

BERKELEY LAB



BioSci Communiqué

12.07.16

Events Highlights

Refer to the [Area Events Calendar](#) for events, details, and up-to-date information.

Upcoming John Lawrence Seminars

Flies as a Discovery Tool for Human Diseases | Hugo J Bellen, Baylor College of Medicine | December 13, 4 - 5 PM, Aquatic Park, Rm 977-141

The Physics of Growth and Form in Living Systems | Kerwyn Casey Huang, Stanford University | December 20, 4 - 5 PM, B66 Aud.

Improving Fitness of Humans and the Biome...the Knockout Mouse Project | K. C. Kent Lloyd, UC Davis | January 17, 4 - 5 PM, Aquatic Park Rm 977-141



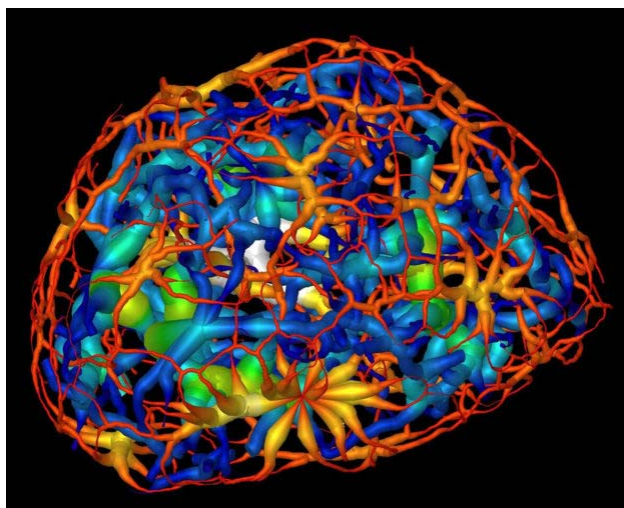
Registration Open for JGI's 2017 User Meeting

The 12th Annual JGI Genomics of Energy & Environment Meeting will take place March 20-23, 2017, in Walnut Creek. Satellite workshops are held prior to the meeting's start— attendees need to register for these workshops separately. The keynote speakers are Brenda Andrews from the University of

News Roundup

- Genes, Early Environment Sculpt the Gut Microbiome [>>](#)
- Brain Initiatives Generate Tsunami of Neuroscience Data [>>](#)
- X-rays Capture Unprecedented Images of Photosynthesis in Action [>>](#)
- California Assemblymember Richard Bloom Visits JBEI and ABPDU [>>](#)
- Crop Yield Gets Big Boost with Modified Genes in Photosynthesis [>>](#)
- 3-D Imaging Technique Maps Migration of DNA-carrying Material at the Center of Cells [>>](#)
- Second Annual Software Developer Wet Lab Boot Camp Takes Place at JBEI [>>](#)
- Inspiring ASCB Award Essays by Mina Bissell and Eva Nogales [>>](#)
- Gatekeeping Proteins to Aberrant RNA: You Shall Not Pass [>>](#)
- Biosciences Technology Recognized with R&D 100 Award [>>](#)
- MBIB Researchers to Support Two Exascale Projects [>>](#)
- JBEI Volunteers at Bay Area Science Festival [>>](#)
- New Plant Synbio Tool Breaks With Tradition [>>](#)

More news on the Biosciences Area [website](#).



ALD Message

As 2016 comes to a close and 2017 begins to take shape, I'm optimistic that the solid foundation provided by our Area reorganization will help us weather the uncertainties of the coming

Toronto and Norman Pace from the University of Colorado. To register for the meeting and for the satellite workshops, as well as to see the list of confirmed speakers and other details, go [here](#).

Sexual Harassment Prevention Training

A live, updated and interactive alternative to the traditional two-hour, bi-annual, web module harassment curriculum is offered December 8, Noon - 2 PM, in B50 Aud. The course qualifies supervisors for their biennial sexual harassment prevention training credit. To RSVP and for questions, contact [Leticia Ericson](#).

Area Program Development

Biosciences recently completed a round of brown bags on writing effective white papers. Survey responses are currently being evaluated and a retrospective analysis is planned to inform future program development modules aimed at building capacity across Biosciences.



Innovation Portal Update & Training

Starting in January 2017, all invention/software disclosures will be submitted online through the Innovation Portal. Watch for information on training sessions. The [Innovation Portal](#), launched in 2015, enables Berkeley Lab researchers, division support staff and leaders to view the status of invention disclosures, intellectual property, and agreements handled by the Innovation and Partnerships Office (IPO). In 2016, the Innovation Portal was expanded to handle online NDA and MTA requests. The final step, to accept online

year. Every one of my six new calendar years as ALD has started with a Continuing Resolution; with the recent progress we've made toward our strategic goals, I'm confident that we're in an even stronger position to work together toward positive outcomes next year.

At the November ALD retreat, Director Witherell, Deputy Director Simon, and the ALDs discussed and decided on Berkeley Lab's Priorities and Initiatives for the coming year:

Laboratory Priorities – Reflecting the Lab's enduring commitments: Advanced Light Source Upgrade; Exascale for Science (computing); Biosciences Campus Campaign to relocate off-site biosciences groups; Renewal of Infrastructure.

Laboratory Initiatives – Reflecting efforts with Lab-wide breadth requiring institutional support: Next generation of scientists, including diversity; Microbes to Biomes; Electron Microscopy; Water-Energy Nexus; Beyond Moore's Law; Data Analytics for Science (machine learning).

As I mentioned in my email on November 21, the success of the Biosciences Area is ensured through teamwork, professionalism, respect, and inclusiveness, and our new leadership team is deeply committed to creating and maintaining an environment where everyone is welcome and can work together to achieve our goals. I'm very pleased to see that under Director Witherell, the Lab is continuing its commitment to diversity.

On January 31, 2017, Berkeley Lab will host a groundbreaking for the Integrative Genomics Building, the first building of the new Biosciences Campus. I'd like to extend a special thanks to David Gilbert, who is serving as the Biosciences organizer of the event. This is being planned as a celebration for employees of the Joint Genome Institute (JGI) and KBase, in an effort aimed to welcome them to their future home on the main Berkeley Lab site.

Regards,
Jay Keasling

Area News

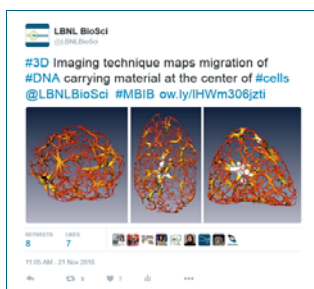
Awards for Bioscientists

Several Biosciences researchers have been honored with awards recently. Pictured from left to right: Biophysicist senior scientist [Eleanor Blakely](#) and faculty scientist [Krishna K. Niyogi](#), of the Biological Systems & Engineering and Molecular Biophysics & Integrated Bioimaging (MBIB) Divisions respectively, were elected as Fellows of the American Association for the Advancement of Science (AAAS). [Ke Xu](#), chemist faculty scientist in the MBIB Division, is a recipient of a 2016 Packard Fellowship for Science and Engineering. Also, JBEI's [Henrik Scheller](#) has been awarded the 2016 Kaj Linderstrøm-Lang Prize.



invention/software disclosures, marks the completion of IPO's transition to a consistent, paperless, and transparent process for handling Berkeley Lab intellectual property and related agreements. If you haven't used the portal in the past, [e-learning modules](#), [FAQs](#), and [glossaries](#) are available to help get you up to speed before the online disclosure training begins. For questions, email iportal@lbl.gov.

@LBNLBioSci Twitter Highlight



Researchers from the Molecular Biophysics & Integrated Bioimaging Division have mapped the reorganization of genetic material that takes place when a stem cell matures into a nerve cell. The tweet highlighting this achievement was one of our top tweets of the past month.

Follow [@LBNLBioSci](#) to keep up with the latest from Biosciences. Feel free to suggest or contribute content for our Twitter account by emailing bioscomms@lbl.gov.

Divisional Retreats Held this Fall

On October 11, the **Biological Systems & Engineering (BSE) Division** retreat, held at Emeryville's Hilton Garden Inn, included overviews and presentations from its three departments, Organismal Systems & Bioresilience, Biodesign, and Process Engineering & Analytics, as well as updates on Operations, HR, and Safety. In addition, representatives of the Innovations and Partnership Office and the Berkeley Lab Foundation presented. In the strategic directions & new opportunities session, Eleanor Blakely discussed her research and the future of charged particle therapy, a mode of particle therapy used in cancer treatment; and Andrew Wyrobek spoke on the Lab-wide BRAIN and Molecules to Minds (M2M) initiatives. The gathering, attended by about 125 participants, concluded with an open mic session.

The Molecular Biology & Integrative Bioimaging (MBIB) Division

came together at its annual retreat on November 3 in Lafayette. About 80 division PIs, postdocs and graduate students attended, as well as several PIs from other Biosciences divisions. MBIB Division Director Paul Adams opened the meeting with an overview of strategic plans for the division. The heads of the three departments, Cellular and Tissue Imaging, Bioenergetics, and Structural Biology, gave overviews of the current research within their departments, and PIs gave talks covering a wide range of research areas in biosciences, from imaging of protein deposits in the human brain and relationship to Alzheimer's progression, to photoswitches for increased energy production in plants and new methods in serial crystallography. Three guest speakers presented: Richmond Sarpong (UCB), Markita Landry (UCB), and Jamie Fraser (UCSF). Two rounds of "lightening talks" gave poster presenters a chance to describe their research and resulted in a lively and well-attended poster session. At the end of the day, a reception allowed researchers more time to interact and view posters.

The Environmental Genomics & Systems Biology (EGSB) Division

held its annual science and strategic planning retreat on November 18 in Lafayette (right) with 90 attendees from EGSB, JGI, the Biosciences and Earth and Environmental Areas, and UC collaborators. Prior to the scientific talks, EGSB Division Director Louise Glass gave an overview of the ongoing and future research directions of the division and Biosciences Lead Safety Coordinator Shraddha Ravani gave an update on safety rules and best practices. The 18 scientific talks by PIs, scientists, and postdocs highlighted the diverse research with an emphasis on multidisciplinary approaches to address environmental challenges through a molecular understanding of ecosystem processes. After the presentations, the group discussed future recruitment, and new collaborations and research directions. The retreat ended with a poster session and reception during which participants further explored EGSB science in a more informal setting.



JGI Winter Primer Now Available

The latest issue of the Primer, Volume 14, issue 1, containing stories ranging from the 2017 portfolios for the Community Science Program and the



collaborative science initiative, FICUS, with EMSL, to user science highlights, can be downloaded [here](#).

JGI Selects Microbial Small-Scale Proposals

The JGI's small-scale Microbial/Metagenome Program focuses on providing pilot data to enable future large-scale proposal submission; proposals from first-time JGI investigators are strongly encouraged. A total of 25 microbial small-scale proposals were recently [selected](#) from 73 submissions. [Submissions](#) for small-scale proposals are being accepted until February 24, 2017.

Highly Cited Researchers 2016

Clarivate Analytics (formerly part of Thomson Reuters) released their 2016 list of Highly Cited Researchers, which includes Igor Grigoriev, Natalia Ivanova, Nikos Kyrpides, Erika Lindquist, and Asaf Salamov of the Joint Genome Institute; Suzanne Lewis of EGSR; Bill Jagust of MBIB; and ALD Jay Keasling.



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