The internal monthly newsletter for Biosciences at Berkeley Lab.

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#### **BERKELEY LAB**



# **BioSci Communiqué**

# 04.05.17

# **Events Highlights**

Refer to the <u>Area Events</u> <u>Calendar</u> for events, details, and up-to-date information.

# Upcoming John Lawrence Seminars

Biological Design for Health and the Environment | Pamela A. Silver, Harvard University | April 11, 4 - 5 PM, B66 Aud

Title TBD | Dan Fletcher, University of California, Berkeley and BSE Division | April 18, 4 - 5 PM, Aquatic Park, Rm 977-141

Title TBD | Brendan J. Frey, University of Toronto | May 2, 4 - 5 PM, Emery Station, Rm 978-4132 & 4134

#### [Complete Schedule]

# Registration Open for the JGI's July Secondary Metabolites Meeting



The 2017 Microbial and Plant Systems Modulated by Secondary Metabolites Meeting will take place July 24 -26, featuring keynote speaker Jo Handelsman, the director of Wisconsin Institutes for Discovery (WID) at the University of Wisconsin-Madison. She previously served as the associate director for science at the White House Office of Science and Technology Policy (OSTP) under the Obama administration. Go here for

# **News Roundup**

- Speciation Driven by Alleles Adapted to Local Conditions >>
- Could This Enzyme Help Turn Biofuel Waste into Something Useful? >>
- JBEI Paper Awarded 'Publication of the Year' by the Journal of Biological Engineering >>
- Grasses: The Secrets behind Their Stomatal Success >>
- Cryo-Electron Microscopy Achieves Unprecedented Resolution Using New Computational Methods >>
- Researchers Probe for Cancer Clues In a Sample of Blood
  >>
- New Drug Strategy: Target Ribosome to Halt Protein Production >>
- Mary Maxon: Inspiring Women in Sciences >>
- The 'Dark Matter' of the Microbial World >>
- New Machine Learning Technique Provides Translational Results >>
- What a Genome-Wide Screening Can Reveal about Cancer Survival <u>>></u>
- Designing Protein Cavities from Curved Beta Sheets >>
- ABPDU Collaborates with Mango Materials Thanks to Small Business Vouchers Pilot >>

More news on the Biosciences Area website.



# **ALD Message**

In mid-March, we welcomed Nigel Mouncey to the Lab as the new Director of the Joint Genome Institute (JGI). I am thrilled that he is bringing his scientific vision and management experience to the JGI at this important time for environmental research, and I am already impressed with his substantive contributions to the Area as a registration and meeting information.

# Program Development

#### Area Program Development Module: Federal Budgets and Funding

The Biosciences Area will be starting up its program development module on Federal Budgets and Funding this spring. Mary Maxon and Katy Christiansen will be presenting on how the federal budget process works, how science and technology budget priorities are determined, and how scientists and others can influence the process. Attendees of this module will receive a priority-invitation to attend an upcoming brown bag workshop on writing effective white papers for federal program managers, private funders, and others. Biosciences staff at all career levels are encouraged to attend.

# Outreach & Funding

#### Dinner with a Scientist

Oakland Unified School District (OUSD) is hosting Dinner with a Scientist on April 24-26, at the Chabot Space and Science Center. Outstanding science teachers are invited to dinner and can bring a couple of their students along. The event is designed to reward teachers and to inspire students. Scientists switch tables during the evening so the students get to talk to several scientists. For more information, and to register, visit here or contact Caleb Cheung.

# SCGSR Program Accepting Applications

The DOE Office of Science Graduate Student Research (SCGSR) program supports supplemental awards to outstanding US graduate students to conduct part of member of the Biosciences Leadership Team. I look forward to seeing Nigel's vision implemented at the JGI, and his successful integration in the Berkeley Lab and DOE communities.

Nigel has been invited by the DOE Office of Biological and Environmental Research (BER) to speak at this month's BER Advisory Committee (BERAC) meeting to introduce himself and his vision for the JGI. In addition, I've asked members of the Biosciences Leadership Team to join me at the meeting and bring a small number of researchers in the early stages of their careers. I am pleased that we will be accompanied by Karen Davies (MBIB), Kris Bouchard (BSE), Edward Baidoo (BSE), Hans Carlson (EGSB) and Emiley Eloe-Fadrosh (JGI), who will introduce themselves to BER program managers in brief presentations following the meeting. You can find out more about the members of the BERAC and the agenda for the meeting <u>here</u>.

In a recent call with Sharlene Weatherwax, associate director of science for BER, I learned that although the Microbiome Interagency Working Group (MIWG) charter has expired, their strategic plan for the development of a predictive understanding of microbiomes and microbiome function was drafted and is expected to be released this year. If you are interested, you can learn more by reading the MIWG charter.

Here in Berkeley, the <u>Lab Advisory Board</u>, which provides advice to Lab leadership as well as to the UC President about scientific and operational aspects of Berkeley Lab, meets tomorrow and Friday. I've been asked to speak at this meeting about challenges that Biosciences may face as federal budgets are expected to decline. Earlier this year, I made recommendations to Director Mike Witherell to consider adding more bioscientists to the Lab Advisory Board if there are openings in the future.

Today the monthly Biosciences Campus Meeting will convene the multiple stakeholders around the Lab (OCFO, EESA, Government Affairs, and Facilities, etc.). The agenda includes updates on IGB construction progress from Stan Tuholski and Biosciences Campus fundraising from Alicia Yeh. We learned last week that there has been significant and encouraging progress in gathering preliminary estimates for retrofitting laboratory facilities to house a state-of-the-art cryo-electron microscopy (cryo-EM) user facility; Paul Adams will report on our continuing efforts in this area.

Regards, Jay Keasling

### **Area News**

#### **WSEC Champions Workplace Improvements**

If you've ever used the Lab's back-up care program or taken a parenting class on your lunch hour, you can thank the <u>Women</u> <u>Scientists & Engineers Council</u> (WSEC). In honor of National

Women's History Month, the Lab, in this <u>online article</u>, looked back at how WSEC got started and what issues it is currently working on. Board members from Biosciences include Environmental Genomics & Systems



their graduate thesis research at a DOE national laboratory, in collaboration with a DOE laboratory scientist, for a period of 3 to 12 consecutive months. Applications are due 5 p.m. Eastern Time, May 16, 2017. Detailed information about the program, including eligibility requirements and access to the online application system, is available here.

### **On the Hill**

#### Hoteling Workstations Now Available on Hill

Six hoteling workstations located in 50A-2177 are now available to the general Lab population, intended for shortterm use by guests, off-site employees needing a place to work between meetings on the Hill, or employees who have been temporarily displaced due to a relocation issue. The workstations can be reserved through Google calendar. Direct questions or comments to <u>Spaceplanning@lbl.gov</u>.

### Communications

#### We Have New Biosciences Web Pages!

A suite of pages covers the John Lawrence Seminar Series (the seminar schedule, information about John Lawrence, and the seminar series archive). An <u>Area</u> <u>Annual Events Timeline</u> gives an overview of major programs and commitments over the course of the fiscal year for planning purposes.

#### Biology (EGSB)

Division's Astrid Terry and Lauren Lui; Susan Tsutakawa of the Molecular Biophysics & Integrative Bioimaging (MBIB) Division currently serves as the committee chair. (Photo: WSEC board members, from L, Elizabeth Stuart; Lui; Terry; Katherine Ray; Ina Reichel; Erin Fong; and Tsutakawa)

#### Awards for Bioscientists



Several Biosciences researchers have been honored with awards recently. <u>Mina Bissell</u> (left) of the Biological Systems & Engineering Division received the fourteenth Annual AACR Award for Lifetime Achievement in Cancer Research for her pioneering work, which has identified the roles of the extracellular matrix and three-dimensional architecture in programs of gene expression in tissue morphogenesis and cancer.

EGSB's <u>Jill Banfield</u> was named 2017 V.M. Goldschmidt medalist, and <u>Oleg Sobolev</u>, MBIB postdoctoral scholar in Paul Adams' Computational Crystallography Initiative, won a poster presentation prize at the West Coast Protein Crystallography Workshop 2017 last month.

#### **ALS Triennial Review**

The Advanced Light Source (ALS), which houses several groups in MBIB, successfully completed a 3-day Triennial Review by DOE on March 20-22. The review featured talks by ALS management and scientists, and several breakout sessions, two of which covered biosciences areas of interest. The session on scattering and diffraction included discussions on the methods of small-angle scattering and crystallography, and the breakout for industrial applications highlighted pharmaceutical company use of the ALS crystallography beamlines for structure-based drug design. Many MBIB scientists participated in the breakouts, including Marc Allaire, Michal Hammel, Simon Morton, Jay Nix, Banu Sankaran, and Peter Zwart. In addition, a poster session with over 100 posters demonstrated the outstanding science enabled by the ALS.

# Maxon Serves on National Academies 'Future Products of Biotechnology' Committee

Biosciences Area Principal Deputy Mary Maxon <u>served</u> on a National Academy of Sciences committee that produced a <u>report</u> on

the future products of biotechnology for the White House Office of Science & Technology Policy (OSTP) and the three federal regulatory agencies that oversee biotechnology products. Maxon was asked to be one of three committee members (From L: Richard Murray, chair; Maxon; Steve Bradbury) to participate in the report release activities in Washington, DC, on March 8 & 9. She returned to DC the following week to participate in more briefings at



OSTP and on Capitol Hill, and also has been asked to be part of additional dissemination activities, including a Science Reddit AMA on June 15.

#### JGI's 12th User Meeting - Lively In Person and Online

The Walnut Creek Marriott was packed once more for the <u>JGI's 12th</u> <u>Annual User Meeting</u>, held March 20-23. The keynotes - delivered by Max Planck Institute researcher Tobias Erb and UC Davis' C. Titus Brown - are available on the <u>JGI's YouTube</u> channel; more

# @LBNLBioSci Twitter Highlight



This past month we celebrated Women's History Month, highlighting the contributions of women to events in history and contemporary society. Related news, blog posts, and bios were featured @LBNLBioSci. A recap is available on our <u>Storify page</u>.

Follow <u>@LBNLBioSci</u> to keep up with the latest from Biosciences; contribute content for our Twitter feed by emailing bioscicomms@lbl.gov. videos of the talks are in process. There was a strong social media presence with 250 people tweeting about the <u>meeting</u> using #JGI2017, available on <u>Storify</u>, leading to over 400 tweets and more than 1,000 re-tweets about the event. More in-depth coverage will appear in the upcoming spring issue of *The Primer*, the JGI's newsletter.

#### **HR Staffing Change**

Diane Heim, Sr. HR Division Partner for the BSE, EGSB, and MBIB divisions, has left Berkeley Lab effective March 29. The Area is actively recruiting to fill her position. HR Center Manager Bettina Brixner is the interim Sr. HR Division Partner <u>contact</u>.



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