

The internal monthly newsletter for Biosciences at Berkeley Lab.

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BERKELEY LAB



# BioSci Communiqué

11.02.16

## Events Highlights

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

### Upcoming John Lawrence Seminars:

*Multiscale Image-Based Modelling of Plant-Soil Interaction* | Tiina Roose, University of Southampton | November 7, 3 - 4 PM, B66 Aud. (BioEPIC seminar, special installment)

*Translating Cancer Genomics to Precision Oncology* | Francisco M. De La Vega, Stanford University School of Medicine | November 15, 4 - 5 PM, Aquatic Park, Rm 977-

## News Roundup

- JGI Announces 37 New CSP Project Allocations [>>](#)
- Navigating an Ocean of Biological Data in the Modern Era [>>](#)
- Understanding the Genes Behind Some of Evolution's Most Dramatic Changes [>>](#)
- New Bacteria Groups, and Stunning Diversity, Discovered Underground [>>](#)
- Davies and Mortimer Impressions of WEF's Annual Meeting of the New Champions [>>](#)
- Potential Targeted Therapy Found Against Triple-negative Breast Tumors [>>](#)
- Biosciences Staff Honored with Director's Awards [>>](#)
- Workshop Focuses in on Electron Microscopy [>>](#)
- Brain Modulyzer Provides Interactive Window Into the Brain [>>](#)
- BETO Announces Agile BioFoundry [>>](#)

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

## Retrospective

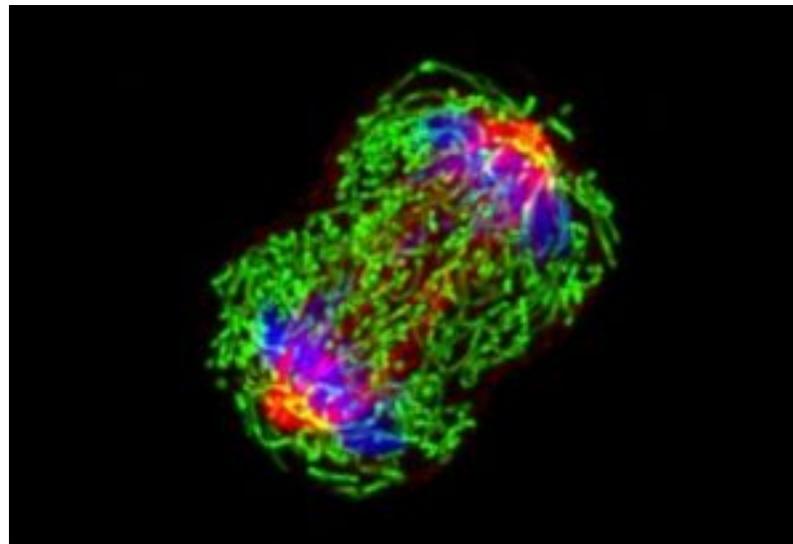
### Operations Transformed

The Biosciences Operations staff have done an incredible job of transitioning our Communications, Financial, EH&S, HR, Purchasing, Timekeeping, etc., structures, systems and processes to fit the needs of the new organization with virtually no disruptions in support.

Beginning a little over a year ago, they formed teams within their focus areas, developing stronger working relationships with each other, and by pooling their considerable talents, have helped Biosciences achieve savings of over \$2M (or approx. 15%) of operational costs per year.

### Program Development

The reorganization has provided strategic clarity that allowed us to partner with the Lab's Innovation and Partnerships Office to develop priorities and goals for



## Message from the ALD

In the last month, there were two major developments for our Area: the DOE-funded [Agile BioFoundry](#) was established on October 1, and on October 7, DOE gave formal approval for the Integrative Genomics Building (IGB), the first building of our Biosciences Campus, to begin construction at the former Bevatron site on the main Berkeley Lab campus. In other Area news, on October 6 Mary Maxon and I briefed staff from three congressional committees – Senate Energy and Nature Resources, Senate Energy and Water Development Appropriations, and House Energy and Water Appropriations – about our newly refreshed Biosciences Strategic Plan and the Agile BioFoundry. Upcoming this week is the first ALD retreat with Director Mike Witherell, where we'll discuss, among other things, FY18 Lab-wide LDRD topics and major infrastructure priorities.

This month marks the one-year anniversary of the establishment of our reorganized Biosciences Area, and looking back, I see some significant impacts. We've centralized and streamlined many activities and processes in Biosciences operations,

upcoming program development activities.

Also, it allowed for JGI researchers to have secondary divisional appointments, enabling new paths for program development. For example, funding was secured for a Los Alamos National Laboratory collaboration to develop new genomics and gene editing tools for industrially-relevant algae strains.

Participants' surveys showed a positive response to the program development modules offered by the Area in the past year. Opportunities to learn more about program development will again be offered next year.

### **Diversity in Funding Portfolio**

The Biosciences Leadership is working toward the co-location of the Area to the future Biosciences Campus to maximize team science and encourage collaboration. As part of this effort, we are diversifying our funding portfolio to resource our future programs and infrastructure.

We have developed narratives

scientific goal-setting, program development, and fundraising. In our efforts to establish equality across the Area, we've not only saved significantly on operations costs (over \$2M), but also made significant progress toward ensuring that people are paid equally in their job classifications across the Area.

Our new Biosciences leadership team is nearly complete – I am very close to selecting a new Director for the Joint Genome Institute – and the team has already demonstrated tremendous collaborative strengths in developing shared objectives for scientific excellence, mentoring, diversity and inclusion, safety, and working together to realize the vision for the new Biosciences Campus. But there is more to be done, including working together to decrease the Area burden, a goal I hope to achieve again this year as we did in the last year.

Regards,  
Jay Keasling

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## **"Area Reorganization, One Year Later" from our Directors...**

### **Biological Systems & Engineering Division, Blake Simmons**



We are focused on efforts that combine the power of biology with the tools of engineering to develop sustainable energy and biomanufacturing solutions and improve human health. One of the most exciting things about the work going on in our division is that it lies at the intersection of so many disciplines, and

this merging of skills and expertise is a direct result of the reorganization. We recently had an LDRD proposal funded that explores the intersections between bioenergy, biomanufacturing, and environmental and human toxicology, which will highlight the merit of our approach to consilience.

we have developed narratives around scientific objectives and capabilities that philanthropic donors may be interested in supporting, and building these relationships.

Please contact [Alicia Yeh](#), Executive Director of Biosciences at the Berkeley Lab Foundation, X4081, with your questions or ideas.

### Area Website Anniversary

One year ago we launched our redesigned Biosciences website and since then, we have welcomed 18,500 users for nearly 30,000 sessions. Those visitors viewed over 100,000 pages and read about 3.5 pages/session. Users spend an average of 2.25 minutes on our site and we get 10% more new versus returning visitors. While most people who use the site are located in the United States, it has been accessed in 113 other countries around the world.

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**@LBNLBioSci**  
**Twitter Highlight**

### Environmental Genomics & Systems Biology Division, Louise Glass



We are working to link genome biology to ecosystem dynamics to develop a mechanistic and predictive understanding of ecosystem function. We are fostering new relationships and broadening existing collaborations with faculty and researchers at UC Berkeley, UC Davis, EESA and divisions within the Biosciences Area and other Lab Areas to better meet our shared strategic goals. I look forward to working with my colleagues in EGSB and at Berkeley Lab/UC to develop new initiatives, technologies, and collaborative programs to address humankind's grand challenges of the 21st century.

### Molecular Biophysics & Integrated Bioimaging Division, Paul Adams

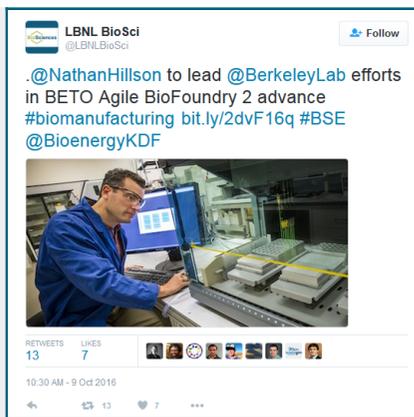


Our goal is to generate a mechanistic and predictive understanding of biological processes through molecular- and meso-scale visualization and advanced spectroscopies. The reorganization has enabled us to work together to submit joint funding proposals, develop plans for a virtual imaging center, and perform high-resolution studies of key photosynthetic complexes. Our close ties to campus have made it possible to recruit new talent, Na Ji and Eric Betzig, to UC Berkeley and the Biosciences Area. In the next 12 months I look forward to MBIB researchers working with others at the Lab to help plan for the ALS upgrade, promote cryo-electron microscopy, create the foundation for an imaging center, bring together biology and materials sciences for energy solutions, and exploit our expertise in computation to further our understanding of complex biological systems.

### DOE Joint Genome Institute, Axel Visel (interim)



The reorganization provided an opportunity for us as the DOE Genome Science User Facility to interact more closely with the scientists in Berkeley Lab's



One of our top tweets this past month was the establishment of BETO's Agile BioFoundry, led by Biosciences, which earned 1,983 impressions.

Follow [@LBNLBioSci](https://twitter.com/LBNLBioSci) to keep up with the latest from Biosciences. Feel free to suggest or contribute content for our Twitter account by emailing [bioscicomms@lbl.gov](mailto:bioscicomms@lbl.gov).



research divisions. These interactions have already resulted in new, fruitful collaborations and joint development efforts within Biosciences. We are excited about the prospect of moving into the Integrative Genomics Building (IGB) on the Lab's main campus in 2019, where we will be co-located with KBase and in the immediate vicinity of other Biosciences labs, as well as major DOE User Facilities including the ALS, Molecular Foundry, ESNET, and NERSC.

## Area News

### Biosciences Staff Honored with Director's Awards

Congratulations to our Biosciences Area colleagues who have been [named as recipients](#) of 2016 Berkeley Lab Director's Awards.

### Integrative Genomics Building is a "GO"

On October 7, DOE's Energy System Acquisition Advisory Board (ESAAB) gave formal approval for the Biosciences Integrative Genomics Building (IGB) to begin construction. Approval of the Critical Decision 3 (CD-3) milestone is a major step in any building construction project funded by DOE's Science Laboratories Infrastructure (SLI) program. The IGB will be under construction for approximately two years at the old Bevatron site on the Berkeley Lab main campus. The JGI and KBase teams are projected to move into the building, which will accommodate about 300 staff, in the spring/summer of 2019. A groundbreaking ceremony is being planned with the date to be announced soon.



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