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# Berkeley Plant & Microbial Biology

UNIVERSITY OF CALIFORNIA

Academics. Research. Discoveries.

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*PMB Professor John Coates*

## New Director of Energy Biosciences Institute

Microbiology professor John D. Coates of Plant & Microbial Biology has been named the new director of the Energy Biosciences Institute.

The EBI is one of the largest public-private partnerships in the world. It was created to apply advanced biological knowledge to the area of

bioenergy development.

[Read More](#)

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## Arnon and Kase Fellowships

The Arnon and Kase Graduate Student Fellowships Committee recently selected Grady Pierroz and Thai Dao to receive the prestigious Arnon and Kase Fellowships for the 2016-2017 academic year.

[Read More](#)



*Grady Pierroz*

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*PMB Professor N. Louise Glass*

## Glass Joins Leadership at Lawrence Berkeley Lab

Professor N. Louise Glass, former chair of Plant & Microbial Biology, has accepted the position of Director of the Environmental Genomics and Systems Biology Division at the Lawrence Berkeley National Lab.

[Read More](#)

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## Huge Mycology Conference at UC Berkeley

*By Cat Adams  
Plant & Microbial Biology*

More than 350 fungal specialists from around the world will gather at UC Berkeley's beautiful Clark-Kerr campus to share their research, network and germinate new ideas at the meeting organized by Professors John Taylor and Tom Bruns of Plant & Microbial Biology.

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*Sydney Glassman, Ph.D., will be one of the speakers at the conference*



Tomales Bay

## Plant & Microbial Biology 2016 Retreat

The Plant & Microbial Biology Annual Retreat will be August 26 - 28 at the Marconi Conference Center in Tomales Bay. The Retreat is open to students, faculty, and staff of the department, and is an ideal venue for faculty, students and postdocs to present their research. PMB Chair Kris Niyogi will be the keynote speaker Friday

night.

[Read More](#)

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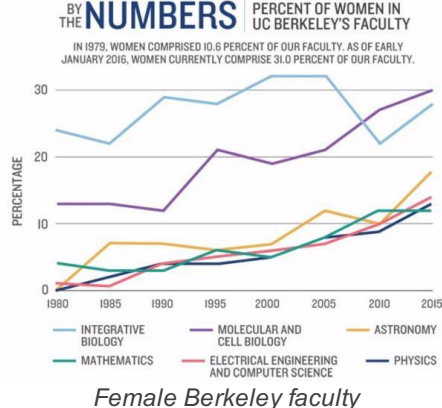
## Glaunsinger Featured in Daily Cal Article

*By Brenna Smith  
The Daily Californian*

When Britt Glaunsinger isn't receiving prestigious awards or working as a tenured professor for both the Plant & Microbial Biology and Molecular Cell Biology departments, she has another full-time job.

Glaunsinger is one of many female professors at UC Berkeley who is also a mother. These women navigate everyday responsibilities such as breast-feeding, pregnancy and child-rearing - responsibilities that academia does not easily accommodate.

[Read More](#)



*Specht Lab 2016; Associate Professor Chelsea Specht is in the center in orange*

## Specht: New President of Plant Taxonomists

Chelsea Specht, an associate professor in the Department of Plant & Microbial Biology, was just elected President-elect of the American Society of Plant Taxonomists. Her term starts September 2017.

[Read More](#)

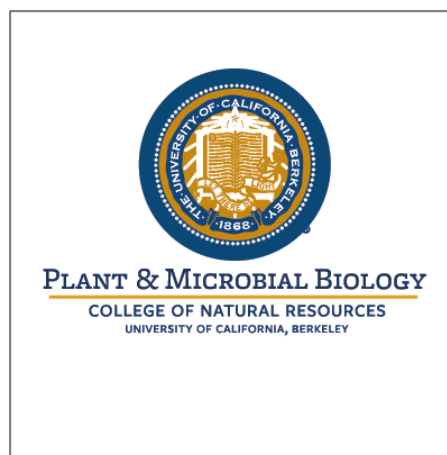
## Plant & Microbial Biology Fall 2016 Seminar Series

The PMB Seminar Series for Fall 2016 kicks off with Kumaran Ramamurthi of the National Institutes of Health as the first speaker, followed by Jing-Ke Weng of Massachusetts Institute of Technology as the Buchanan Speaker, chosen by department postdocs.

For planning purposes, please check out the finalized seminars page on our website. You can even download and print a copy of the Seminar Poster. All seminars are open to students, faculty, staff and the public.

Other seminars, including Plant Gene Expression Center, Student/Postdoc, Molecular & Cell Biology, will be added to the seminars page as they are updated.

[Seminars Page](#)  
[Kumaran Ramamurthi](#)  
[Jing-Ke Weng](#)





## Free Technology Training with CalPact

Outstanding technical training in a number of technologies, including Excel, videography, bCal Fundamentals and Google Forms Design, is available through CalPact and is now open for registration.

There are a few changes to the format:

- Courses will no longer be full day or multi-day durations. They will typically run between two to three hours in the mornings and afternoons, and will focus on specific sets of relevant and related learning outcomes.
- Schedules will no longer be separate six-month sets of static offerings. As new courses are created or as existing waitlisted sections reach capacity, the schedule will adaptively expand.

New schedule: <http://hr.berkeley.edu/sites/default/files/calpactschedule.pdf>

For more information:

CalPact Technology Training Program

510.643.0451

[calpact@berkeley.edu](mailto:calpact@berkeley.edu)

## AWARDS

### Lindow: 2016 American Phytopathological Society Award

Plant & Microbial Biology Professor Steven Lindow has been selected to receive the Award of Distinction, the highest award made by the American Phytopathological Society in honor of his significant contributions to the science of plant pathology.

Lindow, who is also Executive Associate Dean at the College of Natural Resources, will be honored at their next annual meeting.

[Read More](#)



*Healthy Plants • Healthy World*

## RECENT PUBLICATIONS

**Bypassing the pentose phosphate pathway: Towards modular utilization of xylose** - NST professor Dan Nomura and PMB graduate student Kulika Chomvong published a research article in *PLOS One* on a novel pathway that optimizes chemical conversion of pentose sugars. [Link](#)

**The Microbiome and Metabolites in Fermented Pu-erh Tea as Revealed by High-Throughput Sequencing and Quantitative Multiplex Metabolite Analysis** - PMB professor John Taylor and graduate student Yongjie Zhang published a research article in *PLOS One* on fungal and bacterial communities found in two types of fermented *Camellia sinensis* tea leaves. [Link](#)

**Advancing crop transformation in the era of genome editing** - PMB CE

Specialist Peggy Lemaux published a research perspective in *The Plant Cell* detailing recent advances in crop research from novel opportunities with genome editing. The article recommends innovations needed to truly enable genome editing in crops. [Link](#)

**Photosystem II Subunit PsbS is Involved in the Induction of LHCSR-dependent Energy Dissipation in *Chlamydomonas reinhardtii*** - PMB researchers (Professor Krishna Niyogi, post-doc Setsuko Wakao, alum Thuy Truong (Ph.D. '11), Katharine Guan) published a research article in the *Journal of Biological Chemistry* on a light-induced protein whose accumulation is limited by CO<sub>2</sub> availability. [Link](#)

**Cyanobacterial ultrastructure in light of genomic sequence data** - PMB adjunct associate professor Cheryl Kerfeld published a review in *Photosynthesis Research* on the connection between cyanobacterial structure and the occurrence of genes encoding protein domains related to the formation of cyanobacterial inclusions. [Link](#)

**Total Synthesis, Structure, and Biological Activity of Adenosylrhodibalamin, the Non-Natural Rhodium Homologue of Coenzyme B12** - PMB post-doc researcher Florian Widner published a research article in *Angewandte Chemie (Applied Chemistry) International Edition* on the role of cobalt in B12 synthesis. [Link](#)

**Reconstituting MamE-dependent proteolysis** - PMB professor Arash Komeili and grad students David Heryshey and Patrick Browne published a research article in the *Journal of Biological Chemistry* on regulatory mechanisms of proteolytic activity in magnetotactic bacteria. [Link](#)

**Peptide signaling in plants: finding partners is the key** - PMB professor Sheng Luan published an article in *Cell Research* highlighting new research on plant signaling networks, which in many cases are tied to mechanisms that can control the growth and development of plant organs. [Link](#)

**Cofactor Assembly of Cytochrome bc<sub>1</sub>-b<sub>6</sub>f Complexes** - PMB post-doc researcher Stephane Gabilly published a research article in *Advances in Photosynthesis and Respiration* on enzyme complexes that catalyze electron transfer reactions in bacterial and organellar energy-transducing membranes. [Link](#)

**Speciation dynamics and biogeography of Neotropical spiral gingers (*Costaceae*)** - PMB associate professor Chelsea Specht, alum Shayla Salzman (B.S. '12), and former researcher Thiago Andre published a research article in *Molecular Phylogenetics and Evolution* on the speciation dynamics of 84 species of spiral ginger plants. [Link](#)

**Structure of the Magnetosome-associated actin-like MamK filament at sub-nanometer resolution** - PMB researchers (professor Arash Komeili, former post-doc Meghan Byrne, alum Olga Draper (Ph.D. '02), post-doc Ertan Ozyamak) published a research article in *Protein Science* on the MamK protein. Using cryo-electron microscopy, the researchers were able to analyze the protein's filament structure to miniscule resolutions. [Link](#)

**The *Arabidopsis* Golgi-localized GDP-L-fucose transporter is required for plant development** - PMB associate professor Markus Pauly, adjunct professor Henrik Vibe Scheller, and former post-doc researcher Lifeng Liu published a research article in *Nature Communications* on a nucleotide sugar transporter that is required for proper growth and development of *Arabidopsis*. [Link](#)

**Analysis of sequenced genomes of *Xanthomonas perforans* identifies candidate targets for resistance breeding in tomato** - PMB professor Brian Staskawicz published a research article in *Phytopathology* on newly identified tomato genes that are potential targets for resistance breeding against bacterial spot, a disease that causes reduced yields, defoliation, and sun-scalded tomatoes. [Link](#)

**Transient expression in *Nicotiana benthamiana* for rapid functional analysis of genes involved in non-photochemical quenching and carotenoid biosynthesis** -

PMB researchers (professor Krishna Niyogi, alum Lauriebeth Leonelli (Ph.D. '11), grad student Erika Erickson, postdoc Dagmar Lyska) published a research article in *The Plant Journal* on a new powerful alternative for assessing gene function *in planta*. The research confirmed the viability of studying dynamic photosynthetic processes through transient expression assays. [Link](#)

## EVENTS

8/22 - [Re-writing Genomes: A New Era in Genome Engineering](#)

8/26-8/28 - PMB Retreat 2016 Marconi Conference Center

10/17 - Northern California Computational Biology Student Symposium

## CALENDAR

8/24 - First Day of Instruction

8/26-8/28 - [PMB Retreat 2016 Marconi Conference Center](#)

8/31 - [Microbiology Seminar Speaker Kumaran Ramamurthi - "Towards the assembly of a synthetic bacterial cell"](#)

9/5 - Labor Day Holiday

9/7 - [Buchanan Lecture: Jing-Ke Weng - "Mechanistic Basis of Metabolic Evolution in Plants"](#)

9/14 - [Plant Biology Seminar Speaker Ravi Palanivelu - "Arabidopsis LORELEI is required for pollen tube reception by the female gametophyte"](#)

9/21 - [Microbiology Seminar Speaker Britt Glaunsinger - "RNA destruction and revival during viral infection"](#)

The PMB newsletter is produced by  
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