

Donald Danforth Plant Science Center

ANNUAL ACHIEVEMENT HIGHLIGHTS / 2013



DONALD DANFORTH
PLANT SCIENCE CENTER



**"THANKS TO THE TALENT,
VISION, HARD WORK
AND GENEROSITY OF OUR
SCIENTISTS, STAFF AND
EXTENDED COMMUNITY,
PROGRESS HAS BEEN
FASTER THAN EVEN I
IMAGINED. WE SHOULD
ALL BE GRATEFUL."**

DR. WILLIAM H. DANFORTH,
Founding Chairman

OUR PEOPLE EMPOWERING SCIENTISTS TO MAKE IMPORTANT DISCOVERIES

- Awarded \$12 million in competitive grants to fund projects to understand the mechanisms of defense against diseases, to increase the energy content of bioenergy crops, and to increase the productivity of staple food crops in developing regions.
- Published 89 scientific articles in peer-reviewed journals.
- Recruited four new Principal Investigators, strengthening the Center's work using high-throughput technologies, computation, and genetics to understand the basis for important crop traits, like seed and fruit quality, root growth, disease resistance in staple crops, and natural variation that can be tapped for crop improvement.
- Provided National Science Foundation-funded internships to undergraduate students for a total of 162 since 2003. In the past three years, 57% of interns were from research-limited colleges and universities, and 35% were from underrepresented groups.
- Trained 70 postdoctoral, graduate, and undergraduate students, for a total of 504 to date.

\$12 MILLION
AWARDED IN
COMPETITIVE GRANTS
FOR PLANT SCIENCE
RESEARCH

OUR SCIENCE ADVANCING FOOD SECURITY AND RENEWABLE ENERGY

- Conducted four field trials of cassava with nutritional improvements, an important step in addressing widespread under-nutrition in the developing world.
- Developed a technology to produce high-energy cyclic hydrocarbons, a component of jet fuel, in *Camelina sativa* seeds.
- Sequenced the genome of *Spirodela polyrhiza* (duckweed), a potential bioenergy crop.
- Designed and installed the *Bellwether Phenotyping Facility*, a one-of-a-kind imaging and robotics unit that accelerates the study of agriculturally beneficial plant traits.
- Launched a new research program to develop resistance to bacterial blight disease in cassava, a staple crop in developing regions.
- Filed seven U.S. or international patent applications, and closed or maintained nine licensing deals with for-profit companies.

17
SUMMER RESEARCH
INTERNSHIPS
PROVIDED TO
UNDERGRADUATE
STUDENTS

OUR COMMUNITY GROWING OUR REGION AND EDUCATING NEXT-GENERATION SCIENTISTS

- Hosted the "5th Annual Ag Innovation Showcase," which brought 335 investors, entrepreneurs, and business leaders to the St. Louis area.
- St. Louis Community College's Center for Plant and Life Sciences bio-technician training program graduated its 52nd student since moving to BRDG Park in 2009, contributing to a skilled workforce for the region's growing biosciences sector.
- Received the 2013 Achievement in Bioscience award at the St. Louis Regional Chamber's Arcus Awards ceremony.
- Initiated *Mutant Millets*, a bioenergy research outreach program, for 448 students in area high schools.
- Launched *Green Means Grow*, a gardening and plant science education program, for 18 schools and hundreds of students in the St. Louis Public School District.
- Increased participation in *Tech Trunks*, a scientific equipment loan program, to 670 students in local high schools.
- Presented five curriculum development workshops to 80 science education teachers in local schools.

335
INVESTORS,
ENTREPRENEURS,
AND BUSINESS
LEADERS ATTENDED
"AG INNOVATION
SHOWCASE"



THE DANFORTH PLANT SCIENCE CENTER: IMPROVING THE HUMAN CONDITION THROUGH PLANT SCIENCE

We are committed to scientific discovery that addresses the food security, energy, and health challenges that face this and future generations. Our research unlocks the full potential of plants to provide nutritious food, renewable energy, and innovative cures.

Join our efforts to improve human wellbeing, renew the environment, produce jobs, and increase investment in our region.

Support the Danforth Plant Science Center today.
www.danforthcenter.org/support

www.danforthcenter.org



**DONALD DANFORTH
PLANT SCIENCE CENTER**

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