncology, where she chairs the Melanoma Disease-Specific Committee—has served as captain of the Team Buckeye – Melanoma Team, and her husband has been on the Team Buckeye – College of Veterinary Medicine Team. But the couple, who came to Ohio State in 2001, typically ride together, and they wholeheartedly support the Pelotonia goal to end cancer.

“Life is precious,” Dr. Kendra states in her profile on the Pelotonia website.

**“The diagnosis of cancer cuts the lives of so many short. I ride in Pelotonia so more research can be done and more people can live healthier lives.”**

Her clinical and research focus is on patients with melanoma, the deadliest of skin cancers, and other skin malignancies. Under her leadership, the melanoma program at the OSUCCC – James uses a multidisciplinary, science-based approach to patient care

that involves targeted therapies, immunotherapeutic techniques and agents with novel mechanisms of action.

More and more patients are benefiting from this. In the past few years, the melanoma program has seen increases in patient volume, clinical trials and patients enrolled in these studies, which are paving the way to better therapies. “Everyone’s cancer is biologically unique, so our approach is to look at the individual patients and the genetic mutations within their tumors,” Dr. Kendra says. “We then determine the best therapy for the optimal long-term benefit.”

She points out that scientists at Ohio State have strongly contributed to advancements in treating melanoma. “Tumors can become resistant to the drugs we have, so there are studies on how to prevent the development of this resistance,” she explains. “And we have studies on how to overcome the resistance in patients who have already taken the drug successfully but have since become resistant.

“Before, patients with stage IV melanoma typically had a six- to nine-month survival rate after diagnosis,” she adds. “With new drugs and clinical trials, we have extended that. I feel privileged to be part of the Ohio State medical community, and I’m proud to contribute to the mission of the OSUCCC – James: to provide cutting-edge research that translates to innovative patient care.”



Bill Kisseberth, DVM, PhD (right), and Kari Kendra, MD, PhD (left), are ready to roll in an earlier Pelotonia weekend ride.

Dr. Kisseberth's research interests are in comparative and translational oncology, with a focus on clinical trials of novel cancer therapies, especially for lymphoma and osteosarcoma (bone cancer). He works within the CVM's Comparative and Translational Oncology Signature Program, which integrates nearly 40 investigators from Ohio State's colleges of Medicine, Pharmacy, Nursing and Veterinary Medicine, along with researchers at Nationwide Children's Hospital (NCH), to investigate cancers that occur in both humans and animals in an effort to improve outcomes for veterinary and human patients.

Part of Dr. Kisseberth's research has directly benefited from Pelotonia. He and **Dean Lee,**

**MD, PhD,** a professor in the Department of Pediatrics at Ohio State and NCH, and a member of the Leukemia Research Program at the OSUCCC – James, received a Pelotonia-funded Idea Grant to study adoptive natural killer cell therapy in dogs with bone cancer. Idea Grants provide pilot funding that enables teams of scientists to pursue promising new cancer research concepts.

"Bone cancer is 10 times more common in dogs than humans," Dr. Kisseberth says, "so they are excellent models for this disease."

Also, the recent U.S. Food and Drug Administration (FDA) approval of a drug called acalabrutinib, a potent and selective oral Bruton tyrosine kinase (BTK) inhibitor that is very effective in patients with chronic

lymphocytic leukemia and other blood cancers, was aided by collaborative clinical trials at Ohio State involving the Division of Hematology, the CVM and the Comparative and Translational Oncology Signature Program. Dr. Kisseberth directed the studies of acalabrutinib in dogs with lymphoma.

**Drs. Kisseberth and Kendra believe that the most meaningful part of the Pelotonia experience is coming together as a community—patients, caregivers, health care professionals, researchers, sponsors and the public—to achieve a common goal that benefits everyone.**

"This is particularly felt cycling through the towns and seeing and hearing the support given the riders," says Dr. Kisseberth, who adds that he is devoting his Pelotonia experience this year to the memory of former faculty colleague and CVM peloton member **Laurie Cook, DVM,** who died after a battle with metastatic breast cancer. "Laurie was a fabulous clinician and teacher, and a strong supporter of Pelotonia."

He says he and Dr. Kendra are inspired by a quote from the 1994 movie *The Shawshank Redemption*, which is based on a Stephen King novella: "Remember that hope is a good thing, maybe the best of things, and no good thing ever dies."

Research funded by Pelotonia, Dr. Kisseberth adds, provides hope for all.

# Persistent Pelotonia Pedaler Prevails Over Difficult Challenges

*Cancer survivor **Susan Missler, PhD**, of Upper Arlington, says she's not one to shy away from a challenge. Some of her experiences as a rider in every Pelotonia cycling event support her claim.*



The inaugural Pelotonia in 2009 was a lesson in perseverance for Missler, as she rode most of her 100-mile route from Columbus to Athens alone and was among the last to finish.

“I joked that Lance Armstrong (world-famous cyclist who participated in the first Pelotonia) got the sheriff’s escort out (of Columbus), and I got the sheriff’s escort in (to Athens), as one of the last to arrive,” she says. “I recall walking some of the hills, and the speedometer on my bike reading zero miles per hour. But I had every intention of finishing in Athens! It was around 7 p.m. when I did.”

Another year she rode while recovering from shingles, and as she crossed the finish line someone asked her where her helmet was. “I reached up and said, ‘It’s on my head ... oops, it’s not!’” She’d left it at a spot along her route where she’d considered stopping because she wasn’t feeling right.

Still another year she delayed brain surgery for an incidental-finding aneurysm so she could ride. Her surgeon, a Pelotonia rider whose wife was battling cancer, “knew what it meant to me, as it meant a lot to him, too. He said, ‘Take it easy, and you can ride.’”

*Susan Missler pauses at the 25-mile rest area during Pelotonia 2019.*

Two years ago Missler rode just 3.5 months after having a knee replacement. “Those 25 miles—my shortest Pelotonia ride—took everything I had,” she says. “I kept repeating the names of people I was riding for, as well as people who are no longer around but I could feel their presence supporting me: my mom and dad, my niece Maureen and my nephew Ryan. There was no way I wouldn’t finish.”

A staunch competitor, Missler grew up in a large family (including eight siblings) and played many sports—basketball, volleyball, softball, tennis, racquetball—but her journey to becoming an avid cyclist didn’t begin until she and some friends added a century bike ride to their “bucket list” and then found an opportunity in the first Pelotonia.

“I signed up and have not stopped since,” Missler says. “That first ride was personal; as a cancer survivor, I wanted to give back to The James. And the ride was a spiritual experience, with all the people along the route cheering and thanking you for riding. At mile 92, I saw a sign stapled to a tree that read, ‘Thank you Dr. Williams for saving Grandpa.’ I finished with tears in my eyes and pumping the pedals a little harder.”

Missler’s experience with cancer began when she was diagnosed with melanoma, the most serious form of skin cancer, at age 35 after having “an itchy spot” removed from her back by a dermatologist. A week later she was seen by the late **Michael Walker, MD**, a surgical oncologist at The James whom she describes as “a tremendous surgeon and a thorough and caring man.”

“My surgery in August 1996 was a great success, with clear margins and a benign sentinel node biopsy,” Missler says. “My treatment and recovery at The James were fantastic. I am now 24 years cancer free and am seen by a dermatologist at Ohio State every year.

“Pelotonia is a must for me now,” adds Missler, a member of the Team Buckeye – Team CTCL (Cutaneous T-Cell Lymphoma) peloton.

**“Every year, come the first weekend in August, I’ll be on my bike riding to end cancer.”**

Even in the absence of a mass Pelotonia cycling event this summer due to the COVID-19 pandemic, Missler concocted a My Pelotonia experience that involved extensive riding.

“For my twelfth ride, I will ride and walk 1,700 miles by 12/12/2020,” she says, noting that her partner Heather often joins her in these excursions but that anyone is welcome to take part. Missler explains that she is walking and cycling 100 miles for each of the 17 years she knew her friend Ben, who died last July “after an approximately six-year courageous battle with melanoma.”

One year when Missler was hesitant to keep asking the same people to donate to her ride, she contemplated stopping.

“But Heather told me, ‘You can’t stop now. I’ll help you raise

money.’ Over the years, we’ve held fundraisers such as Taco Tuesdays, baked chocolate chip cookies, commissioning my brother-in-law to make corn hole boards that we painted Pelotonia green with dark blue arrows, etc.,” she says. “My family and friends have always been great supporters of me and my ride to end cancer. In 2019, my niece Meredith, an apprentice in the International Brotherhood of Electrical Workers, convinced her Local Union 32 to do their annual fundraiser for Pelotonia. They raised \$2,730.”

Besides her constant support of Pelotonia, Missler—who works as an evaluator in child welfare/child protection for the Institute for Human Services (IHS)—has other ties to Ohio State. She once was employed at the university for approximately 13 years “while also completing a one-of-a-kind doctoral degree in sport psychology” for which she wrote the curriculum—more evidence of an implacable spirit that is invaluable in her quest to, as she states in her Pelotonia profile, “kick cancer’s butt!”

Toward that end she gains sustenance from spectators along her routes. “During every ride, just when I need a pick-me-up, something inspiring happens,” she says. “One time as I was riding alone, a woman stood up from her lawn chair and said, ‘They saved my life!’ I smiled at her and said, ‘They saved mine too!’ That final leg of the ride was a lot easier.”

## STATEWIDE INITIATIVES

# Pelotonia-Funded Projects Focus on Colorectal, Endometrial, Lung & Breast Cancer in Ohio

*Funds from Pelotonia have supported four major statewide initiatives, including one that is finished, two that are well underway and one that is just beginning.*

## Ohio Colorectal Cancer Prevention Initiative (OCCPI)

A five-year statewide initiative to screen newly diagnosed colorectal cancer (CRC) patients and their biological relatives for Lynch syndrome (LS) has been completed, but researchers are still analyzing data and publishing overall results.

Funded over five years by \$4.3 million from Pelotonia, the Ohio Colorectal Cancer Prevention Initiative (OCCPI) established a network of 50 community hospitals around the state to accommodate screenings for LS, an inherited genetic condition that predisposes to colorectal, endometrial, ovarian, stomach and other cancers. The LS screenings identify patients and family members who may be at risk for these cancers so they can take precautionary measures, such as heightened surveillance (e.g., colonoscopies) for early detection.

“While we are closed to enrollment, and all of the screening is done, we are still analyzing and publishing data from this study,” says OCCPI Director **Heather Hampel, MS, LGC**, associate director of the Division of Human Genetics at Ohio State.

Hampel says the study enrolled over 3,300 newly diagnosed CRC patients, of whom 143 tested positive for LS. She says 204 of their relatives also tested positive, and another 101 CRC patients were found to have a hereditary cancer syndrome other than LS.

“Our study findings demonstrate the value of screening early-onset CRC patients for LS,” Hampel says, noting that her team is working to help launch this screening approach nationally.

## Beating Lung Cancer in Ohio (BLC-IO)

Researchers are relying on the same network of Ohio community hospitals that was established for the OCCPI (see story above) for recruiting patients in a statewide clinical research initiative that takes aim at lung cancer, the No. 1 cancer killer among men and women in the United States.

Supported by \$3 million from Pelotonia, the Beating Lung Cancer – In Ohio (BLC-IO) initiative is led by **Peter Shields, MD**, deputy director of the OSUCCC; **David Carbone, MD, PhD**, director of the Thoracic Oncology Program at the OSUCCC – James; **Mary Ellen Wewers, RN, PhD, MPH**, member of the Cancer Control Program at the OSUCCC – James; and **Barbara Andersen, PhD**, also in the Cancer Control Program.

BLC-IO has two aims: to assess the impact of advanced gene testing and to provide expert advice to help each patient’s treating physician determine

the best therapy for stage IV lung cancer patients in hopes of prolonging survival; and to improve smoking-cessation rates among smokers with lung cancer and their family members (determine the impact of centralized telephone counseling and provider support on cessation).

Project leaders anticipate that more than 2,000 newly diagnosed patients with stage IV non-small cell lung cancer will enroll in BLC-IO via the community hospital network. Enrollees receive free testing for more than 300 genes in their cancer specimens, and the physicians who treat them receive expert support for interpreting test results and determining treatments. BLC-IO also will provide smoking-cessation support for up to three years to all participating patients and members.

## Ohio Prevention and Treatment of Endometrial Cancer (OPTEC)

Supported by \$1.5 million in Pelotonia funds, a statewide clinical cancer research project called Ohio Prevention and Treatment of Endometrial Cancer (OPTEC) aims to recruit up to 1,000 women with endometrial (uterine) cancer from partner hospitals across the state and screen them for Lynch syndrome (LS) and other inherited genetic conditions linked to greater risk of endometrial, colorectal, stomach and ovarian cancers.

Their tumor samples undergo molecular profiling to identify targeted treatments personalized to each patient's tumor characteristics. Patients with LS and their at-risk family members will be educated about the importance of genetic testing and cancer-prevention strategies based on their increased risk for LS-associated cancers. Women whose tumors have defective DNA mismatch repair will be considered for immunotherapy clinical trials for endometrial cancer.

OPTEC is led by **David E. Cohn, MD, MBA**, chief medical officer at the OSUCCC – James, and **Paul Goodfellow, PhD**, of the Molecular Carcinogenesis and Chemoprevention Program, and is assisted by

multiple collaborators from Ohio State (e.g., **Casey Cosgrove, MD**, lead oncologist and member of the Translational Therapeutics Program) and from Nationwide Children's Hospital (NCH) Research Institute. OPTEC will conduct its LS screening with a one-step genetic sequencing technique developed by **Elaine Mardis, PhD**, a geneticist at the NCH Research Institute and also a member of the Translational Therapeutics Program. Genetic profiling will help identify patients who are most likely to benefit from new therapies, including immunotherapy drugs that target certain proteins.

OPTEC also is supported by a five-year grant awarded by the National Cancer Institute in 2018 to principal investigators Goodfellow, Mardis and **Heather Hampel, MS, LGC**, to study "Combined NGS Tumor-Based Detection of Germline Lynch Syndrome Mutations and Prognostic Classification of Endometrial Cancers." This grant extends research supported by Pelotonia and supports the study of additional tumors from women with endometrial cancer.

## Turning the PAGE on Breast Cancer in Ohio

The newest statewide initiative supported by Pelotonia is Turning the PAGE on Breast Cancer in Ohio (Population-Level Precision Prevention Strategies for Preventing Aggressive Breast Cancer). Co-led by **Electra Paskett, PhD, MSPH**, associate director for population science and community outreach at the OSUCCC – James, and **Heather Hampel, MS, LGC**, this project will use a multi-level approach in 12 Ohio counties to provide breast cancer education and facilitate access to risk assessment, genetic counseling and testing, appropriate screening/surveillance, follow-up for abnormal tests, and prompt and proper treatment for African American women who are at greater risk of breast cancer mortality.

Collaborators with the OSUCCC – James include the Ohio Association of Community Health Centers, Susan G. Komen and the North Central Region American Cancer Society. Participating counties will include Franklin, Fairfield, Clark, Butler, Hamilton, Lake, Cuyahoga, Lorain, Trumbull, Summit, Stark and Mahoning. Several strategies (e.g., Facebook ads, referral from providers or community organizations) will be used to direct interested women to a website where they can place

information about themselves, after which their risk for breast cancer will be assessed and they will receive a personal prescription for breast health.

Paskett says this study will use geographic predictors (county) of aggressive disease to identify and target women who live in high-risk counties, train providers at Federally Qualified Health Centers (FQHCs) to facilitate breast health strategies and deliver personalized breast cancer prevention strategies to women based on their risk stratification, and help women adhere to these strategies via telephone patient navigation.

"We will determine whether there were significant increases in the percentage of women who are up-to-date with risk-appropriate breast cancer screening in the 12 counties, the number of referrals to genetic counseling/genetic testing within the FQHCs, any change in breast-health knowledge among FQHC providers, and the number of community organizations involved in breast health, community events and policy efforts," Paskett says.

# Pelotonia Money Boosts Clinical Trial Research at the OSUCCC – James

*Idea Grant Project Sets Stage for NCI-Funded Study of Anaplastic Thyroid Cancer*



*Manisha Shah, MD*

A 2018 Pelotonia-funded Idea Grant helped a team of OSUCCC – James researchers gather preliminary data that has led to a larger study that includes a phase I clinical trial designed to benefit patients with anaplastic thyroid cancer (ATC), a tumor with a very poor prognosis.

Principal investigator (PI) for the investigator-initiated clinical trial is **Manisha Shah, MD**, professor in the Division of Medical Oncology at Ohio State and member of the Translational Therapeutics Program at the OSUCCC – James.

Also providing data that led to the new study was an earlier NCI Thyroid Specialized Program of Research Excellence (SPORE) grant awarded to PI **Matthew Ringel, MD**, professor and director of the Department of



Endocrinology, Diabetes and Metabolism at Ohio State, and co-leader of the Cancer Biology Program at the OSUCCC – James.

Shah says this is a truly collaborative project that stemmed from the thyroid SPORE seed grant and then from the 2018 Pelotonia Idea Grant, for which she was the co-PI along with PI **Terence Williams, MD, PhD**, associate professor in the Department of Radiation Oncology at Ohio State and member of the Cancer Biology Program at the OSUCCC – James.

**“With our Idea Grant,” Shah says, “we met a major goal of Pelotonia, which is to use funding from a starter grant that leads to funding for a much larger project.”**

She says ATC is a deadly disease for which therapy includes surgery, radiation and chemotherapy, but patient outcomes are poor, with average survival of less than six to 12 months. Recently, she adds, genetic studies have found that ATC exhibits a high frequency of mutations in an oncogene called *BRAF*. Those mutations activate this oncogene, which drives tumor growth and causes resistance to current therapy, including radiation.



In their project abstract, Shah and colleagues also state that data from their labs indicated that inhibiting the *BRAF* oncogene “markedly improves radiation efficacy.” Thus they proposed to conduct a clinical trial to combine radiation with drugs that would inhibit the biologic activity of the *BRAF* oncogene.

Now underway, that phase I clinical trial is designed to determine the maximum tolerated doses of the drugs dabrafenib (a *BRAF* gene inhibitor) and trametinib (a *MEK-1/2* gene inhibitor) to be used concurrently with external beam radiation therapy (EBRT) in patients who have *BRAF*-mutant ATC. The investigators note that dabrafenib and trametinib may stop the growth of tumor cells by blocking some of the enzymes needed for cell growth, and that radiation therapy uses high-energy beams to kill tumor cells and shrink tumors.

They hypothesize that giving dabrafenib, trametinib and EBRT together may kill more tumor cells. The scientists also hope to identify biomarkers of response and molecular pathways leading to resistance.

Shah is leading this investigator-initiated clinical trial at Ohio State (OSU-17277). The trial is conducted in collaboration with the International Thyroid Oncology Group (ITOG), with MD Anderson Cancer Center in Houston and Memorial Sloan Kettering Cancer Center in New York City as participating centers. Patient accrual has begun.

Shah believes this project, involving multiple collaborators and built on sound preliminary data from studies supported by Pelotonia and other sources, could yield findings that result in better therapies and improved prognoses for patients with ATC.

# Pelotonia-Supported Studies Help OSUCCC – James Change Landscape of Cancer Care

*On this and the next three pages are examples of recent groundbreaking studies supported in part by Pelotonia dollars.*

## Ohio State-Developed Drug Receives FDA Approval for Treating CLL, SLL

On Nov. 21, 2019, the U.S. Food and Drug Administration (FDA) approved the use of the drug acalabrutinib for first-line therapy in chronic lymphocytic leukemia (CLL) and small cell lymphoma (SLL).

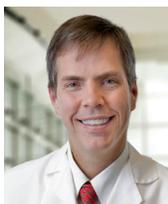
It was the first full approval of this targeted drug therapy, which was developed and tested at the OSUCCC – James in collaboration with the pharmaceutical partner Acerta Pharma.

Acalabrutinib, marketed as Calquence®, is a second-generation Bruton tyrosine kinase (BTK) inhibitor, a newer class of drugs shown to improve the survival of patients with mantle cell lymphoma in addition to CLL and SLL.

The drug works by permanently binding BTK, which is part of a chain of proteins that relays growth signals from the surface of the cancer cell to genes in the cell nucleus, enabling cancer cells to survive and grow. By blocking BTK, the drug halts the flow of these growth signals, and the cancer cells die.

Unlike the first generation BTK inhibitor (ibrutinib, marketed as IMBRUVICA®), preclinical and clinical data shows that acalabrutinib more selectively blocks the BTK pathway without disrupting other key molecular pathways that are important for preserving platelet and immune function, thereby preventing/minimizing certain side effects associated with cancer treatment.

The foundational basic-science research, initial phase I clinical trial and numerous sequential phase II and phase III clinical trials that led to this new FDA approval of acalabrutinib were performed by a team of researchers at the



*Byrd*

OSUCCC – James led by **John C. Byrd, MD**, a Distinguished University Professor at Ohio State and co-leader of the Leukemia Research

(LR) Program at the OSUCCC – James. Byrd also holds the D. Warren Brown Designated Chair of Leukemia Research in the College of Medicine.

This research included collaborative clinical trials with Ohio State's College of Veterinary Medicine and the Comparative and Translational Oncology Program, a research collaboration that integrates nearly 40 scientific investigators from Ohio State's colleges of medicine, pharmacy, nursing and veterinary medicine, along with researchers from Nationwide Children's Hospital, to investigate cancers that occur in both humans and animals. **William Kisseberth, DVM, PhD**, a professor in the Department of Veterinary Clinical Sciences, directed the studies of acalabrutinib in dogs with lymphoma.



*Kisseberth*

"Acalabrutinib is a highly potent and selective oral BTK inhibitor that has proven to be very effective for our patients affected by CLL and other blood cancers. It is remarkably well tolerated and results in longer progression-free survival. We are honored and thrilled that this research is helping patients thrive," says Byrd.

Collaborator **Jennifer Woyach, MD**, associate professor in the Division of Hematology and member of the LR Program, presented study data at the 2019 American Society of Hematology (ASH) annual meeting on the mechanisms of resistance that cause some patients to stop responding to acalabrutinib.



*Woyach*

## Study Suggests New Strategy for Treating Advanced, Progressing Bile Duct Cancer

A study led by OSUCCC – James researchers shows how resistance to a promising targeted drug develops in patients with a rare, lethal cancer of the bile ducts called cholangiocarcinoma.

Reported in the journal *Molecular Cancer Therapeutics*, the study also suggests that adding another drug when the cancer starts to progress might re-sensitize tumor cells to the initial drug, which is called an *FGFR* inhibitor because it thwarts the action of the *FGFR* gene. (*FGFR* stands for fibroblast growth factor receptor).

“While most patients with *FGFR*-positive cholangiocarcinoma benefit from new *FGFR* inhibitors in clinical trials, most patients unfortunately develop cancers resistant to the drugs,” says study leader **Sameek Roychowdhury, MD, PhD**, a



Roychowdhury

medical oncologist and researcher at the OSUCCC – James. “We believe this study is an important step in understanding drug resistance and improving the treatment of this and other cancers caused by *FGFR* gene mutations.”

Findings also suggest that monitoring fragments of circulating tumor DNA for acquired mutations that cause resistance to *FGFR* inhibitors may reveal the presence of resistance mutations and mark the time a patient should begin taking the additional drug, which is known as an mTOR inhibitor.

The successful treatment of cholangiocarcinoma is challenging because the disease is usually diagnosed at an advanced stage that has a five-year survival rate of 2%. Patients diagnosed earlier also have low five-year survival due to high rates of disease recurrence. Abnormal activation of the *FGFR* gene occurs in 15-20% of patients with

cholangiocarcinoma, and *FGFR* inhibitors show effectiveness in 70-80% of those patients until resistance develops. *FGFR* inhibitors are being studied in several clinical trials at the OSUCCC – James.

“Having a better understanding of how treatment resistance develops and how to prevent it is critical for improving the treatment of cholangiocarcinoma and other cancers caused by *FGFR* mutations,” says **Melanie Krook, PhD**, a postdoctoral fellow in Roychowdhury’s lab who was first author on the published study.

“Our findings suggest that cholangiocarcinoma patients treated with an *FGFR* targeted therapy could benefit from combination therapies with other drugs such as mTOR inhibitors. Additional laboratory studies are needed to identify optimal lead strategies for this combination,” she adds.

For this study, Roychowdhury, Krook and colleagues examined the *FGFR* gene in the cancer cells of a cholangiocarcinoma patient who died after experiencing disease progression and developing resistance to the *FGFR* inhibitor drug known as infigratinib.

The researchers identified two acquired *FGFR* mutations in the patient’s tumor cells that conferred resistance to *FGFR* inhibitors. They then used cancer cell lines to learn that the mutations led to activation of the mTOR biochemical pathway. This enabled the cancer cells to grow, even in the presence of *FGFR* inhibitors. However, adding an mTOR inhibitor to the cells restored their sensitivity to *FGFR* inhibitors.

## IDEAS TO IMPACT

# Pelotonia-Supported Studies Help OSUCCC – James Change Landscape of Cancer Care (continued)

## Blocking Fat Storage May Offer New Way of Treating Most Lethal Form of Brain Cancer

Glioblastoma (GBM) is a lethal brain cancer that accumulates fats in lipid droplets and uses them as energy for rapid cell division. Blocking an enzyme that GBM cells use to form the lipid droplets might offer a new way to treat this deadly disease, according to a study led by researchers at the OSUCCC – James.

GBM has an average survival of 12-15 months after diagnosis, a period that has remained unchanged for two decades. New and more effective treatments are desperately needed.

In earlier work, this same research team learned that GBM cells accumulate unusually high levels of fatty acids and use them as a source of energy needed for rapid cell growth. Normally, excessive levels of fatty acids are deadly to cells.

In this study, published in the journal *Cell Metabolism*, the researchers looked at an enzyme called DGAT1 (diacylglycerol-acyltransferase 1). GBM cells use the enzyme to package fatty acids into lipid droplets. The enzyme converts fatty acids into molecules called triglycerides, which can be safely stored as lipid droplets in the cancer cells' cytoplasm.

But blocking DGAT1 diverted the excessive fatty-acid molecules to mitochondria, the cells' energy-producing organelles, rather than to storage. This overwhelmed the organelles, causing them

to produce high levels of destructive molecules called oxygen radicals (also called reactive oxygen species). This, in turn, damaged the mitochondria and triggered the cells to self-destruct through a process called apoptosis.

***“These findings suggest that inhibiting DGAT1 might offer a new therapeutic approach for the treatment of glioblastoma,”***

says principal investigator **Deliang Guo, PhD**, professor in the Department of Radiation Oncology and director of Center for Cancer Metabolism at Ohio State, where he also is in the Translational Therapeutics Program at the OSUCCC – James.

“This same approach might also apply to cancers such as prostate, colon, renal and others, which also show lipid-droplet formation,” says Guo. For this study, Guo and colleagues analyzed patient tumor tissue, multiple GBM cell lines and an animal model to examine fatty acid metabolism and lipid droplet formation in GBM.

“Overall,” Guo says, “our findings may lead to the identification of lipid-metabolism pathways that are unique to glioblastoma and other malignancies, and to new therapies for these cancers.”



*Deliang Guo, PhD*

## Study May Refine Diagnosis and Treatment of Younger Adults With Acute Leukemia

The findings of a study led by researchers at the OSUCCC – James could refine an important set of diagnostic and treatment recommendations for middle-aged patients with acute myeloid leukemia (AML).

The retrospective study evaluated the molecular characteristics and outcomes of 863 AML patients under age 60 who were treated according to 2017 European LeukemiaNet (ELN) recommendations. The ELN is a European Union-funded organization of physicians, scientists and patients who focus on leukemia. The Ohio State University joined LeukemiaNet in 2014.

ELN recommendations are internationally used for diagnosing and managing people with AML and other leukemias. AML is a blood cancer that affects 19,900 Americans and kills nearly 11,200 of them yearly, according to the American Cancer Society. The OSUCCC – James researchers note that only 35-40% of AML patients under age 60 achieve long-term survival.

This study, published in the journal *Leukemia*, found that 9% of favorable-risk and 53% of intermediate-risk patients should be reclassified as adverse risk, and that 4% of favorable-risk and 9% of adverse-risk patients should be reclassified as intermediate risk.

***“If verified, our findings may refine the ELN risk stratification of younger AML patients, which could improve their treatment choices and outcomes,”***

says corresponding author **Ann-Kathrin Eisfeld, MD**, an investigator in the OSUCCC – James Leukemia Research Program.

During this study, Eisfeld and her colleagues detected 2,354 mutations, an average of three per patient (median age 45 years). They also determined the frequency of current ELN risk-group-defining mutations, additional mutations that differed among the risk groups, and mutations in three “functional group” categories: RAS-pathway mutations, kinase and methylation-related mutations, and mutations in genes encoding for spliceosomes, transcription factors and tumor suppressors.

The researchers compared the frequencies of the mutations within each ELN risk group—favorable, intermediate and high—to learn which were associated with better or worse outcomes and might therefore help refine the 2017 ELN classification.

The research paper stemming from this study is dedicated to the memory of its senior author, **Clara D. Bloomfield, MD**, who died in March 2020 during completion of the manuscript. Bloomfield, a Distinguished University Professor at Ohio State who also served as cancer scholar and senior adviser to the OSUCCC – James, was instrumental in developing the 2017 ELN recommendations, which replaced those that were issued by the ELN in 2010 that were also co-authored by Bloomfield.



Ann-Kathrin Eisfeld, MD



Clara D. Bloomfield, MD

# Bringing Top Cancer Researchers to Ohio State

*Some of the brightest minds in cancer research are attracted to the OSUCCC – James, and Pelotonia dollars often help these researchers continue their work when they arrive, enabling them to hit the ground running.*

In the past year the OSUCCC – James has recruited both senior- and junior-level medical scientists, including some who are also members of the new Pelotonia Institute for Immuno-Oncology (PIIO). The recruits include these two prominent senior-level scientists:



**Bei Liu, MD, MPH**, was recruited to Ohio State from the Medical University of South Carolina as a member of the PIIO at the OSUCCC – James. She also is a professor in the College of Medicine, Department of Internal Medicine, Division of Hematology. Liu has an NIH-funded research program focused on cancer immunotherapy, mucosal and tumor immunology, and innate immunity. She is interested in understanding chaperone biology in B cells, plasma cells and dendritic cells in both normal and pathological conditions. Her lab team discovered that the chaperone grp94 protein is required for multiple myeloma cell survival, which is mediated in part by the Wnt target survivin. Her team also discovered that grp94 critically regulates dendritic cell function in the tumor microenvironment. Liu says the goal of her lab team is to utilize knowledge learned from the immune system's responses to cellular stress and gut bacteria to develop novel cancer therapeutics.



**Dongjun Chung, PhD**, was recruited to Ohio State from the Medical University of South Carolina as an associate professor in the Department of Biomedical Informatics (BMI) within the College of Medicine. Chung was jointly recruited by BMI and the PIIO at the OSUCCC – James. His research expertise includes statistical genetics, bioinformatics, machine learning and statistical computing. Chung is principal investigator for two NIH-funded grants and contributes to multiple other NIH-funded grants. His research group has published several articles in scientific journals and has developed multiple statistical methods, software and Web interface in the areas of high-throughput sequencing, genome-wide association studies, cancer genomics and systems biology.





With the **2020 My Pelotonia** platform, participants set personal goals to ride, walk, run, volunteer or take part in some other activity of their choice to support cancer research at the OSUCCC – James.

This page displays a few of their answers to

## “What’s My Pelotonia?”



**TEAM BUCKEYE**  
WE ARE LEGENDARY

“My Pelotonia is to walk 100 miles by August 7, try new healthy cooking options with my family and raise \$2,000.”

**RAPHAEL E. POLLOCK, MD, PHD, FACS**  
Director, The Ohio State University Comprehensive Cancer Center

**WHAT’S YOURS?**  
→ [TEAMBUCKEYE.OSU.EDU](http://TEAMBUCKEYE.OSU.EDU)



**TEAM BUCKEYE**  
WE ARE LEGENDARY

“My Pelotonia is to get in 1,000,000 steps before August 4.”

**ARNAB CHAKRAVARTI, MD**  
Professor and Chair, Department of Radiation Oncology at The Ohio State University

**WHAT’S YOURS?**  
→ [TEAMBUCKEYE.OSU.EDU](http://TEAMBUCKEYE.OSU.EDU)



**TEAM BUCKEYE**  
WE ARE LEGENDARY

“My Pelotonia is to ride 200 miles.”

**DAVID COOHN, MD, MBA**  
Chief Medical Officer, James Cancer Hospital and Solove Research Institute

**WHAT’S YOURS?**  
→ [TEAMBUCKEYE.OSU.EDU](http://TEAMBUCKEYE.OSU.EDU)

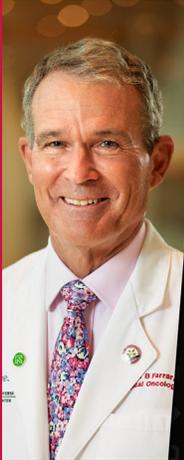


**TEAM BUCKEYE**  
WE ARE LEGENDARY

“My Pelotonia is to walk daily and eat healthy so that my baby girl grows and is delivered healthy this August.”

**ZOBEIDA CRUZ-MONSERRATE, PHD**  
Assistant Professor, Division of Gastroenterology, Hepatology and Nutrition at The Ohio State University

**WHAT’S YOURS?**  
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**TEAM BUCKEYE**  
WE ARE LEGENDARY

“My Pelotonia is to ride 43 miles – one mile for every year that I’ve treated cancer patients at Ohio State and The James.”

**WILLIAM FARRAR, MD**  
CEO, James Cancer Hospital and Solove Research Institute

**WHAT’S YOURS?**  
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**TEAM BUCKEYE**  
WE ARE LEGENDARY

“My Pelotonia is to walk 200 miles from now until August 7.”

**ROSA LAPALOMBELLA, PHD**  
Pelotonia Fellowship Director

**WHAT’S YOURS?**  
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**TEAM BUCKEYE**  
WE ARE LEGENDARY

“My Pelotonia is to run 50 and ride 50 miles by August 8, work to improve lung cancer outcome disparities and raise \$1,000.”

**ROBERT E. MERRITT, MD, FACS**  
Associate Professor of Surgery, Director, Division of Thoracic Surgery at The Ohio State University

**WHAT’S YOURS?**  
→ [TEAMBUCKEYE.OSU.EDU](http://TEAMBUCKEYE.OSU.EDU)



**TEAM BUCKEYE**  
WE ARE LEGENDARY

“My Pelotonia is running 200 miles to create a cancer-free world.”

**HAROLD L. PAZ, MD, MS**  
Executive Vice President and Chancellor for Health Affairs, The Ohio State University, Chief Executive Officer, OSU Wexner Medical Center

**WHAT’S YOURS?**  
→ [TEAMBUCKEYE.OSU.EDU](http://TEAMBUCKEYE.OSU.EDU)



**TEAM BUCKEYE**  
WE ARE LEGENDARY

“My Pelotonia is to run 28 miles on August 8-9 in recognition of the number of years my mom has been cancer-free.”

**AMY WARE, MHA, MEd**  
Senior Advisor to the CEO, James Cancer Hospital and Solove Research Institute

**WHAT’S YOURS?**  
→ [TEAMBUCKEYE.OSU.EDU](http://TEAMBUCKEYE.OSU.EDU)

THE OHIO STATE UNIVERSITY  
COMPREHENSIVE CANCER CENTER –  
ARTHUR G. JAMES CANCER HOSPITAL AND  
RICHARD J. SOLOVE RESEARCH INSTITUTE

460 W. 10th Ave.  
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