

the Leaflet

VOLUME 27 • ISSUE 1 • SPRING 2025

ANNOUNCING THE FUTURE FORWARD
CAMPAIGN FOR THE DANFORTH CENTER

*The Leaflet is a publication for partners,
friends, and supporters of the Donald
Danforth Plant Science Center.*



DONALD DANFORTH
PLANT SCIENCE CENTER



Leaflet Vol. 27 Issue 1 Spring 2025

Table of Contents

News.....	3
Feed people.	8
Sustain the Earth.	10
Grow our community.	12
Continue to lead.	14

OUR MISSION

Improve the human condition through plant science



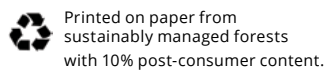
Feed the hungry
and improve
human health



Preserve and
renew our
environment



Enhance our region
as a world center
for plant science



Printed on paper from
sustainably managed forests
with 10% post-consumer content.

Cover

Plants are the future and plant science is leading the way. Learn more about how plants can feed the world and sustain the planet in this issue.

Contact

975 North Warson Road
Saint Louis, MO 63132

development@danforthcenter.org

314.587.1234 | danforthcenter.org

Credits

© 2025 Donald Danforth Plant Science Center All rights reserved.
The Leaflet is a biannual publication for partners, friends, and supporters of the Danforth Center. Thank you.

Editor: Elizabeth McNulty

Designer: Lee Kern

Contributors: Patrick Bowey, Kristina DeYong, Elizabeth McNulty, Karla Roeber

Photography: Adobe (front cover, 2 mid, 3 bottom, 6, 7, 15, 16, 21, back cover bottom); Courtesy Bank of America (4 mid L); Patrick Bowey (4 bottom R, 5 top, 11, 12 top, 13 top, 14 mid); Terry Bridges (18 bottom); Cavan Images (9 bottom); Kristina DeYong (5 mid, 10 mid); Courtesy Edward Jones (3 top); Courtesy Cary Fowler (back cover mid); Matt Freebersyser (10 top); Courtesy Gates Foundation (8 top); Devon Hill (3 bottom R, 4 top R, 4 mid R, 6 inset, 7 bottom, 12 bottom, 14 top); Courtesy Larta Institute (2 top); Courtesy Stifel (4 top L); Bill Stutz (10 inset, 13 mid); Courtesy VIRCA (8 bottom, 9 top); Stephanie Zettl (4 bottom L).

Leadership

FOUNDING CHAIR

William H. Danforth

PRESIDENT & CEO

Jim Carrington, PhD

BOARD DIRECTORS

Penny Pennington, *Chair*
Lisa Ainsworth, PhD
Benjamin Ola Akande, PhD
Senator Roy Blunt
Sara Yang Bosco
Patrick O. Brown, MD, PhD
Johannes Burlin
Marilyn Bush
Mun Y. Choi, PhD
Desiree Coleman-Fry
Christopher B. Danforth
James L. Johnson, III
Robert J. Jones, PhD
Wesley Jones
Jackie Joyner-Kersee
Ruth E. Kim, JD
Sanjeev Krishnan
Lúcia G. Lohmann, PhD
Ann C. Marr
Andrew D. Martin, PhD
Anna E. McKelvey, LLM
Thomas C. Melzer
William L. Polk, Jr.
Robert Reiter, PhD
Michael W. Riney
Todd R. Schnuck, *Immediate Past Chair*
John F. McDonnell, *Emeritus Director*

SCIENTIFIC ADVISORS

Eric Ward, PhD, *Chair*
David Braun, PhD
Natalia de Leon, PhD
Jen Heemstra, PhD
Jan Leach, PhD
Jennifer Nemhauser, PhD



The Danforth Center holds the highest rating from both Charity Navigator (four stars) and GuideStar (the Platinum Seal of Transparency).



The Donald Danforth Plant Science Center is a nonprofit organization, tax exempt under Section 501(c)(3) of the Internal Revenue Code, Federal ID No. 31-1584621. Contributions are tax deductible as allowed by law.

Dear Friends,

At the Donald Danforth Plant Science Center, we believe science has the power to change the world—starting right here in St. Louis.

Today, I'm honored to share an exciting milestone in that mission: the launch of ***Future Forward***, a comprehensive campaign to raise \$165 million to accelerate our impact.

Future Forward will fuel the breakthroughs that define the Danforth Center—cutting-edge plant science that addresses the most pressing challenges of our time: food security, environmental resilience, sustainable agriculture, and economic opportunity.

This campaign will fund critical investments in:

- **People:** Recruiting and supporting the world's top plant scientists and next-generation talent
- **Discovery:** Advancing breakthrough research to improve crops and make agriculture more resilient and sustainable
- **Innovation:** Translating science into real-world impact through technology, entrepreneurship, and global partnerships

As Chair of the Board, I'm thrilled to witness the extraordinary achievements unfolding at the Danforth Center. The energy and innovation here are nothing short of world-changing. We are not just on the map, we are becoming the global epicenter for agtech and biotech. The momentum is palpable, and it's propelling our region to new heights.

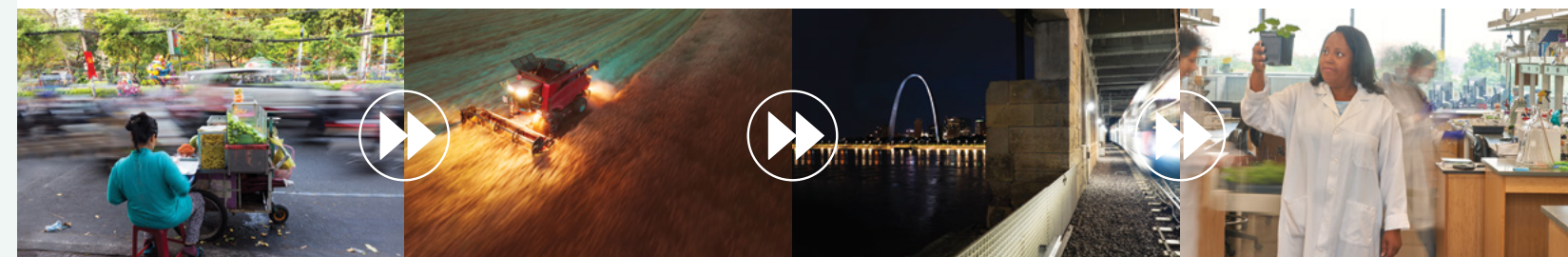
***Future Forward* is more than a campaign. It's a call to action—for those who care about feeding the world, protecting the planet, and growing the innovation-driven economy here in St. Louis.**

We invite you to join us. Together, let's move science—and our future—forward.

Warmly,

Penny Pennington
Managing Partner, Edward Jones
Chair, Danforth Center Board

P.S. Read all about the campaign starting on [p. 6](#) of this issue.



News & Events

NEW BOARD MEMBERS



Benjamin Ola Akande, PhD, and **Marilyn Bush** have joined the Danforth Board of Directors this January. Dr. Akande is Senior Vice President, Chief Corporate Responsibility Officer, Stifel Financial, and is the current chair of the Danforth Leadership Council. Bush is President of Bank of America St. Louis and Market Executive

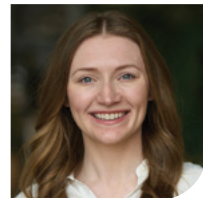
for Business Banking, Bank of America. The appointments come as Directors Teddy Bekele, Beau Brauer, Lee Broughton, and Steve Fox depart the board at the conclusion of their terms. "We are excited to welcome Benjamin and Marilyn and grateful to Teddy, Beau, Lee, and Steve for their invaluable partnership," said President and Chief Executive Officer Jim Carrington, PhD.

AWARD ROUND-UP



Elizabeth Kellogg, PhD, the Robert E. King Distinguished Investigator at the Danforth Center and member of the National Academy of Sciences, received the Danforth

Award for Plant Science. The award recognizes outstanding scientists whose exceptional contributions to plant biology, agriculture, or fields relevant to the Danforth Center have made them leaders in their field. Dr. Kellogg is among the world's foremost experts on cereal crops and their wild relatives in the grass family.



Katie Murphy, PhD, principal investigator and director of the Danforth Center Phenotyping Facility has been awarded the North American Plant Phenotyping

Network Early Career Award for 2025. Watch "Seeding Solutions," a video by STL Made about Katie's work at thestl.com.

ACADEMY OF SCIENCE



Allison Miller, PhD, Danforth Center principal investigator, received the George Engelmann Interdisciplinary Award for Collaborative Science Achievement

for her innovative approach to sustainable agriculture systems.



Bing Yang, PhD, Danforth Center principal investigator and professor at the University of Missouri – Columbia, received the James B. Eads Award for Excellence in

Engineering or Technology for his work in plant genome engineering and advancing CRISPR/Cas technology for disease-resistant crops.

EVENTS

See back cover for upcoming public events, including a nationally renowned speaker and a fundraising party you won't want to miss.



A New President for Plant Science: Dr. Giles Oldroyd

After an extensive international search, the Danforth Center has named Giles Oldroyd, PhD, as its next president. Oldroyd, a plant geneticist, will step into his new role on October 1. He succeeds current President and CEO James Carrington, PhD, who has led the Center since 2011.

Dr. Oldroyd comes to the Danforth Center from the University of Cambridge, UK, where he is the Russell R. Geiger Professor of Crop Science and Director of the Crop Science Centre. He is internationally recognized for his work to understand symbiotic interactions between plants and beneficial bacteria and fungi in the soil. He also leads the Enabling Nutrient Symbioses in Agriculture (ENSA) project, funded by Gates Agricultural Innovations, which seeks to develop self-fertilizing cereal crops for African farmers.

"Dr. Oldroyd is a proven leader with a passion and strong commitment for improving lives through plant science," said Penny Pennington, managing partner, Edward Jones and chair, Danforth Center Board of Directors, who led the search committee. "Under his leadership, we are confident the Danforth Center will continue to drive innovative research, foster collaboration, and expand its impact across the globe."

Born in the UK, and raised both there and in Zambia, Dr. Oldroyd completed his PhD at the University of California, Berkeley, and his postdoctoral work at Stanford University. He is one of only a few hundred scientists in the world who are elected members in both the UK's Royal Society and the US National Academy of Sciences, the two foremost scientific organizations in the English-speaking world. The World Food Prize recently named him a Top Agri-Food Pioneer.

"Plant science is essential to tackling the global challenges we face," said Oldroyd. "I am honored to lead this prestigious institution as we continue to deliver impact through new discoveries and technologies, ensuring the sustainable production of food and fuel."



Incoming Danforth Center President Dr. Giles Oldroyd chatting with Dr. Lucía Lohmann, president of the Missouri Botanical Garden.

Scan to see a video featuring Dr. Oldroyd:



▶▶ FUTURE FORWARD

Campaign for the Danforth Center

Future Forward

A CAMPAIGN TO TACKLE ISSUES OF HUNGER, THE ENVIRONMENT, AND REGIONAL GROWTH

The Danforth Center has announced this April the public launch of *Future Forward*, a bold \$165 million comprehensive campaign that will harness the power of plant science to confront some of the most urgent challenges of our time—global hunger, environmental degradation, and economic opportunity.

The initiatives that this campaign supports are some of the most ambitious in the Center's history. They will support breakthrough research, fuel regional innovation, and expand access to food and sustainable farming practices across the globe. *Future Forward* is not just an investment in science—it's a commitment to a better, more prosperous future.

Driving Solutions at the Intersection of Science and Society

Through *Future Forward*, the Danforth Center will:

- 1 **Feed people.** Advance resilient, nutritious, high-yield crops through cutting-edge research and biotechnology. Food security is essential for the health and upward mobility of smallholder farmers and their families and communities. It is also essential for the stability of society. Plants hold the potential for long-term, sustainable solutions. With our partners, the Danforth Center is already delivering improved crops in Africa—and has plans to speed and scale the initiatives.



"The Danforth Center is uniquely capable of translating plant science discoveries into food security solutions while preserving our life-sustaining environment."

- **Jim Carrington, PhD,**
President and CEO



2

Sustain the Earth. Reduce agriculture's environmental impact by developing crops that store more carbon, require fewer inputs, and regenerate soil health. We cannot afford to ignore the environment, and farmers have a vital role to play in improving agriculture. They need better tools, and improved plants are key. By improving existing crops and discovering new ones, the Danforth Center can sustain the Earth while feeding the world.



4

Continue to lead. Invest in top scientific talent, facilities, and the next generation of visionary researchers. The Danforth Center seeks to attract the best and the brightest scientists from around the world. To retain them, we must constantly improve our facilities, infrastructure, and processes. With your help, we will add new core facilities, new technologies, and the support that propels new ideas to discovery.

"This campaign reflects our strong belief in science that makes people's lives better," said John McDonnell, retired chairman, McDonnell Douglas Corporation, and *Future Forward* campaign chair. "The Danforth Center is creating the future of agriculture—and real-world impact that benefits farmers, families, and communities everywhere."

A Call to Action

The Danforth Center invites individuals, organizations, and community partners to join this transformational effort through philanthropy, advocacy and engagement.

"*Future Forward* is not just a campaign—it's a movement," said Tom Bander, vice president of development at the Danforth Center. "We believe the future is something we build together, and we welcome all who want to join us in this journey."

3

Grow our community. Catalyze job creation and economic development through agtech innovation, start-up support, and expanded STEM education. Danforth Center scientists are making groundbreaking discoveries that form a critical foundation to address global issues of food security in a changing world. Help us create an innovation ecosystem where our discoveries lead to innovative products, stimulate economic growth, and result in our campus and region becoming the number one location for agtech innovation worldwide.



LEARN MORE

Support the
**FUTURE
FORWARD**
campaign.





•
Cassava is a staple food crop that more than half the people in Africa depend on for their daily calories, but it is susceptible to devastating viruses.

A Critical Moment for Cassava—and for Farmers across Africa

YEARS OF PROGRESS HANG IN THE BALANCE

Cassava is one of the world's most important crops, feeding over 800 million people across tropical regions. It can grow in impoverished soils and in drought conditions. Its starchy roots not only provide a daily source of calories, but also fuel rural economies through uses in biofuel, beverages, and processed foods. Yet cassava is under serious threat from devastating viral diseases like Cassava Brown Streak Disease (CBSD), which can destroy entire harvests without visible warning until the roots are unearthed—too late to save the crop or the season.

For nearly two decades, scientists at the Danforth Center, led by **Nigel Taylor, PhD**, Dorothy J. King Distinguished Investigator, have worked tirelessly to develop cassava varieties resistant to these crippling diseases. Thanks to the **Virus Resistant Cassava for Africa (VIRCA)** project—funded through a grant from the United States Agency for International Development (USAID)—a breakthrough brown-streak resistant cassava has now completed regulatory trials in Kenya and was poised for introduction to tens of thousands of farmers in 2026-2027.

But just as success was within reach, an unexpected policy shift struck.



The Danforth Center's VIRCA virus-resistant cassava (at right). Kenyan farmers need it, but many may not be able get it due to federal funding cuts.

A SUDDEN SETBACK

In early 2025, as part of an abrupt overhaul of federal programs, the USAID was shuttered. Funding for the VIRCA project was terminated—immediately cutting \$2.1 million in crucial final-phase support. Activities in three countries must cease altogether, and efforts in Kenya and Rwanda have been drastically scaled back. This setback jeopardizes years of progress, leaving farmers vulnerable at a moment when solutions were finally at hand.

Despite these challenges, work continues. Thanks to two newly secured collaborations—one targeting cassava whitefly and another strengthening cassava resilience in Rwanda—the Danforth Center remains committed to advancing cassava solutions. But consistent funding is vital. Breakthroughs in plant science take years to build and can be dismantled in months without stable support.

“The clampdown on scientific research funding has certainly affected the Danforth Center’s work,” said President and CEO Jim Carrington, noting that \$2.5 million grants have been canceled, and that more than \$6 million others have been delayed or paused indefinitely.

THE HUMAN COST OF INACTION

For farmers like Josephine, a mother of five and grandmother of two in western Kenya, cassava isn't just a crop—it's survival. Each year she has watched as she lost more and more of her harvest to brown streak disease. VIRCA's resistant cassava varieties offered new hope for feeding her family and earning income at market. Now, without support, that hope is slipping away.

FEED PEOPLE

At this critical juncture, the Danforth Center's **Future Forward** campaign is more important than ever. With your renewed investment, we can ensure that hard-won scientific progress is not lost—and that farmers around the world can access the crops they need to survive and thrive. Please consider making a new, renewed, or additional gift today at campaign.danforthcenter.org.



Dr. Nigel Taylor (right) visiting the “multiplier” site in Kenya where virus-resistant cassava plants are being grown for use in sale cuttings. Distribution efforts are now being scaled back in response to federal USAID funding termination.



Sixty percent of Kenyan smallholder farmers are women, like Josephine seen here, who grows cassava to feed her extended family – and to help send her grandchildren to school.



Maize has been planted on an est. 95 million acres in the US in 2025. Fine tuning plant architecture could yield big gains.



Principal Investigator Dr. Andrea Eveland and Research Scientist Dr. Edoardo Bertolini study the genetics of corn architecture, revealing new yield enhancements for breeders.

“Our goal is to turn deep genetic insights into real-world breeding strategies—so we can grow more food, with fewer resources, on the same amount of land.”



- Andrea Eveland, PhD, Danforth Center Principal Investigator

A Long Game with Big Returns

RESEARCH IN CORN GENETICS POINTS THE WAY TO YIELD GAINS

In a moment when many research programs face uncertainty, a newly published study from the Danforth Center offers a timely reminder of why sustained scientific funding matters.

Led by Principal Investigator **Andrea Eveland, PhD**, and published in *Nature Communications*, the study uncovers key genetic mechanisms that govern *pleiotropy*—a phenomenon where a single gene affects multiple traits. In maize, this can complicate breeding, since improving one trait (like leaf angle) may have unintentional effects on another (like tassel branching). Eveland’s team identified regulatory variations that influence these traits early in plant development and demonstrated how they can potentially be fine-tuned independently. By mapping these genetic networks, Eveland’s team developed a strategy to “decouple” traits that often conflict—unlocking new possibilities for breeders to increase crop density and productivity.

Why does this matter? Because maize is planted at massive scale—more than 90 million acres across the US each year. And when it comes to hybrid seed production, even small improvements in plant architecture can yield enormous gains. In fact, more grains of seed corn are planted annually than there are stars in the Milky Way. At that scale, “fine tuning” isn’t a luxury—it’s an economic imperative.

This research was funded by a [National Science Foundation](#) award that supported years of interdisciplinary work across genetics, computational biology, and plant development. It also led to 24 publications and helped train the next generation of scientists through the Danforth Center’s Genotype-to-Phenotype Authentic Research Experience, giving high school and community college students hands-on exposure to real-world science.

In an era of tightening budgets, Eveland’s work offers clear proof: large-scale multidisciplinary science takes time—but delivers lasting impact.

Breakthrough Partnership for Soil Health

INDUSTRY COLLABORATION AIMS TO SCALE NATURE’S UNDERGROUND ALLIES

In today’s funding environment, scientific partnerships are more important than ever. A new collaboration between the Danforth Center and [Enhanced Nature](#) (EN)—a subsidiary of [Symbiotic Sciences](#)—is a promising example of how industry and research can work together to advance sustainable agriculture.

The project centers on arbuscular mycorrhizal fungi (AMF), microscopic organisms that live in tight symbiosis with plant roots. AMFs help plants absorb nutrients like phosphorus and nitrogen and improve their tolerance to drought and other environmental stresses. In return, plants provide carbon compounds that allow the fungi to thrive.

“About 70% of all plants form natural partnerships with AMF,” said **Dr. Armando Bravo**, Danforth Center principal investigator. “They’re a cornerstone of healthy soils and sustainable farming—but producing them efficiently at scale has been a major barrier.”

Bravo’s research focuses on the biology of plant-fungal symbiosis, while EN brings deep expertise in large-scale AMF production. Together, they aim to optimize new methods for growing AMF in vitro—advancing both fundamental science and practical applications.

The global market for AMF is growing fast, with demand rising from organic and regenerative agriculture sectors. As public funding grows more uncertain, partnerships like this offer a promising path forward—enabling researchers to pursue long-term goals while helping industry scale the tools of sustainability.

“In this case,” Bravo noted, “science and industry are symbiotic too.”

NSF DELAY DISRUPTS RESEARCH AND STUDENT PROGRAMS

In May, it was reported that the [National Science Foundation](#) would “stop awarding new grants and funding existing ones” indefinitely. The NSF is one of the Danforth Center’s top three funding agencies. Already the Center has experienced delays. For example, the incremental funding for the 2025 summer Research Experiences for Undergraduate (REU) program has been delayed with no timeline for activation. More details in the next issue.



Dr. Armando Bravo (center) in the greenhouse with team members. Their work to improve production of AMFs for better soil health has found a new industry partner.

GROW OUR COMMUNITY.



Inaugural Kemper Fellow Olivia Gomez with, from left, Danforth Center President Jim Carrington, David Kemper, Dr. Jim Umen, and Jenny Hoelzer, Commerce Bank Vice President and Manager of Community Relations & Events

Investing in Tomorrow's Scientists

KEMPER FOUNDATION'S FUTURE FORWARD GIFT SUPPORTS GRADUATE RESEARCH

The Danforth Center's *Future Forward* campaign is not only accelerating innovation in plant science—it's investing in the people who will carry that mission into the future. A new endowed fellowship from the **William T. Kemper Foundation** reflects this commitment and advances core campaign priorities like sustaining the Earth.

"We're delighted to work with our long-time partners at the Danforth Center in expanding their research to find solutions for major environmental issues such as phosphate pollution of our wetlands and river systems," said David Kemper, executive chairman, Commerce Bancshares, Inc.

The William T. Kemper Fellowship will support outstanding PhD students whose research has the potential to address major challenges in agriculture and sustainability. The inaugural recipient is **Olivia Gomez**, a fifth-year PhD student in the Plant and Microbial Biosciences program at [Washington University in St. Louis](#).

At the Danforth Center, Gomez conducts her research in the lab of **James Umen, PhD**, where she studies how algae store phosphate—an essential nutrient in agriculture. Phosphate is a critical ingredient in fertilizer, but crops absorb only a portion of it; the rest often runs off into waterways, contributing to toxic algal blooms. Meanwhile, global phosphate reserves are finite and declining.

Gomez's research aims to uncover natural mechanisms that could inform the development of crops that store phosphate more efficiently and reduce waste.

She attributes her interest in plants to her childhood: "I moved seven times between three countries, and I noticed plants have different adaptations in different places." Through her work, Gomez hopes to improve global food security by improving crop resilience to disease and environmental stresses.



Inaugural Kemper Fellow Olivia Gomez studies phosphate uptake in algae with an eye to discovering the mechanisms that could make the process more efficient and reduce waste and pollution.



William H. Danforth Fellow Samantha Nuzzi (left) in the growth chamber with Dr. Tessa Burch-Smith and a colleague.

A Fellowship Rooted in Discovery

SAMANTHA NUZZI NAMED 2025 WHD PLANT SCIENCE FELLOW

The Danforth Center is proud to announce that **Samantha Nuzzi** has been named the **2025 William H. Danforth Plant Science Fellow**, an award that recognizes outstanding PhD students whose work holds strong promise for advancing plant science.

A fifth-year PhD student in the Division of Plant Science at the [University of Missouri—Columbia](#), Samantha conducts her research in the lab of **Tessa Burch-Smith, PhD**, at the Danforth Center. Her focus: understanding how plant cells communicate with one another—and how those communication systems might be hijacked by viruses.

"Cell-to-cell communication is essential," Samantha explains. "Without it, plants can't grow, defend themselves, or send signals properly." While plant cells are separated by walls, they exchange information through tiny pores called *plasmodesmata*. These structures form during cell division—but can also form outside of it, through mechanisms that remain poorly understood.

That's where Samantha's research comes in. "Viruses exploit these connections—and in some cases, even alter them," she says. "If we can understand how plasmodesmata are formed, we may be able to strengthen the plant's defenses against infection."

Her work relies heavily on advanced imaging tools, and she collaborates closely with **Kirk Czymmek, PhD**, and the Danforth Center's **Advanced Bioimaging Laboratory** to visualize plant structures in remarkable detail. "We're pushing the boundaries of what's possible," she says. "And it's critical for improving how we respond to viral threats in agriculture."

Originally from South Florida, Samantha credits a curious childhood for her scientific path. "I used to poke creatures at the beach with a stick," she laughs. "Now I do the same thing—with a million-dollar microscope."



"We're pushing the boundaries of what's possible. And it's critical for improving how we respond to viral threats in agriculture"

- Samantha Nuzzi, 2025 WHD Fellow

GROW OUR COMMUNITY

The future of our planet depends on a new generation of scientists—innovators whose discoveries will shape a healthier, more resilient world. Endowed fellowships are especially critical to their support. The **Future Forward** campaign is committed to empowering people by supporting emerging scientists whose work will shape the future of agriculture, sustainability, and global food security. Learn more: campaign.danforthcenter.org.

CONTINUE TO LEAD.



From left, Drs. Czymmek and Burch-Smith, in the Advanced Bioimaging Laboratory. Their recent grant funds protocol development for a new and powerful microscope.



“Better imaging means better science—and better science helps us grow the food people need.”

- Tessa Burch-Smith, PhD,
Danforth Center Principal Investigator

CONTINUE TO LEAD.

If you believe science drives innovation, strengthens our economy, and secures our future, now is the time to speak up. Contact your federal elected officials to express concern about cuts to scientific funding—and the lasting damage they cause to our region and our nation. Visit usa.gov/elected-officials to find contact information.

Inside the Secret Life of Cells

NEXT-GEN MICROSCOPY LEADERSHIP FOR THE WORLD

What if we could see inside a plant cell the way a surgeon sees inside the human body?

That’s the kind of leap Danforth Center scientists are making, thanks to a \$1.5 million grant last year from the [National Science Foundation](#) (NSF) and a powerful new microscope called the Hydra Plasma FIB-SEM that was funded in part by donor support. One of just a handful such cutting-edge tools in the country, this microscope is now up and running in the Center’s [Advanced Bioimaging Laboratory](#) (ABL).

With it, Danforth researchers [Tessa Burch-Smith, PhD](#), and [Kirk Czymmek, PhD](#), are leading a groundbreaking collaboration with Stanford University to develop protocols for capturing 3D images of plant cells at the nanoscale—so small it’s a thousand times thinner than a human hair.

It’s not just about the wow factor. These images can help us answer some of the most important questions in plant science: How do healthy cells respond to disease? What happens at the molecular level when a plant is stressed by drought or heat?

To get clear answers, samples must be frozen with incredible precision—a tricky task with plants. Their tough walls and watery insides make cryopreservation especially hard. The team is committed to developing best practices, sharing their methods widely, and training scientists on the technology, multiplying their impact around the world.

This work is a bold example of the Center’s [Future Forward](#) campaign promise in action. The Danforth Center continues to lead by investing in cutting-edge tools, heading global collaborations, and accelerating discoveries that help people and the planet.

Supporters

Corporate Partners

The Danforth Center is grateful to our corporate partners for their generous support in 2024.

\$100,000+

Edward Jones®



\$10,000+

Genective
Hjelle Advisors
Novus International, Inc.
Moneta Group
Investment Advisors
Polsinelli
Verizon Communications Inc.

\$5,000+

Agrich Global Inc.
Aon
Bunge North America
Foundation
Christner Architects
Convion & Argus Controls
Graybar Electric
Company, Inc.

ICL Specialty Products, Inc.
KWS Saat AG
Nestlé Purina PetCare
Company
Paycom Payroll LLC
United Soybean Board

\$1,000+

The Advertisers Printing Co.
Butler’s Pantry
Clements Food Foundation
Color Art Palette Inc.
CoverCress Inc.
CSI Leasing, Inc.
Elemental Enzymes
First Bank Inc.
Hermann Companies, Inc.

Hilliker Corporation
Katie’s Pizza and Pasta
Lewis & Clark AgriFood
Limitless Horizons Consulting
Maritz Inc.
McKee, Vorhees & Sease, PLC
Midland States Bank
National Corn Growers
Association
New Growth Horizon
Foundation
Saluna
St. Louis County Farm Bureau
The St. Louis Trust Company
Stifel
Stupp Bros. Bridge & Iron Co.
Foundation
Tarlton 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.

WHD Legacy Society

The Danforth Center is grateful to donors who have planned for future needs of the Center by designating an estate gift. To learn more about estate giving, visit legacy.danforthcenter.org.

Anonymous
Mel† & Sue† Bahle
Mr.† & Mrs.† William J. Barnard
Senator & Mrs.
Christopher S. Bond
William R. Boyle†
Cicardi & Susan Bruce
Ann Case†
Dr.† & Mrs.† William H. Danforth
Dr. Robert† & Lorene† Drews
Elizabeth Early
Mr.† & Mrs.† David C. Farrell

George L. Fonyo
Harris J. Frank†
Allen W. Gaebe†
Mr.† & Mrs. David P. Gast
Mrs. Charles Guggenheim†
Irene & Bob Gulovsen
Dr.† & Mrs.† Ernest G. Jaworski
Norma Deen Juracsik
Karen Kalish
Janet M. & Newell† S. Knight, Jr.
Nancy Knowles†
Dr.† & Mrs.† Wilfred R. Konneker

Mary† & Oliver† Langenberg
William A. & Christine A.
Linnenbringer
The Mares Family Endowment
Marilyn Miles
Mr.† & Mrs.† Jefferson Miller
Philip† & Sima Needleman
Jo Oertli
Mr. & Mrs. John W. Rowe
Carol† & D.C.† Rucker
Walter† & Marie† Schmitz
Rich Schumacher

Francine & Jerome† Seslen
Steven C. Shepley
Sanford† & Gloria Spitzer
Moir Stevens†
Mr. & Mrs. Austin Tao
Alice H. Vosburgh†
Ambassador† & Mrs. George
Walker, III
Mr. Blanton J. Whitmire†
Mr. & Mrs. James M. Willock
Mr. & Mrs. John J. Wolfe, Jr.
Aleene Schneider Zawada†

Tributes

The Danforth Center is grateful to donors who choose to honor or memorialize their friends, loved ones, and colleagues with a gift to the Center. Gifts listed here were received by Dec. 31, 2024. To make a tribute, visit danforthcenter.org/donate.

In Honor of...

The Advertisers Printing Co.

New Growth Horizon
Foundation

Jane Bond

Ms. Martha W. Bond
Mr. & Mrs. Lary Bozzay

Beau Brauer

Rev. Roy Pfautch

Lee Broughton

Mr. & Mrs. Donald L. Ross

Teri & Jim Carrington

Mrs. Carol R. Armstrong

Decipher Investigative Intelligence

Lara Glauber

Stephen Desloge

Rev. Roy Pfautch

Steven A. Epner

Mr. & Mrs. Paul L. Epner

Colleen Fahey

Anonymous

Glenn Fischer

Karen C. Adderton
Mr. & Mrs. Jason Fischer

Richard Grote

Rev. Roy Pfautch

Lisa & Chris Imbs

Rev. Roy Pfautch

Ruth Kim

Tom & Cindy Bander
Anna & Wayne Crosslin
Dr. Frances Levine
Lenny & Debbie Vines

Ruth Martinez

Mr. Michael Sonsini

Patricia McKevitt

Ms. Kathryn Norwood

Thomas Melzer

Mr. & Mrs. W. Corby May

Blake Meyer

Dudley & Beth McCarter

Dr. Allison Miller

Mary Ellen Miller
Mr. & Mrs. Timothy G. Morrison
Arnold & Terrie Robbins

Rev. Roy Pfautch

Mr. & Mrs. A. C. Hiemenz, III

Edward Schlafly

Rev. Roy Pfautch

Todd Schnuck

Peter Schnuck

Nigel Taylor

Melanie Bernds Smith &
Scott Smith

Francis & Estelle Walls

Melissa & Brock Lundak

Jean Wright

Ms. Sandra L. Richardson

In Memory of...

Betsy Boles

Sarah L. Boles & Family

Ann Case

Anonymous
Ms. Nancy B. Ream

Susan Corley

Tom & Cindy Bander
Ms. Irene Fowle
Mr. & Mrs. F. C. Gebhard
Jim & Pat Steiner
Mrs. Eleanor L. Withers

Donald Danforth

Mr. Bruce Blair

William H. Danforth

Mr. & Mrs. Blackford F. Brauer
John & Anne McDonnell

Shauna Devlin

Ms. Cynthia Correll

Joseph R. Dolan

George C. Convy

Derick Driemeyer

Karen C. Adderton
Ms. Bonita J. Alpert
Frank & Mariann Baker
Ms. Katherine Betz
Dr. & Mrs. John B. Buettner
Ms. Laura Driemeyer &
Mr. Harry Castleman
Mr. & Mrs. Thomas G. Iversen
Mrs. Jeanne Lewi
John & Anne McDonnell
Saint Louis Community
Foundation
Ms. Janet Slater
Dr. & Mrs. Dennis H.
Steffen, M.D.
Bonnie Barton Wolfarth

Marilyn Fox

Tom & Cindy Bander

Bob Harness

Luke Kissam & Kathryn
Schanen Kissam

Bob & Joan Jasper

Butch & Cindy Jasper
Mike & Diane Jasper

Dr. M. Kenton King

June King

Roger Krueger

Luke Kissam & Kathryn
Schanen Kissam

Steve Luebke

Mary Ann & Claude Pierce

Todd Mockler

Anonymous
Natalie DiNicola & Steve
Rosenbloom

Geraldine Heuhlhauser

Mr. & Mrs. William Bergfeld

Phil Needleman

Tom & Cindy Bander
Linda M. Martinez
John & Anne McDonnell

Emelyn Piotter

Debra Howenstine &
Bart J. Piotter

William Schwartz

Ms. Harriette Arkin
Mrs. Leila S. Davis
Mrs. Susan S. Elliott
Mr. & Mrs. Donald K. Larsen
Mr. & Mrs. Theodore
McCullough
Mr. & Mrs. Charles McKenna
Ms. Nina N. Needleman
Ms. Ann S. Shea
Mrs. Jacqueline Shillington
Ms. Deborah L. Taryle
Mr. Marc Wallach

Charles M.M. Shepherd

Susanne W. Shepherd

Francis J. Stokes

Luke Kissam & Kathryn
Schanen Kissam
Delta Stokes Seward &
Christopher G. Seward

Helen Swango

Michael Bennett

Jack C. Taylor

John & Anne McDonnell

Thomas E. Thompson

Anonymous

Virginia Weldon

Tom & Cindy Bander
Mr. & Mrs. Luther Campbell
Ms. Jennifer Cogburn
Hon. & Mrs. John C. Danforth
Sally Lemkemeier
Ann Liberman
Peters Family Charitable
Fund
Rev. Roy Pfautch
Ms. Barbara Sterling
Mrs. Ann Sullins

Peg & Blanton Whitmire

Gary D. Curl & Carol
Jones-Curl



DONALD DANFORTH
PLANT SCIENCE CENTER

975 North Warson Road
Saint Louis, MO 63132 USA

Address service requested

NONPROFIT ORG
U.S. POSTAGE
PAID
ST. LOUIS, MO
PERMIT NO. 5385

Connect with us.



danforthcenter.org

Don't-Miss Events

SEEDS OF CHANGE

Aug. 27

Dr. Cary Fowler,
father of the Svalbard
Global Seed Vault

Sept. 26

All are welcome
to the Young
Friends' Fundraiser

EVENT TICKETS &
RESERVATIONS:

