

CENTER FOR APPLIED PLANT SCIENCES (CAPS)



THE OHIO STATE
UNIVERSITY

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The Ohio State University Center for Applied Plant Sciences (CAPS) is a partnership between Ohio State's College of Arts and Sciences, College of Food, Agricultural, and Environmental Sciences, College of Engineering and the Office of Research. CAPS supports building strong connections between basic research and potential applications. The Center's top priorities include the creation of new bioproducts and enhanced crop performance.



Plants for research grown in the Biotech Support Facility on West Campus

CAPS SEMINAR SERIES

Weekly scientific seminars showcase topics related to CAPS' four main strategic areas. The goal of the CAPS Seminar Series is to develop interactions and spur synergistic connections among researchers in diverse fields by highlighting advances in the current work of Center members and invited guests. Seminar speakers include Ohio State faculty, postdoctoral researchers, graduate students, research staff and distinguished university professors and international scholars.

Individual experts working in tandem to translate basic biological concepts into applications that will revolutionize plant sciences locally, nationally and globally.

MISSION

To find practical solutions to challenging problems within four main strategic areas:

- Photosynthesis & carbon fixation
- Biomass & bioproducts
- Crop improvement & functional foods
- Plant-microbe interactions

GOALS

- Foster interdisciplinary scientific teams to address challenges in the four strategic areas listed above
- Enhance the infrastructure supporting plant science research
- Improve access to state-of-the-art research facilities
- Advocate for education and outreach programs related to plant science
- Increase opportunities to attract top PhD students with graduate fellowships through an interdisciplinary graduate program in Translational Plant Sciences (TPS)
- Advance the development of a bio-based economy through strategic partnerships with Ohio-based industries
- Collaborate with other Ohio State University Centers and Institutes to further the shared goal of improving the human condition

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COLLEGE OF ARTS AND SCIENCES



Corn (maize) flowers

HISTORY

CAPS builds on earlier initiatives to increase research work across disciplines and colleges, such as:

- The Plant Molecular Biology and Biotechnology Program — collaborations between Columbus and Wooster campus scientists.
- The Translational Plant Sciences Targeted Investment in Excellence (TIE) — \$6 million investment in new faculty, equipment, and fellowships to increase leadership in the molecular plant sciences.

PARTNERSHIPS

To bridge the gap between basic and applied research, CAPS works with the Ohio Agricultural Research and Development Center (OARDC), the Ohio BioProducts Innovation Center (OBIC), the BioHio Research Park, the Arabidopsis Biological Resource Center and the Office for Energy and the Environment (OEE). CAPS also partners with COSI and Franklin Park Conservatory to hold various education outreach events throughout the year.

PROGRAMMING

CAPS sponsors/co-sponsors a variety of events and initiatives, including:

PLANT SCIENCE & EDUCATION OUTREACH PROGRAMS

Hands-on learning opportunities for K-12 students and the general public that raise awareness about the important role plants play in our daily lives.

TRIPARTITE CONFERENCE OF THE AMERICAS ON BIOTECHNOLOGY AND BIOENERGY

Unique research partnership of three major universities—Ohio State, Rutgers, and the University of Sao Paulo, Brazil—committed to intensive, collaborative research on Bioenergy and Biofuels.

PRACTICAL SUMMER WORKSHOP IN FUNCTIONAL GENOMICS

Lectures in genomics, RNA expression analysis and proteomics; hands-on laboratory experience; bioinformatics sessions, all aimed at solving cutting-edge problems in these areas. Open to graduate students, postdoctoral researchers, junior faculty members and qualified undergraduate students.

“CAPS allows us to tap into the incredible scientific expertise available at Ohio State. We can support interdisciplinary teams that take a very basic biological concept and translate it into an application that provides a practical solution to a problem, such as a new plant-based industrial product or a food that helps prevent cancer.”

{Jay Hollick, Director, CAPS}

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