

The Regents of the University of California

NATIONAL LABORATORIES COMMITTEE

November 16, 2021

The National Laboratories Committee met on the above date at UCSF-Mission Bay Conference Center, 1675 Owens Street, San Francisco and by teleconference meeting conducted in accordance with California Government Code §§ 11133.

Members present: Regents Hernandez, Kounalakis, Reilly, and Sures; Ex officio member Estolano; Advisory members Horwitz, Powell, and Timmons; Chancellor Larive; Staff Advisor Lakireddy

In attendance: Regents Lott, and Makarechian, Faculty Representative Cochran, Secretary and Chief of Staff Shaw, Senior Counsel Lounsbury, Provost Brown, Vice President Leasure, and Recording Secretary Li

The meeting convened at 4:05 p.m. with Committee Chair Sures presiding.

1. **APPROVAL OF MINUTES OF PREVIOUS MEETING**

Upon motion duly made and seconded, the minutes of the meeting of September 28, 2021 were approved, Regents Estolano, Hernandez, Kounalakis, Reilly, and Sures voting “aye.”¹

2. **STATUS OF THE SOUTHERN CALIFORNIA HUB**

[Background material was provided to Regents in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Pramod Khargonekar, Vice Chancellor for Research and Distinguished Professor of Electrical Engineering and Computer Science at UC Irvine, began his remarks by contrasting a historical photograph of Lawrence Berkeley National Laboratory (LBNL) researchers and staff with a present-day photograph, noting that the diversity and collaboration depicted in the latter image represented the future of the National Laboratories. The vision for the UC Southern California Hub (SoCal Hub) was to harness synergies between UC campuses and UC National Laboratories for high-impact, collaborative research in the national interest, the education of a new generation of diverse scientists and engineers, and societal benefits. There were no National Laboratories closer to the Southern California campuses than Los Alamos National Laboratory (LANL), which was located in New Mexico. SoCal Hub could potentially expand the benefits of being located together, enjoyed by UC Berkeley and LBNL, into a larger collaboration between the campuses and UC-managed National Laboratories. Mr. Khargonekar presented photographs demonstrating the long history of such collaboration. Since 2008, the UC

¹ Roll call vote required by the Bagley-Keene Open Meeting Act [Government Code § 11123(b)(1)(D)] for all meetings held by teleconference.

National Laboratories Fees Research Program has invested \$170 million in collaborative research, and UC was an unmatched resource that could help the National Laboratories and the nation. Together, UC's five southern campuses produced more graduates in the science, technology, engineering, and mathematics (STEM) fields than any other region in the U.S. These campuses had high diversity rankings, and many were Hispanic-Serving Institutions (HSIs). Initial ideas for the SoCal Hub originated from visits by then Vice President Kimberly Budil and then Executive Director June Yu to UC Irvine and other southern campuses, which led to planning sessions involving faculty and leaders from the campuses and National Laboratories. UC Irvine, UCLA, UC San Diego, LLNL, and LANL submitted a pilot program proposal to UC Office of the National Laboratories (UCNL) in 2019, and the Regents approved a year of pilot funding in January 2020. Despite the COVID-19 pandemic, the SoCal Hub took advantage of emerging teleconference technology, completing a full year of work and holding four virtual workshops.

John Sarrao, Deputy Director of Science, Technology, and Engineering at Los Alamos National Laboratory, stated that the pandemic created an opportunity to reach out to a larger portion of the University and that representatives from all the campuses attended the SoCal Hub workshops. The campuses' technical strengths matched the National Laboratories' strategic priorities, and only the University had the depth, breadth, and scale to meet the National Laboratories' staffing and pipeline needs. In August 2020, UCLA hosted the Nuclear and Materials Collaborations workshop, where 65 ideas were identified. Facilities at the National Laboratories held significant potential for faculty and students. In October 2020, UCI hosted the Frontiers in Machine Learning for the Physical Sciences workshop. This field presented the campuses and the National Laboratories an opportunity to determine their strengths and where they could lead. In January 2021, UCSD hosted the Computational Mechanics and Sciences virtual workshop, which also expanded the engagement between UC San Diego and LANL to other campuses. These technical workshops demonstrated that the campuses and National Laboratories had many common causes on which to build. In September 2021, UCI hosted the Inclusive SoCal Hub Pipeline and Recruiting workshop. The National Laboratories not only needed to recruit more staff, but also the kind of high-quality and diverse staff that only UC could provide. Discussions shifted from graduate opportunities to undergraduate opportunities and earlier career engagement. The National Laboratories were working to become more familiar with the campuses and students. Mr. Sarrao expressed excitement about the SoCal Hub's success in its first year.

Mr. Khargonekar shared key themes from the pilot year. There was great potential for enhanced synergy and shared research interests between National Laboratory scientists and campus faculty and students. This collaboration could shape national research agendas at the U.S. Department of Energy and other federal agencies. Sustained collaboration was needed to improve diverse recruitment at the National Laboratories, and the National Laboratories resources and facilities could be strategically leveraged to educate and train students and postdoctoral fellows. Visibility of the National Laboratories needed to be increased, particularly on the southern campuses, and processes could be simplified for joint appointments between campuses and the National Laboratories.

Mr. Khargonekar thanked the Regents for approving a second year of funding. In planning for its second year, UC Riverside was invited to join SoCal Hub as a full partner, and SoCal Hub formed an Executive Leadership Council, comprised of Mr. Khargonekar, Mr. Sarrao, UCSD Vice Chancellor of Research Sandra Brown, UCLA Vice Chancellor of Research and Creative Activities Roger Wakimoto, UC Riverside Vice Chancellor of Research and Economic Development Rodolfo Torres, and LLNL Deputy Director for Science and Technology Patricia Falcone. The Council articulated four goals for the SoCal Hub's second year: fund "seedling" projects that resulted from the pilot year workshops, with four projects approved thus far; convene follow-on workshops; enhance student engagement, recruitment, and campus visits by National Laboratory staff; and develop a plan for SoCal Hub strategy, governance, and communications, such as a website that was expected to launch in year two. In the future, the SoCal Hub would facilitate collaboration between the National Laboratories and UC faculty, create pathways for more UC campuses to join, harness campus diversity and inclusion to build a diverse work force at the National Laboratories, develop a robust financial model with support from the Office of the President (UCOP) and external grants, and leverage virtual collaboration tools. A mature SoCal Hub would be a catalyst for new ideas and partnerships that would enable large-scale, externally funded research initiatives, deepen student and faculty engagement with the National Laboratories, and provide tools and cutting-edge facilities to students, faculty, and researchers.

Committee Chair Sures asked what the Regents could do to help increase the visibility of the SoCal Hub to the southern campuses. Mr. Khargonekar replied that the SoCal Hub looked to UCNL to help convey its successes to the Regents, and being featured at Regents meetings was helpful. He asked that the Regents support the SoCal Hub in realizing its potential. After the pandemic, a physical space might be needed, perhaps at UC Irvine. Mr. Sarrao noted the Regents' significant convening authority and asked that representatives from the SoCal Hub be invited to speak at appropriate events.

Regent Estolano, noting from the presentation materials that 15 percent of 65 ideas identified in the August 2020 workshop were considered immediately fundable, asked what part of the fee income funding approved by the Regents could go toward those ideas. She commended the program's recognition of Southern California as a rich source of diversity, researchers, and talent. Vice President Leasure responded that UCNL was discussing longer-term funding for the SoCal Hub, which would be a combination of seed money from National Laboratory fee income and extramural funding secured by long-term collaborations. UCNL would likely to seek Regental approval of funding for the SoCal Hub next year.

Regent Estolano asked when the SoCal Hub would need a physical location and where it would be. Mr. Khargonekar estimated that the program would need a physical location in 2022 as in-person activities increase. The Irvine campus, which was equidistant from other southern campuses, was trying to identify a space for such a location. If the program grows, a bigger space would be needed.

Regent Hernandez noted that UC Santa Barbara was not in the list of SoCal Hub campuses and expressed his hope that the campus be added. He suggested that UC Merced and UC Santa Cruz, which were not close to the Northern California or the Southern California campuses, would be invited to join the SoCal Hub. Regent Hernandez also suggested that recently retired, senior-level employees from the National Laboratories be placed at the campuses as liaisons, and that principal investigators from the campuses spend summers at the National Laboratories. He foresaw security clearances, necessary for certain types of work, as a possible challenge. Mr. Khargonekar responded that the SoCal Hub would be open to other campuses and LBNL. UCSB and UCM could be invited to join as soon as this coming year. Mr. Sarrao agreed that retirees could be a good addition to current engagement between the National Laboratories and the campuses. Security clearances were less of an issue. The plurality of LANL postdoctoral researchers were not U.S. citizens, like the plurality of graduate students across the country. The potential of UC could be realized by working through boundaries and casting a wide net.

Regent Zaragoza asked if there were discussions to provide temporary housing to students participating in SoCal Hub. Mr. Khargonekar replied in the affirmative but noted that the issue had not been addressed during the pandemic. At UCI, there was housing near and on campus for visiting scholars, and there was discussion about reserving some units. Committee Chair Sures stated that this was a funding issue that would have to be addressed in upcoming UC budgets. If UC could devote the resources, it should find the housing. Mr. Sarrao stated that, like the virtual participation of students at LANL during the pandemic, the SoCal Hub could expand its reach and address housing challenges using virtual and hybrid placements. Not all students would be able to move for the summer.

Faculty Representative Horwitz predicted a resistance to an increase in classified research on campus out of concern for research openness, noting an existing issue with process design kits. Mr. Khargonekar replied that the SoCal Hub was mindful of this and would follow UC policy. He believed that the vast majority of SoCal Hub research on campuses would be open research. Mr. Sarrao added that he had not considered classified work for the SoCal Hub, as the needs of the National Laboratories were much broader and more open.

The meeting adjourned at 4:45 p.m.

Attest:

Secretary and Chief of Staff