

## **ACADEMIC COUNCIL SPECIAL COMMITTEE ON LAB ISSUES ANNUAL REPORT 2015-16**

### **TO THE MEMBERS OF THE ACADEMIC COUNCIL:**

The Academic Council Special Committee on Lab Issues (ACSCOLI) was established by the Academic Council to provide broad-based Senate oversight of UC's relationship with the National Laboratories – Los Alamos National Laboratory (LANL), Lawrence Berkeley National Lab (LBNL), and Lawrence Livermore National Laboratory (LLNL). ACSCOLI advises the President and Regents on general policies relating to the National Laboratories, which includes the dispersal of UC's share of net fee monies, policies that affect the lab science management, and the quality of science being performed at the labs. ACSCOLI is also concerned with evaluating the benefits of UC's continued participation in the management of the labs, and has been charged by the Academic Council with stimulating closer connections between the labs, faculty, and students.

ACSCOLI held three in-person meetings and one teleconference in 2015-16.

### **National Labs Overview**

#### *DOE Annual Performance Evaluations for the National Laboratories*

Each year, the US Department of Energy conducts an evaluation of the scientific, technological, managerial, and operational performance of the contractors who manage and operate its national laboratories. These evaluations provide the basis for determining annual performance fees and the possibility of winning additional years on the contract through an "Award Term" extension.

Lawrence Berkeley National Lab (LBNL) was well-reviewed and Director Paul Alivisatos was commended for a superb job. The lab was seen to be high quality and effective in its work. There was a new site manager last year, and the DOE is pleased with the operations. The result is that 94% of the available fee will be provided, and the lab is eligible for Award Term extension to the contract.

Lawrence Livermore National Lab (LLNL) was also well-reviewed. Leadership and work in key mission areas received excellent grades. 93% of the fee will be provided, as well as an extension of the Award Term to 2019.

Los Alamos National Lab (LANL) had another difficult year with additional safety issues. The full annual performance fee was again not earned. ACSCOLI learned in May that the current contract for the management and operation of the Los Alamos National Laboratory will end in Sept. 2018. After that date it is likely that the LANL management contract will be opened up for bid.

#### *Los Alamos National Laboratory Contract*

Looking ahead to a time when UC might need to reconsider its involvement in Los Alamos National Lab, committee members discussed methods for informing the faculty about the LANL contract and a potential bid process. Ideas for communicating with faculty included using the

Senate Source newsletter, sending ACSCOLI updates to Academic Council, inviting the Vice President of UC's Office of the National Laboratories to Academic Council meeting, and providing news and information at the divisional level. Many faculty members will be interested in the lab's involvement in building and maintaining nuclear weapons, and it will be important to provide accurate and factual information.

The Regents are involved in the management of the labs at high levels. ACSCOLI will invite Regent Norm Pattiz, who chairs the Board of Governors of the Los Alamos National Security LLC (the partnership that manages LANL) to a meeting in 2016-17.

### Change in Administration

Michael Witherell replaced Paul Alivisatos as Director of Lawrence Berkeley National Lab. Director Witherell, who was previously the Vice Chancellor of Research at UCSB, attended the May ACSCOLI meeting to introduce himself to committee members and update the committee on the work of the Berkeley Lab.

### **UC Lab Fees Research Program**

Funding for the UC Lab Fees Research Program (LFRP) comes from the net fee income that UC receives for managing the Livermore and Los Alamos National Labs. The 2017 LFRP call for proposals was sent out in the spring, with letters of intent due June 2, 2016. The program has a carry-forward from prior years, which, along with an adjusted amount for this year, brings the total award funds to \$13.5 million. This year there are two award categories: "Targeted UC Multicampus-National Lab Collaborative Research and Training Awards" and "In-Residence UC-National Lab Graduate Fellowships."

The collaborative awards were offered in 2008 and 2012. The 2017 "targeted" opportunity is a result of a proposal from last year to integrate the LFRP goals of maximizing UC campus faculty collaboration and linking key lab strategic initiatives to campus interests. Targeted grant proposals must focus on collaborative research and training activities in one of three key areas identified for high-impact research:

1. Biological applications of advanced computing
2. High energy density science
3. Mesoscale materials science

Grantees must include a minimum of four campuses and either LLNL or LANL. Although committee members expressed concern about the four campus requirement, systemwide workshops held on the targeted subject area last year drew participants from all campuses.

The in-residence fellowship grants will be given to graduate students who have advanced to candidacy who will be on-site at either LLNL or LANL doing their own dissertation research at 80% time. The grants are for two years, with a possible third year extension option, and while not tied to any particular subject area, each proposal needs to have identified a scientist at the lab to serve as mentor and supervisor and be approved by the student's UC faculty advisor. The goal of the grant is to provide experience, training, and mentoring. It is expected that the graduate fellowships will take about \$800,000 of the \$13.5 million total.

UC Office of the National Laboratories Vice President Kimberly Budil, who briefed ACSCOLI regularly on the UC-DOE relationship, noted that she has widely promoted to DOE the fact that UC re-invests their lab fees in academic endeavors. The Office of the National Labs would like to see more larger-scale collaborations, and welcomes suggestions for broader outreach.

### **Joint Appointments**

Establishing joint appointments between UC campuses and the National Laboratories has been a long-standing area of interest for ACSCOLI. Committee members again discussed the interpretation of “adjunct professor” as defined in the Academic Personnel Manual (APM). Concerns about adjuncts and joint appointments have included costs and whether or not the positions sufficiently benefit the local campus community. LANL and LLNL employees are not UC employees, so arrangements are more complex than at LBNL. ACSCOLI members noted that a communications strategy to describe the case for adjunct professors would be simpler than changing policy or the APM. It was agreed that a straightforward path to pursue an adjunct appointment would be helpful.

### **Strengthening the Relationships between UC Campuses and the National Laboratories**

The labs and campuses continue to work together to develop larger-scale strategic collaborations, with a goal of developing research engagements between the labs and all of the UC campuses. The Lab Fee Research Program’s Multicampus-National Lab Collaborative Research and Training Awards is one example.

In December, ACSCOLI learned about four joint campus-lab project areas that have received discretionary and external funding:

1. Clean energy and water (“CERC-WET” – LBNL, Berkeley, Davis, Irvine and Merced)
2. Predictive medicine (Biological Applications of Advanced Scientific Computing or “BAASiC” – led by LLNL and UCSF)
3. Mesoscale Materials Science (led by LANL and Irvine)
4. High Energy Density Science (led by LLNL and San Diego)

In addition, Discovery Science projects at the NIF (National Ignition Facility) have increased, with eight completed and nine new projects starting.

In May, the Executive Director of the National Laboratory Program, June Yu, demonstrated a new data visualization tool that illustrates the extent and nature of current UC-lab collaborations using Web of Science peer-reviewed publication data. ACSCOLI members were impressed with Director Yu’s interactive graphical presentations of lab-campus connections, although noted that Web of Science does not cover all subject areas (most notably absent is computer science).

### **Other Updates from the Office of National Laboratories**

The federal government has four major initiatives related to “applications of high performance computing to biology” in the areas of microbiomes, cancer moonshot, precision medicine, and a brain initiative. Work that is already going on within UC can be applied to these efforts. President Napolitano and others have reached out to relevant departments in Washington, DC, about energy innovation, biosciences, and about potential regional collaborations within California that would include the private sector.

## **Representation**

As Chair of ACSCOLI, Jim Chalfant served as a member of the LBNL Advisory Board and the LBNL Contract Assurance Council.

## **Acknowledgements**

ACSCOLI wishes to acknowledge the contributions of its principal consultants: Kimberly Budil Vice President of the Office of the National Laboratories; Mary Croughan, Executive Director of the Research Grants Programs Office; and Kathleen Erwin, Director of the UC Research Initiatives. UC Davis Professor Robert Powell was appointed by the Regents as Executive Committee Governor to the Lawrence Livermore National Security, LLC (LLNS) and Los Alamos National Security LLC, (LANS) Boards of Governors and is a recurring guest of the committee. Powell also chairs the LLCs' Science and Technology Committee.

Respectfully submitted, 2015-16ACSCOLI:

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