

Danforth Plant Science Center
Annual Achievement Highlights

2012

DONALD DANFORTH
PLANT SCIENCE CENTER





OUR SCIENCE: Achievement and Discovery

- Designed and built cutting-edge robotics and advanced computational systems to produce, visualize, interpret, and interrogate datasets that are unprecedented in size and complexity
- Sequenced the genomes of *Camelina sativa* and *Setaria viridis*, two plants important to the development of next-generation bioenergy crops
- Demonstrated virus disease resistance in greenhouse and African field trials of new cassava varieties under development
- Conducted or assisted with 12 field trials of crops under development, bringing the total completed to 47 field trials
- Grant highlights:
 - \$12.1 million DOE grant to study drought responses in bioenergy crops
 - \$7.5 million DOE grant to improve oil seed crops
 - \$3.5 million in 3 NIH grants to study plant-virus interactions and biology of algae
 - \$712,000 NSF grant for Research Experiences for Undergraduates summer internship program

OUR PEOPLE: Scientists Enabling Impact

- Two scientific teams joined the Danforth Center, adding new expertise in plant-environment interactions, cereal crops, and bioenergy
- Enterprise Rent-A-Car Institute for Renewable Fuels expanded intellectual property portfolio to 13 patents filed
- Institute for International Crop Improvement was established to advance crop development and delivery to underserved regions
- Expanded training of students
 - 16 Center faculty now hold 21 adjunct faculty positions at local universities
 - Committee for Scientific Training and Mentoring (CSTM) was established to support the professional development of graduate students, postdoctoral fellows and technical staff
 - Expanded NSF Research Experiences for Undergraduates summer internship program by 34 percent, raising total number of students trained to 152

OUR COMMUNITY: Economic Growth and Education

- New Companies and Innovation
 - BRDG Park occupancy grew to 18 tenants, employing 270 people
 - Benson Hill BioSystems, the fourth start-up company founded by Center faculty, was launched to boost the intrinsic yield of crop plants
 - St. Louis Community College's Center for Plant and Life Sciences bio-technician training program graduated its 47th student since moving to BRDG Park in 2009, contributing to a skilled workforce for the region's growing biosciences sector
- Educational and Outreach
 - Tech Trunk program: 575 students at 15 area high schools gained hands-on experience with modern laboratory science
 - Launched a pilot version of BrachyBio! in two St. Louis high schools, providing direct participation of students in experimental research
 - Conducted five professional development workshops for high school teachers on topics such as bioinformatics and bioenergy

THE DANFORTH CENTER: Where Discovery Yields Impact

In a world filled with critical challenges, the Danforth Center is developing sustainable solutions. Solutions in the areas of health, nutrition, bioenergy, and sustainable agriculture have the potential to lift families, communities and nations from poverty, creating global economic growth and security for future generations. Donations to the Danforth Center are leveraged to support meaningful research.

With your gift, we are partners in turning discovery into impact.

www.danforthcenter.org



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