25 Years of Excellence

2023 ANNUAL REPORT
Letter from the President

One of my favorite things to do with visitors is to take them on tours of the Danforth Center. Sure, they are usually impressed with the laboratories, robotics, and plant growth facilities. But they are often more impressed with the people they meet along the way. In this report, you will learn about many of those talented Danforth Center community members and their passion for using plant science to improve the human condition.

Whether it’s a student from Washington University doing their graduate studies at the Danforth Center or a horticultural specialist working with scientific teams to produce plants for experiments, our people possess the magic that makes the Danforth Center such a special place. This year, we grew to nearly 450 Center community members who originate from about 35 countries around the globe. They come because of the unique opportunity to make a difference in people’s lives through creative and impactful scientific research.

Our incredible people are doing difficult, challenging work. But they are enabled by generous supporters like you, and by the fact that you are invested in their success. On behalf of the entire Danforth Center, thank you!

Letter from the Chair

The Danforth Center seeks to address the biggest challenges of the 21st century and to provide solutions in a hurry. In the five years I have served as board chair, the pace of discovery and delivery at the Danforth Center has accelerated dramatically, especially with the new Field Research Site fully integrated into operations.

The pages of this booklet are filled with the kind of news that inspires me to optimism about the future:

• Discoveries that can help us grow more food in a changing climate.
• Progress on improved food crops for Africa.
• A quick exit for a Danforth Technology Company spinout, helping to speed the product to market.

The work of the Danforth Center would not be possible without our community. Our Founding Chair, Bill Danforth, knew this and celebrated it: “Our people are willing to work together for a common good. That’s a rare plus not present in every community.”

It has been my sincere pleasure to work together with this community for the common good, and I look forward to continuing the work under new board chair Penny Pennington’s leadership. By working together, all of us can make a difference. Thank you for your support.

James C. Carrington

Todd R. Schnuck
Preserve our Planet

Farms with Benefits

Agriculture currently accounts for ten percent of greenhouse gas emissions. But what if we could develop crops that help? Crops with the same or better productivity—that also capture more carbon, fix their own nitrogen, thrive on less water, and stop soil erosion? This is the vision of scientists at the Danforth Center who are working to create crops that can withstand the rigors of a changing climate, that can feed the world while also improving the environment.

The Subterranean Influences on Nitrogen and Carbon (SINC) Center is dedicated to developing technology that reduces the need for nitrogen fertilizer by promoting beneficial microbe-plant interactions, developing cover crops, and optimizing plant genetics. In 2023, SINC Center co-directors launched initiatives to better understand plant-bacteria nutrient exchange, elemental uptake, and published studies on cover crop root architecture and a field evaluation technique for biofertilizers. The goal? To find a way to feed the world while preserving the planet.

Read more>>

Minirhizotron tubes allow researchers to track and study the hidden half of plants underground. In 2023, Danforth Center scientists led by Dr. Katie Murphy, director of the Danforth Center Phenotyping Core Facility, installed 404 minirhizotrons—and more are planned with support from The Bellwether Foundation to develop phenotyping systems at the Field Research Site. These root studies can help shed light on improving plants’ uptake of nutrients and their interaction with soil microbes to grow more food with fewer inputs.

Read more>>
As part of the Enterprise Rent-A-Car Institute for Renewable Fuels, scientists explore the potential of plants to create green solutions for global energy challenges. In 2023, Dr. James Umen (pictured) and his team discovered a new gene in green algae that controls sex determination, opening the door for targeted breeding. Read more>>

Meanwhile the lab of Dr. Doug Allen has uncovered an important role played by malic enzyme in enhancing soybean oil production. Both discoveries could prove important for developing sustainable green fuels and petroleum replacements. Read more>>

The model plant Arabidopsis, which was used in the study. New research led by Dr. Keith Slepkin at the Danforth Center revealed that plants can pass on “memories” of high carbon dioxide to their offspring. This discovery opens the door for scientists to equip plants with the tools they need to adapt to rising levels of CO₂, high heat, and other stressors associated with climate change. Read more>>

As climate change influences daily and seasonal temperature patterns—such as warmer nights and winters—it is critical to better understand how plants interpret and react to thermal cues to ensure food security worldwide. In 2023, researchers in the lab of Dr. Dmitri A. Nusinow identified a new protein complex in plants that regulates temperature response by the circadian clock. It’s an important step in work to develop crops that can continue to grow with the same or increased yields in a changing climate. Read more>>

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Feed the World

Farmers on the Frontlines

Farmers around the world are on the frontlines in the fight against hunger. For smallholder farmers in Africa, the situation is particularly challenging. There are more people to feed, less land to grow crops on, and many of their crops have barely increased in productivity in the last fifty years. Add to this the effects of conflict and climate change. Danforth Center scientists are working to close the productivity gap and bring improved crops to Africa to increase food security and farmers’ livelihoods.

The Danforth Center helped pod-borer-resistant (PBR) cowpea over the regulatory finish line in Nigeria and Ghana. Today, farmers are clamoring for these improved seeds, which diminish the need for expensive pesticides dramatically. In 2023, certified seed production in Nigeria jumped tenfold on a course to meet demand in coming years. Dr. Donald MacKenzie, executive director of the Danforth Center Institute for International Crop Improvement, led licensed seed inspector trainings in Nigeria and a seminar for the National Biosafety Authority of Ghana.

Read more>>
Dr. Getu Duguma surveys his teff field trial at the Danforth Center Field Research Site. Teff is an ancient grain consumed by 80+ million people in Ethiopia. Dr. Duguma grew up on a farm there, so he knows first-hand what improved teff will mean for Ethiopian farmers. Teff has weak, slender stems and falls over due to its own weight and other environmental factors, leaving 25% of yield in the dust. Dr. Duguma and his team have developed short-stature teff that doesn’t fall over. In 2023, the USDA cleared their improved teff for field trials without the burden of biotech regulation, and testing is now underway. Read more>>

Dr. Nadia Shakoor inspects her lab’s fonio crop in the Danforth Center greenhouse. Cultivated in Africa for more than 5,000 years, fonio is an ancient grain that hasn’t benefited from much agronomic improvement...yet. A type of millet, fonio can grow on poor and marginal lands, making it an excellent choice for farmers confronting a changing climate. The Danforth Center is working to improve this grain— for the benefit of the millions of consumers and farmers in West Africa who eat fonio on a daily basis. Read more>>

The storage root on the left shows the devastation caused by cassava brown streak disease—a virus that can destroy an entire cassava crop with little warning. At right: virus-resistant cassava developed by the Danforth Center and partners in East Africa. Dr. Nigel Taylor leads the Virus-Resistant Cassava for Africa (VIRCA Deployment) project. Confined field trials are taking place in Uganda and Rwanda. The crop is closest to farmers’ hands in Kenya, where national performance trials—the final hurdle to regulatory approval—will be completed in 2024. Read more>>

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Dr. Andrea Eveland is working to change that. Sorghum is also poised to help mitigate climate change through the work of Dr. Nadia Shakoor to breed for bigger, deeper root systems that store more carbon. Read more>>

Danforth Center 2023 Annual Report
Next-Gen Science

Inspiring the next generation of diverse scientists is fundamental to our future. By engaging young minds, we cultivate curiosity and passion for solving global challenges. Our educational programs, mentorship, and hands-on experiences empower future leaders to explore, innovate, and contribute to advancements in agriculture and environmental sustainability. Investing in the next generation ensures a pipeline of talent dedicated to addressing pressing societal issues and shaping a brighter future for our planet.

Students in the “Drone Ranger” camp learning about geospatial science. In a partnership with the Jackie Joyner-Kersee Food, Agriculture, Nutrition, Innovation Center (JJK FAN), and with support from Boeing, the Danforth Center Education Research and Outreach lab launched a geospatial science initiative in the 2022-2023 school year. Students programmed and flew drones, collected data, and learned about intersections with plant science, geography, and scientific careers.

Read more>>

The 2023 Research Experience for Undergraduates (REU) internship class. Funded by the National Science Foundation, the REU has been part of the Danforth Center for 23 years. In 2023, more than 159 undergraduates from around the country competed for 21 spots in the rigorous 10-week program. Program organizers were Dr. Tessa Burch-Smith and Dr. Kirk Czymmek.

Read more>>

Graduate student Amie Fornah Sankoh made history at the Danforth Center on April 21, 2023 when she successfully defended her dissertation, becoming the first-ever Deaf, Black woman to receive a PhD in any STEM discipline. A student in the lab of Dr. Tessa Burch-Smith, Dr. Sankoh’s research focuses on intercellular signaling in plants.

Read more>>
Innovation for the Future

Innovation lies at the heart of what we do at the Danforth Center. By pushing the boundaries of scientific discovery and technology, we strive to address global challenges such as food security, environmental sustainability, and climate resilience. Through collaborations with industry leaders, investors, and academic partners locally and around the globe, we aim to unlock new solutions at record speed. Innovation drives our science and fosters a future where plants play a pivotal role in building a more sustainable and resilient planet.

39 North Executive Director Emily Lohse-Busch at the announcement event. Seven institutions united in 2023 to launch 39 North AgTech Innovation District as an independent 501(c)(3). Anchor institutions include the St. Louis Economic Development Partnership, Greater St. Louis Inc., City of Creve Coeur, the Danforth Center, CoverCress Inc., Benson Hill, and Bayer Crop Science. 39 North aims to bolster St. Louis as an agtech hub, promoting the region’s robust innovation resources, strong talent pipeline, and strategic location. 

In 2023, Peptyde Bio, launched by the Danforth Center Start-Up Initiative and Danforth Technology Company, was acquired by Invoio Sciences in less than two years, a rare feat in the startup world. This rapid exit underscores the high demand for and efficacy of their eco-friendly antifungal technology, which offers a sustainable and cost-effective alternative to traditional chemical fungicides. Co-founded by Dr. Dilip Shah and Dr. Kirk Czymmek, Peptyde Bio’s innovation is a testament to the Danforth Center’s focus on swiftly bringing emerging technologies to market.

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Led by the Danforth Center, BioSTL, Yield Lab LATAM, World Trade Center St. Louis, Greater St. Louis Inc., and 39 North, Cultivar STL was launched this year to boost partnerships with Latin America startups and ecosystems in agri-food tech. The first convening showcased St. Louis’s strengths to more than 30 startup executives, investors, and leaders from eight countries. The program aims to create international research and business collaborations, advancing the region’s competitive edge in ag and geospatial technology.

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Read more>>
Community Engagement and Contributions

Donors are essential partners in our mission. They are our investors, our volunteers, our brand ambassadors, our community builders. Together, Danforth Center community members and supporters expand our sphere and grow our enterprise in service to humanity. We are grateful.

Agrela Ecosystems, founded by Dr. Nadia Shakoor, launched the PheNode®, an advanced environmental sensor platform, in 2023. With $250,000 in early revenue and clients like the Taylor Geospatial Institute, PheNode aims to revolutionize data-driven agriculture and various industries through customizable, cutting-edge data collection technology. Read more>>

Dr. Becky Bart appeared at SXSW 2023, discussing the crucial role of microbes in human and environmental health. Her panel, “Plants, People & Planet: Microbes Rule Health,” highlighted the importance of microbiomes in agriculture, forestry, personalized medicine, and sustainability, emphasizing their potential to address climate change and other significant challenges. Read more>>

In 2023, the Danforth Center was named a Top Workplace by the St. Louis Post-Dispatch for the third year in a row. The award recognizes employers that score highly in the eyes of their employees. The Danforth Center was praised for its culture of cooperation, professionalism, open-mindedness, and excellence. Read more>>

Dr. Malia Gehan presented at the North American Plant Phenotyping Network conference, which she co-organized at the Danforth Center in February. The event was attended by hundreds of scientists from 15 countries. Gehan was recognized later in the year for her distinguished collaboration, when she was selected into the first class of Taylor Geospatial Institute fellows. Read more>>

Supporters
Friends Committee

The Danforth Center is grateful to the Friends Committee, which promotes the work of the Center and grows membership and financial support through annual giving.

2023 FRIENDS COMMITTEE
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Matt S. Wolfe

“Members of the Friends Committee work hard to bring the Danforth Center mission to the public with the goal of building the donor community. Conversations: Big Ideas attracted record attendance this year, and we are excited to report increased membership in the Danforth Society, the Center’s upper level giving society. Welcome and thank you!”

- Tim Halls,
Chair, Friends Committee

Conversations

Organized by the Friends Committee since 2003, Conversations are free public events that provide the opportunity to learn about the work of the Center and our partners. In 2023, the events were in person and livestreamed. (View recordings on our blog at danforthcenter.org.)

MAPPING THE FUTURE OF ST. LOUIS | MARCH 30
This evening offered a chance to learn about the future of agriculture and how plant science and geospatial science are intricately interwoven. The conversation took place between Taylor Geospatial Acting Director Vasit Sagan, PhD, Associate Professor of Earth & Atmospheric Science at Saint Louis University, and Danforth Center Principal Investigator Allison Miller, PhD, Professor of Biology at Saint Louis University. Jason Hall, CEO of Greater St. Louis, Inc., served as moderator.

BIG IDEAS 3.0 | AUGUST 31
Combining TED Talks and Shark Tank, this inspiring evening featured three teams of early-career Danforth Center researchers, each pitching their concepts for how to use plant science to better our world. After each team’s presentation, they faced questions from a panel that included Benjamin Ola Akande, PhD, SVP, Stifel Financial Corp and DLC chair; Marilyn Bush, President, Bank of America St. Louis; and Janet Wilding, Vice President of Business Attraction, Greater St. Louis, Inc. Chip Lerwick, Missouri Market Leader at Aon and DLC member, served as emcee. After an audience vote, Team Metablify was the announced winner and received a $10,000 grant to jumpstart their idea for groundbreaking software to enable scientists to detect certain plant chemicals that are essential to nutrition and medicine.

At Big Ideas 3.0, Team Metablify won the audience vote. Their big idea? A new tool to detect chemicals within plants that are essential to nutrition and medicine.

At Mapping the Future, TGI’s Dr. Vasit Sagan spoke with Dr. Allison Miller about how geospatial and plant science are enhancing the St. Louis region.

“At the Danforth Plant Science Center is an excellent model, a blueprint, for Taylor Geospatial Institute’s success.”

- Vasit Sagan, PhD, Acting Director, Taylor Geospatial Foundation
Young Friends

The Danforth Center is grateful to the Young Friends, a group of professionals, 40 and under, who raise friends and funds to advance the mission of the Danforth Center.

2023 STEERING COMMITTEE
Matt Plummer, Chair
Jackie Hayes, Vice Chair
Erin Jones, Vice Chair
Davey Oetting, Chair Emeritus
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David Culver, Jr.
Meghan Donovan
Nora Farkis
John Ferrari
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Anna Krane
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Andrew Romme
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Klaire Whiteside
Dylan Zielonko

“"The Danforth Center Young Friends aims to be the premier volunteer group in St. Louis. Our signature initiative is the Grow Challenge® Party with the Plants. In 2023, we raised more than $110,000 for plant science innovation and local STEM education, making it one of our most successful events ever.”
- Matt Plummer
Chair, Young Friends

Grow Challenge®

During the pandemic, the Young Friends championed the Grow Challenge® Week of Giving, which is now the Danforth Center’s annual online donation campaign. Party with the Plants, which was first held in 2017, is now the culminating event of the Grow Challenge.

PARTY WITH THE PLANTS | SEPTEMBER 29

On September 29, nearly 300 people joined in the fun, celebrating a successful Grow Challenge Week of Giving at Party with the Plants. This ticketed event saw St. Louis professionals enjoying cocktails and hors d’oeuvres, listening to live music and scientific demonstrations, and bidding on auction items. Altogether the Grow Challenge raised more than $110,000 for plant science innovation and local STEM education, making this year’s fundraiser one of our most successful ever.

2023 GROW CHALLENGE SPONSORS

Platinum
Novus

Gold

Silver
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CoverCress Inc.
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Rootberry
Sugarfire Smokehouse
Switchgrass Spirits

Selfies and social media: it’s a good time for a good cause. The Grow Challenge and Party with the Plants raised more than $110,000 for Danforth Center STEM education and outreach, early-stage projects, and more.
Members of the Danforth Society and the St. Louis business community celebrated the Danforth Center innovation ecosystem at Toast to Innovation.

Danforth Society Event
TOAST TO INNOVATION | OCTOBER 14

On October 14, members of the Danforth Center’s premier giving group, the Danforth Society, came together with leaders from the greater 39 North innovation district for a celebration of the Danforth Center innovation community. Speakers included Danforth Center President and CEO Jim Carrington, PhD; Stephanie Regagnon, executive director of innovation partnerships; and Jerry Steiner, co-founder and former CEO of CoverCress, who was the recipient of the Danforth Distinguished Service Award.

2023 TOAST TO INNOVATION SPONSORS
RiverVest Venture Partners
Todd & Julie Schnuck
Al & Elizabeth Gallegos
Susan & Aaron Perlut

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who gave to support internships and training for early-career scientists
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Gina & Matt Luetje
Kenneth B. Mares
Renée & Bruce Michelson
Dennis & Carolyn Plummer
Don Senti & Betsy Redfield
Dulari & Dilip Shah

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Senator & Mrs. Christopher S. Bond
William R. Boyle
Cicardi & Susan Bruce
Ann Case
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The Mares Family Endowment
Marilyn Miles
Mr. & Mrs. Jefferson Miller

Legacy Advisory Council
The Danforth Center is grateful to these legal and financial planning experts who provide assistance with the promotion of planned gifts to the Center.

Kenneth J. Bower, Clayton Financial Group
Stephen B. Dailer, Harrison LLP
Matthew G. Perlow, Husch Blackwell LLP
Bud Strong, Husch Blackwell LLP

WHD Legacy Society
The Danforth Center is grateful to donors who have planned for future needs of the Center by designating a gift in their will or estate plans. To learn more about making a gift through your will or estate, visit legacy.danforthcenter.org.

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Founding members of the society include Dr. William H. Danforth†, Mary† and Oliver† M. Langenberg, and Mrs. Jefferson L. Miller†.

“Bill Danforth’s legacy is the Danforth Center—and that was such an inspiration to us. We want to support organizations that benefit St. Louis as well as the world’s most critical issues.”
- William A. & Christine A. Linnenbringer
WHD Legacy Society Members

Danforth Center 2023 Annual Report
Danforth Leadership Council
The Danforth Center is grateful to the Danforth Leadership Council, a group of prominent St. Louisans and corporate representatives interested in the role of plant science in the future of the region.

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Christopher B. Danforth
Natalie DiNicola
Chip Lerwick

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Nancy Ylvisaker
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Supporters
“The Danforth Leadership Council continues to grow and expand the Center’s stakeholder base. In 2023, we were pleased to welcome new corporate members and to support the next generation of emerging scientists at Big Ideas 3.0. We are grateful to all who contributed.”

-Benjamin Ola Akande, PhD
Chair, Danforth Leadership Council

Ignite
Launched in 2023, the IGNITE series put a fresh spin on innovation and entrepreneurship at the Danforth Center. The series brought nationally renowned speakers and panelists who presented and discussed leading-edge ideas for “inspiring innovative impact.”

THE MINDSET WE NEED TO CREATE THE FUTURE
WE WANT | AUGUST 8
The inaugural event of IGNITE brought well-known futurist, TED-talk, and bestselling author Nancy Giordano to the stage. She spoke on ‘2030+ Beyond Economy: The Mindset We Need to Create the Future We Want.” In a wide-ranging talk that touched on many subjects from AI to reinventing the internet, Giordano focused on what we need to create the more sustainable, inclusive, and dynamic solutions the future demands.

CONNECTING GLOBAL ECOSYSTEMS FOR GREATER IMPACT | OCTOBER 18
With a central premise—that solving our climate crisis will require radical collaboration at the frontier of science and social action—this Ignite welcomed a panel of top experts to discuss opportunities for international collaboration. Panelists included Gabriela Burian, Global Director for Multi-Stakeholder Partnerships, Bayer Crop Science; Luis Fernandez Zang, Senior Investment Officer, IDB Group; and Mark Jarman, Founder and Consultant, AgriTIERRA Ltd. Teresita Di Marco, Principal, The Yield Lab LATAM, served as moderator.

Sponsored by:

“IGNITE events bring together innovators and entrepreneurs from across the region—and the globe—in the belief that big challenges require people working together to find solutions.

“The good news is that we can change the future. [...] We have the opportunity, if not the responsibility, to go build the better story.”

-Nancy Giordano, futurist and speaker at Ignite

Panelists at the second IGNITE discussed ways to improve collaboration and partnership around the world to increase our odds of solving the climate crisis.
Corporate Partners
The Danforth Center is grateful to our corporate, industry, and organization partners for their generous support in 2023.

$100,000+
- Agrich Global, Inc.
- Bunge North America Foundation
- Novus International, Inc.

$50,000+
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- Polsinelli
- RiverVest Venture Partners

$5,000+
- RNAissance Ag
- RubinBrown LLP
- St. Louis County Farm Bureau
- The St. Louis Trust Company
- Tariton Corporation
- Mary R. Wolff Real Estate Management Co.

Other Supporters
- Alpha Dental Care
- Aziotics
- Gamble & Schlemeier
- Heartland Barge Management LLC
- The International Companies
- Lutheran Convalescent Home Auxiliary
- Meadowbrook Country Club
- MOST Policy Initiative
- Plastomics
- Seven Pines Garden Club
- Vulpes Agricultural Corp.

Supporters

In 2023, the Wells Fargo Innovation Incubator (IN²) announced its 5th agtech cohort, focusing on “climate-aligned agriculture” startups. Partnered with Danforth Center scientists, these agtech companies receive financial support and investor access. Three of the companies have St. Louis ties: HabiTerre, Impetus Ag, and Impossible Sensing. Read more>>

Docents
The Danforth Center is grateful to our highly trained docents who led tours and increased public awareness of the Danforth Center in 2023.

2023 DOCENTS
- Azmy Y. Azmy
- Molly Cline, PhD
- Joan Culver
- Steve Epner
- Martha Ferdinand
- Glenn Fischer
- Roberta (Robbye) Frank
- Gary Mindel
- Rashmi Nair, PhD
- Fred Perlak, PhD
- Matthew Rubin, PhD
- Rich Schumacher, PhD
- Austin Tao
- Ted Vehige
- James R. von der Heydt

Docent Steve Epner leads a tour through the greenhouses. Docents are often scientists, academics, and entrepreneurs who volunteer their time to promote the Danforth Center mission.
In Honor of...  
Jane Bond  
Ms. Martha W. Bond  
Mr. & Mrs. Lary Bozay  
Teri & Jim Carrington  
Mrs. Carol R. Armstrong  
Katie Claggett  
Mr. & Mrs. Birch Mullins  
Maxine Clark & Bob Fox  
Mr. & Mrs. Kenneth Kranzberg  
Senator John C. Danforth  
Ms. Margot Miller  
Glenn Fischer  
Anonymous  
Terri Fischer  
Ted Guhr  
Mrs. D’Arcy Elsperman  
Gary Hall  
Jim Hall  
Ruth Kim  
Anna & Wayne Crosslin  
Dr. Allison Miller  
Mary Ellen Miller  
Rev. John B. Musgrave  
Mr. & Mrs. Michael Rich  
Karen Stern  
Mr. & Mrs. Kenneth Kranzberg  
Sarah & Dan Wessel  
Jim Hall  
Rose Winkel  
Ms. Anne Leners  
Jean Wright  
Ms. Sandra L. Richardson  
Bing Yang  
Dudley & Beth McCarter  
In Memory of...  
 Roxanne Astroth  
Mr. & Mrs. William Astroth, Jr.  
William H. Danforth  
Mr. & Mrs. Blackford F. Brauer  
Tom & Meg Claggett  
Mr. & Mrs. David C. Farrell  
Mr. & Mrs. Michael Rish  
Sandy & Laing Rogers  
Mark & Senator Jill Schupp  
Derick Driemeyer  
Mrs. Nancy L. Allen  
Mr. Wayne Atchen  
Mr. & Mrs. Howard Anthes  
Mrs. Carol R. Armstrong  
Tom & Cindy Bander  
Mr. & Mrs. William Bergfeld  
Mr. & Mrs. James T. Blair, IV  
Mr. & Mrs. Frank J. Bush  
Mr. Theodore C. Christner &  
Mrs. Claudia Trautmann  
Terry & Jim Coleman  
Ms. Mary Beth Davidson  
Mr. & Mrs. Walter Diggs  
Mrs. Barbara English  
Mr. & Mrs. Gary Giessow  
Joan & Joseph Goldzman  
Mr. & Mrs. Harold F. Helminkamp  
Mr. & Mrs. Donald Hicks  
Mr. Patrick Kenney  
Katie Klingler  
Mr. & Mrs. Michael D. Latta  
Mr. & Mrs. John S. McCarthy  
Mrs. Barbara McKinney  
Dr. & Mrs. Roger Moll  
Dr. Patrick Osborne & Nancy Birge-Osborne  
Mrs. Claire J. Robertson  
Janet Slater  
A. Nicholas Filippello  
Mrs. Abigail B. Filippello  
Samuel W. Greaves  
Ms. Tamara Baldwin Sessoms  
Ms. Donna S. Grunik  
Bonnie Halls  
Dr. & Mrs. Martin P. Altman  
Tom & Cindy Bander  
Ms. Brenda Bauer  
Mr. & Mrs. Bill Borger  
Terry & Jim Coleman  
Mr. Edwin M. Epstein  
Mr. & Mrs. Thomas W. Hough  
James D McMillan  
Meadowbrook Country Club  
Teresa & Keith Wheeler  
Robert L. Jackson  
Mr. & Mrs. Ronald E. Wirts  
Bob & Joan Jasper  
Butch & Cindy Jasper  
Mike & Diane Jasper  
David F. Jones  
James & Barbara Forst  
William & Nancy Knowles  
Mrs. Lesley McIntire  
Jo Ann Zaccarello Lampe  
Mr. & Mrs. Michael D. Zaccarello  
Robert S. Matthews, Sr.  
Elizabeth & Michael Brunt  
Todd Mockler  
Tom & Cindy Bander  
Dr. Erica A. Fishel  
Melissa Rung-Blue &  
David Blue  
Charles M.M. Shepherd  
Suzanne W. Shepherd  
Mike Taich  
Dr. Alison Bedell  
Jack C. Taylor  
John & Anne McDonnell  
Thomas E. Thompson  
Anonymous  
Geraldine Virgil  
Tom & Cindy Bander  
Francis & Estelle Walls  
Anonymous  
Betty Woyak  
Mr. & Mrs. Harold Denlow  
Gene Zafft  
Mrs. Marlene D. Zafft  
In 2023, Danforth Center Principal Investigator Dr. Bing Yang was elected a fellow of the American Association for the Advancement of Science. Yang earned his place in this prestigious group due to his distinguished contributions to plant pathology and gene editing in rice. Read more>>
Our People

2023 MEMBERS
Doug Allen, PhD, Member, USDA Research Scientist
Rebecca Bart, PhD, Member
Ivan Baxter, PhD, Member
Armando Bravo, PhD, Assistant Member
Tessa Burch-Smith, PhD, Associate Member
James Carrington, PhD, President & CEO
Andrea Eveland, PhD, Associate Member
Maila Gehan, PhD, Associate Member
Elizabeth Kellogg, PhD, Member, Robert E. King Distinguished Investigator
Toni Kuchan, PhD, Member, Oliver M. Langenberg Distinguished Investigator, VP - Research
Blake Meyers, PhD, Member, Professor of Plant Science, Mizzou
Allison Miller, PhD, Member, Professor of Plant Biology, SLU
Todd C. Mockler†, PhD, Member and Geraldine and Robert Virgil Distinguished Investigator
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Sona Pandey, PhD, Member
Dilip Shah, PhD, Associate Research Member
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James Umen, PhD, Member, Joseph Varner Distinguished Investigator
Xuemin (Sam) Wang, PhD, Member, E. Desmond Lee Professor, UMSL
Bing Yang, PhD, Member, Professor of Plant Science, Mizzou
Ru Zhang, PhD, Assistant Member

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Kirk Czymmek, PhD, Director, Advanced Bioimaging Laboratory
Noah Fahlgren, PhD, Director, Data Science
Donald MacKenzie, PhD, Exec, Director, Institute for International Crop Improvement

2023 SENIOR RESEARCH SCIENTISTS
Patricia Baldrich, PhD
Kevin Cox, PhD
Getu Duguma, PhD
Molly Hanlon, PhD
Mao Li, PhD
Narayan Narayanan, PhD
Matthew Rubin, PhD
Nadia Shakoor, PhD
Bala Venkata, PhD

To learn about each scientist’s research area, scan the code below.

Principal Investigators

The Danforth Center community was deeply saddened by the sudden passing of Dr. Todd C. Mockler on January 6, 2023. Read more on the following page.

danforthcenter.org | improve the human condition through plant science
Selected Financial Data
Fiscal Year Ended December 31, 2023
(Unaudited)

2023 Unrestricted Operating Support and Revenues

<table>
<thead>
<tr>
<th>UNRESTRICTED OPERATING SUPPORT AND REVENUE¹</th>
<th>Amount</th>
<th>Source %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Grants and Contracts</td>
<td>$22,707</td>
<td>44.3%</td>
</tr>
<tr>
<td>Donor Support</td>
<td>$23,862</td>
<td>46.5%</td>
</tr>
<tr>
<td>Unrestricted Donor Gifts</td>
<td>$2,328</td>
<td>4.5%</td>
</tr>
<tr>
<td>Gifts Released from Restriction</td>
<td>$1,438</td>
<td>2.8%</td>
</tr>
<tr>
<td>Endowment Draw</td>
<td>$20,096</td>
<td>39.2%</td>
</tr>
<tr>
<td>Core Facility Fees</td>
<td>$2,346</td>
<td>4.6%</td>
</tr>
<tr>
<td>Other Income</td>
<td>$2,317</td>
<td>4.6%</td>
</tr>
<tr>
<td><strong>Total Operating Revenues</strong></td>
<td>$51,232</td>
<td>100%</td>
</tr>
</tbody>
</table>

2023 Operating Expenses²

<table>
<thead>
<tr>
<th>OPERATING EXPENSES²</th>
<th>Amount</th>
<th>Expense %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Research/Science/Innovation</td>
<td>$37,873</td>
<td>82.6%</td>
</tr>
<tr>
<td>Administration</td>
<td>$5,278</td>
<td>11.5%</td>
</tr>
<tr>
<td>Development and Public Relations</td>
<td>$2,701</td>
<td>5.9%</td>
</tr>
<tr>
<td><strong>Total Expenses from Continuing Operations</strong></td>
<td>$45,852</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

CAPITAL EXPENDITURES

| Lab and Core Facility Equipment             | $1,266     |
| All Other                                   | $326       |
| **Total Capital Expenditures**             | $1,592     |

REPLACEMENT AND RENEWAL EXPENDITURES

| Debt Principal Payments                     | $737       |
| **Depreciation Expense**                    | $7,895     |

¹ Cash basis and excludes income(loss) on Endowment investments and reimbursement for subcontracted research.
² Excludes subcontracted research on Grants and Contracts and Depreciation Expense.
2023 Leadership

**LEADERSHIP TEAM**
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OUR MISSION
Improve the human condition through plant science

Feed the hungry and improve human health.
Preserve and renew our environment.
Enhance our region as a world center for plant science.

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