FACT SHEET

2013

Institute for Integrative Genome Biology
Center for Plant Cell Biology

About CEPCEB

Mission:
To apply the knowledge of how plants respond to their dynamic environment toward manipulation of crop plants safely and efficiently for better and more sustainable production.

Facilities:
Four centralized instrumentation cores that offer advanced tools in bioinformatics, microscopy, proteomics, and genomics.

Multidisciplinary Membership:
43 Faculty from 13 departments: Biochemistry, Bioengineering, Biology, Biomedical Sciences, Botany & Plant Sciences, Cell Biology & Neuroscience, Chemistry, Computer Science & Engineering, Electrical Engineering, Mechanical Engineering, Nematology, Plant Pathology & Microbiology, Statistics.

Highlighted Awards/Honors:
National Academy of Sciences Members (3)
American Assn. for the Advancement of Science Fellows (17)
Most Cited Researchers in the World (Inst. for Scientific Info): (2)
Home Secretary of Nat’l Acad of Sciences (1st woman): (1)

Education

OPPORTUNITIES FOR GRADUATE TRAINING
CEPCEB faculty provide students opportunities for training leading to the Ph.D. degree in a number of graduate programs. Research in plant systems biology is possible for a broad spectrum of topics that include: cell architecture, intracellular protein transport, cell-cell communication, signal transduction, cytoskeleton, cell cycle control, mechanisms of gene inheritance and gene regulation, small RNAs and the epigenome, responses to environmental change, meristem and organ development, pollination, responses to environmental changes, responses to bacteria, fungi and insects, biosensor development, computational biology, and chemical genomics.

GRADUATE STUDIES IN THE CENTER:
Bioengineering
bioeng.ucr.edu/
Biomedical Sciences
biomed.ucr.edu/
Biochemistry and Molecular Biology
biochemistry.ucr.edu/
Cell, Molecular and Developmental Biology
cell.ucr.edu/
Chemical and Environmental Engineering
www.cee.ucr.edu/

Chemistry/Chemical Biology
chem.ucr.edu/
Computer Science and Engineering
www1.cs.ucr.edu/index.php
Electrical Engineering
ee.ucr.edu
Genetics (Genomics, Bioinformatics)
ggb.ucr.edu/
Microbiology
microbiology.ucr.edu/
Neuroscience
neuro.ucr.edu/
Plant Biology
plantbiology.ucr.edu
Plant Pathology
plantpathology.ucr.edu/
Statistics
statistics.ucr.edu/

OPPORTUNITIES FOR UNDERGRADUATE TRAINING
As a National Science Foundation Research Experiences for Undergraduates (REU) site, CEPCEB provides research experiences to students of two- and four-year colleges who have limited opportunity to learn about the excitement and career options in plant cell biology. Up to twelve qualified students are accepted into the ten-week residential summer research program, which begins with a one-week workshop introducing students to techniques and approaches used for analysis of plant and plant fungal pathogen cell function. These include basic molecular biology, genetics, genomic and bioinformatic analyses, as well as microscopy methods used to study live cells. Students work with a faculty mentor and a graduate or postgraduate mentor on a research project, attend research seminars and participate in workshops to enhance professional development. Students live on campus and are given a stipend of $5,300. Thus far, 118 undergraduate students have been trained in CEPCEB labs, with 43 of them proceeding to graduate school. It is estimated that approximately 40% have pursued studies related to plant biology. Further details can be found at: cepceb.ucr.edu/reu/.

Award Fund

In 2002 the Center initiated a scholarship award fund to recognize research excellence in plant cell biology, genomics, bioinformatics and engineering by pre-college students, undergraduate students, graduate students and postdoctoral researchers. The CEPCEB Award Fund sponsors an annual Noel Keen Lecturer and Awards Ceremony where an invited leading scientist presents his or her work and students receive public recognition for their accomplishments. Information on previous award recipients, special lecturers and ways to contribute is at: cepceb.ucr.edu/endowments/cepcebfund.html.

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