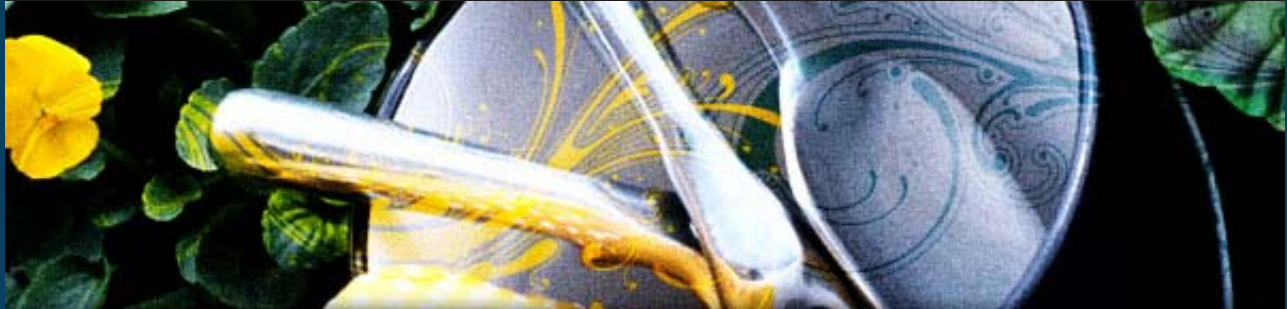


# PLANT & MICROBIAL BIOLOGY

Issue No. 12

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ACADEMICS. RESEARCH. DISCOVERIES.

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## Coates Lab Research: Using Microbes to Extract Oil



Researchers are investigating new ways to use microbes to get at oil, and the Coates Lab -- in collaboration with the Energy Biosciences Institute -- is researching how to maximize recovery from oil reservoirs in efficient, environmentally friendly ways.

Using microbes could be the next game-changer in the oil industry. Research is happening in the lab now, and it's expected that results could progress to field use in a few short years.

Microbes - tiny organisms that include bacteria - exist in abundance everywhere on Earth, including below ground. There is a vast variety of

*Professor John Coates* microbial species, and each species has unique abilities to produce useful compounds or carry out key tasks.

Coates was recently profiled along with other scientists in a profile piece: "The New Frontiers of Oil". Find out more about the Coates' Lab work and this cutting-edge research by visiting our web site.

*Read the full article and see the video: [pmb.berkeley.edu](http://pmb.berkeley.edu).*

## Komeili Lab Shares Keck Foundation Grant

Transforming biomedicine by opening up a broad range of biological questions and enabling fundamentally new studies in cancer, immunology, neuroscience and more is the goal of a grant recently awarded to the Komeili Lab.

UC Berkeley researchers David Schaffer, Mikhail Shapiro, Arash Komeili of PMB and Steven Conolly will share the \$1 million high-risk, high-reward grant from the W.M. Keck Foundation.



*Professor Arash Komeili*

The team proposes to develop a "magnetic Green Fluorescent Protein" by borrowing genes from magnetotactic bacteria-organisms that use the Earth's magnetic field to navigate their environment. They will isolate a set of genes from these bacteria that are responsible for magnetosome formation, then transfer them into mammalian cells and animals to enable MRI of specific cellular processes.

The resulting technology could transform biomedicine by opening a broad range of biological questions being studied in whole animals, thereby enabling fundamentally new studies in cancer, immunology, neuroscience and many other areas. Mikhail Shapiro, one of the project's leaders, says the technique will help scientists explore how tumors spread, immune cells find pathogens or brain cells degenerate.

*Read more at [pmb.berkeley.edu](http://pmb.berkeley.edu)*

## Spring 2013 Seminar Series -- it's Live!

After much hard work and planning by faculty, students and staff, a multitude of seminars for Spring Semester are now set, with speakers from Mexico, Missouri, Minnesota, Germany and more.



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Guests for the PMB seminar series include José Dinneny of Stanford, Richard Losick of Harvard, Andy White of York University and many more. This year's Amon Lecture, scheduled for March 6, will be given by Mark Stitt of the Max Plank Institute of Molecular Plant Physiology.

The Student/Postdoc seminar series features graduate students and postdocs from the many labs of PMB. Several of these students will be giving their finishing

talks as well.

Meanwhile, the Plant Gene Expression Center also has scheduled a robust series of seminars at their office in nearby Albany.

*For more information and downloadable flyers, visit [pmb.berkeley.edu/seminars](http://pmb.berkeley.edu/seminars).*

## Collaboration Results in Endowed Lecture Series

Thomas J. White and John W. Taylor began their collaboration on fungal molecular evolution more than 30 years ago when Taylor, a PMB professor, invited White, a biotech pioneer, to an informal seminar in the Botany Department on the Berkeley campus. White was invited to present his Cetus Corporation research on fungal enzymes that convert plant cell walls to sugar.

Following that meeting, they used a cloned fungal ribosomal DNA to show that fungi were not close relatives of red algae (Kwok et al. 1986); a modest accomplishment, but one of the first efforts to apply molecular evolution to fungi.

Today the pair are collaborating on a lecture series that kicked off in January with an extremely well-attended Regents' Lecture. White will again be back on campus in April to give another seminar to the department. Read more about the history of their collaborations, all of the papers they've published together and see a video of the Regents' Lecture at our web site.

To view the full story, visit [pmb.berkeley.edu](http://pmb.berkeley.edu).

## Jansson elected to American Academy of Microbiology



Professor Janet Jansson

Adjunct Professor Janet Jansson was elected to the [American Academy of Microbiology](#), the honorific leadership group within the [American Society for Microbiology](#), the world's oldest and largest life science organization. The Academy recognizes excellence, originality and creativity in the microbiological sciences.

To learn more about Professor Jansson, visit: [pmb.berkeley.edu/profile/jjansson](http://pmb.berkeley.edu/profile/jjansson)

## New Lab Safety Policies Affect All Personnel

A series of important and sweeping changes are coming to all UC Berkeley labs.

UC is proposing systemwide policies on Personal Protective Equipment, Laboratory Safety Training, and Minors in Laboratories and Shops.

The main focus of the policies is to help prevent workplace injuries and illnesses among faculty, staff, students, volunteers and visitors.

View the proposed policies at [pmb.berkeley.edu/safety](http://pmb.berkeley.edu/safety)



## Research Admin Will Stay on Campus

In April 2013, Shared Services for Research Administration will "go live" and begin providing services to a number of departments, including PMB.

Decisions concerning how the new Research Administration model will work, as well as elements of the organizational structure, are still being discussed. As we move closer to implementation, we do know:

- Faculty will have a single point of contact, familiar with their research
- Research Administrators will remain physically located on campus
- Departments will be supported by a team, so that work continues seamlessly if the primary contact is out of the office
- Faculty will have clear feedback loops and steps for escalating issues

To read more, visit [UC Berkeley Campus Shared Services](#).

## Workshops Teach New Tools for Mail, Calendar and More

Training sessions - in person or on the Web - are now being offered to faculty, students and staff. The sessions are very user-friendly and are led by instructors knowledgeable in all Google applications.



There is a wealth of opportunity and new, better ways to send email, plan your day and work with colleagues near and far using the new campus Google tools.

Sign up for classroom training at the UC Learning Center - login through the blu portal, select Learning Center on the left and search by course title or the term 'bConnected'.

For more information, visit [bconnected-project.berkeley.edu/trainingsupport](http://bconnected-project.berkeley.edu/trainingsupport).

## Etcetera ... Important News and Tidbits of Information!

[Top 100 People in BioEnergy](#) - among them are Chris Somerville, Professor at PMB, and Jay Keasling, Professor at UC Berkeley.

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Two PhD Fellowships are now available in Germany at Goethe-University Frankfurt, Department of Biological Sciences. Candidates are being sought who will develop projects on the biodiversity and ecological significance of fungal endophytes. Find out more at: [pmb.berkeley.edu/current-students/jobs-grants-internships](http://pmb.berkeley.edu/current-students/jobs-grants-internships)

## Department Open Lunch; PMB Happy Hours Start Spring Semester

Grab your lunch and join other members of the department from noon to 1 pm every other Tuesday in Koshland Hall 338.

Here are the dates: 2/26, 3/12, 3/26, 4/9, 4/23, 5/7, 5/21, 6/4, 6/18, 7/2, 7/16, 7/30.

Meanwhile to be informed about all departmental events please go to the Department Calendar on our web site: [PMB Department Calendar](#)

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# Open Lunch!

12 PM—1PM

**Grab your lunch and  
come to 338 Koshland  
every other Tuesday!**

Dates: 1/15, 2/12, 2/26,  
3/12, 3/26, 4/9, 4/23,  
5/7, 5/21, 6/4, 6/18,  
7/2, 7/16, 7/30

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