The Regents of the University of California

PUBLIC ENGAGEMENT AND DEVELOPMENT COMMITTEE
July 17, 2024

The Public Engagement and Development Committee met on the above date at the UCSF-Mission Bay Conference Center, San Francisco campus and by teleconference meeting conducted in accordance with California Government Code §§ 11133.

Members present: Regents Hernandez, Lee, Pack, Robinson, Salazar, and Sarris; Ex officio member Reilly; Advisory member Steintrager; Chancellors Lyons, May, and Muñoz; Staff Advisor Emiru

In attendance: Regent-designate Brooks, Regents Analyst Sheridan, Deputy General Counsel Woodall, Provost Newman, Interim Senior Vice President Turner, Vice President Gullatt, Chancellors Block and Yang, and Recording Secretary Li

The meeting convened at 12:15 p.m. with Committee Chair Sarris presiding.

Committee Chair Sarris began his remarks by sharing his eagerness to work with the Committee alongside Vice Chair Salazar, and he praised the work of the Committee under the leadership of former Committee Chair Reilly.

Committee Chair Sarris announced that three research projects funded by California Climate Action Seed and Matching Grants would establish collaborations between academic institutions like UC and tribal nations to support climate change resilience. These projects would investigate pine forest ecology and cultural values in the Eastern Sierra, monitor fisheries on the North Coast, and survey the changing landscapes of Indian public domain lands, which have continued to grow through the return of land and through partnerships between government and California Indian tribes. The UC Student and Policy Center announced that its inaugural Director would be Catharine Baker, a former State Assemblymember and longtime higher education advocate.

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

Upon motion duly made and seconded, the minutes of the meeting of March 20, 2024 were approved, Regents Hernandez, Lee, Pack, Robinson, Salazar, and Sarris voting "aye."[1]

2. **UPDATE FROM THE INTERIM SENIOR VICE PRESIDENT OF EXTERNAL RELATIONS AND COMMUNICATIONS**

[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.]

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

Interim Senior Vice President Turner provided examples of campus summer outreach activities that the University has recently shared with its State and federal partners. Through the Data Science Challenge, students from UC Merced and UC Riverside would solve real-world bioscience data problems alongside staff at the Lawrence Livermore National Laboratory. The following week, internship and training programs in quantum physics at the Lawrence Berkeley National Laboratory would culminate in the 2024 Berkeley Lab High School Summer Graduation and Symposium.

UC was grateful to Governor Newsom and the State Legislature for a $130 million base budget increase despite the State's precarious financial situation. Ms. Turner thanked the Committee and members of the UC community who joined the advocacy effort. Despite some progress being made on the federal budget, the U.S. House of Representatives was working with funding levels that were lower than what Congress and the White House agreed upon. UC was collaborating with its association partners to oppose these cuts. The passage of a continuing resolution was expected to avoid a government shutdown.

In June, the Office of Federal Governmental Relations hosted a meeting in Washington, D.C. of the UC Council of Vice Chancellors for Research as well as leadership from science agencies and congressional offices to discuss federal research initiatives. Last month, UC Advocacy Network Student Ambassadors met with President Drake during their final meeting. Ms. Turner acknowledged members of her team who received Circle of Excellence Awards from the Council for Advancement and Support of Education.

3. **UNLOCKING THE POTENTIAL OF ARTIFICIAL INTELLIGENCE IN HEALTHCARE**

[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.]

Interim Senior Vice President Turner introduced the item, a continuation of the Committee's exploration of the University's impact on artificial intelligence (AI) and its partnership with government and industry. Today's presentation would focus on AI in health care, particularly research, governance, deployments, and industry partnerships.

Atul Butte, Chief Data Scientist for UC Health and Director of the UCSF Bakar Computational Health Sciences Institute, began the presentation by defining terminology related to artificial intelligence, which was itself a broader term for mimicking human intelligence. Machine learning referred to training computers with data. In supervised learning, computers were trained to mimic the right answer, while in unsupervised learning, the computer would organize large amounts of data when the right answer was not known. Large language models were a type of deep learning inspired by the structure of the human brain. Clinical data from UC Health central data warehouses were now being used to train AI, but large amounts of high-quality, de-identified data were needed. The U.S. Food and Drug Administration (FDA) and others were developing frameworks for approving AI tools, and the FDA has already approved 882 tools. There was an opportunity for UC to innovate or create companies that would innovate these new methods, but evaluating,

purchasing, and managing those methods would be difficult. Millions to billions of dollars were being invested into AI, including healthcare AI.

The first systemwide Conference on Artificial Intelligence in Biomedicine was convened in 2019, and the Office of the President (UCOP) convened the Academic Congress on Artificial Intelligence last February. A congress on the administrative uses of AI was also being planned. The Center for Data-Driven Insights and Innovation (CDI2), which focused on the safe and responsible development and use of data and AI applications, has shared resources and best practices with UC campuses. UC Health participated in a congressional briefing in Washington, D.C. on March 14 and has joined national groups. Dr. Butte presented a list of AI initiatives at UC Health, CDI2, and across the system. The U.S. Department of Health and Human Services, the White House, and the California Attorney General have mandated fairness and nondiscrimination in the use of medical algorithms. Dr. Butte opined that all clinical disciplines, including nursing, should be enabled to use AI to maximize their practice.

Christopher Longhurst, Chief Clinical and Innovation Officer at UC San Diego Health, shared examples of how AI was affecting patient lives at UCSD Health. Given the challenge of diagnosing sepsis due to its similarity to other conditions, UCSD Health implemented an AI algorithm that monitored patients in emergency departments and published its findings. The algorithm contributed to a near 20 percent drop in mortality and helped close health disparity gaps in one emergency department that served a more vulnerable population. It was the first deep learning sepsis model shown to have a mortality impact. Dr. Longhurst stated that funding agencies, journals, and researchers should be encouraged to prioritize such studies, as many implemented algorithms are not studied, and many studied algorithms are not implemented. The mission of the Joan and Irwin Jacobs Center for Health Innovation at UCSD Health was to realize innovation at scale for impact. Nearly six years ago, UCSD Health formed an AI governance committee and later integrated the UC Responsible AI Principles into its governance processes.

In 2022, Dr. Longhurst compared 200 ChatGPT-generated responses to patient questions with doctors' responses and found that the chatbot wrote several paragraphs, compared with several sentences written by physicians. UCSD Health shared these results with a vendor and became one of the first in the nation to adopt large language models for health records. Given the importance of transparency about the use of AI in order to gain patient trust, patient messages generated using large language models were each reviewed by a clinician and automatically labeled as generated by AI before they were sent. This received positive feedback from patients. A study of UCSD Health's outcomes that was published by the Journal of the American Medical Association found that AI-generated drafts did not save doctors time, but doctors did feel as if they reduced cognitive burden. AI could help clinicians save time spent on documentation and electronic health records. With patient consent, AI-enabled ambient documentation could record a conversation and generate a draft for clinician review. This could reduce time spent documenting after business hours and during a clinic visit, thereby rehumanizing the experience of seeing a physician.

Matthew Lungren, Chief Medical Information Officer at Microsoft and Clinical Associate Professor at UCSF, shared that clinicians who have tried ambient documentation have reported 70 percent less burnout and completing documentation tasks in half the time, and two-thirds of patients reported more interaction with their doctors. With the burnout crisis and the increasing burden of administrative work, about half of those surveyed were considering leaving the healthcare profession. The U.S. was spending up to $1 trillion per year in healthcare administrative costs. When large language models like ChatGPT launched, even those who worked in the AI field were surprised by their capability. Four out of five people across different industries were using ChatGPT at work.

Dr. Lungren explained that AI had not been very expandable in the past, but newer, larger models had a wider variety of capabilities for diverse use cases. An internal study at Microsoft found that models like GPT4 had medical knowledge despite not being trained to pass a United States Medical Licensing Examination. Even the *New England Journal of Medicine*, the oldest continuously published medical periodical, recently created a new journal for AI. Another study found that GPT4 was able to achieve human-level performance in reviewing charts and identifying patients for clinical trials, which could provide additional access to trials. How one incorporates these models into medical education was still being discussed. The quick pace of technological innovation presented an opportunity for industry, academia, and clinical practice to achieve desired outcomes.

Regent Hernandez, noting the impact of medical errors and malpractice insurance on the medical field, asked if AI could help bring down malpractice insurance premiums and healthcare costs. Dr. Longhurst replied that the leading cause of medical lawsuits and settlements was missed and delayed diagnoses. He believed that the large language models, if implemented correctly, could reduce diagnostic errors and improve patient safety. AI could become part of the standard of care in the future. However, Dr. Longhurst could not predict whether this would reduce medical legal premiums.

Regent Reilly, underscoring the astronomical investment into AI by the private sector, asked whether this worried the presenters and how the University could overcome the investment divide. Dr. Butte replied that, in his view, the University was not competing with the private sector. UC could use government resources to innovate and foster a generation of entrepreneurs who would then start companies that obtain private investment. Dr. Lungren opined that private investment would not take away from UC's innovation infrastructure, which created a foundation for learning and experimentation. He expressed hope that industry and institutions could partner with each other.

Regent-designate Brooks called attention to the many medically underserved communities and cited the book "Algorithms of Oppression" by UCLA Professor Safiya Noble. She asked how UC could ensure that AI tools would help treat and prevent chronic conditions and illnesses that affect communities without access to health care or insurance. Regent-designate Brooks also asked how UC could use these tools to rebuild trust in medically underserved communities. Dr. Butte replied that UC data sets captured the diversity of its patient population but needed to capture data from more rural patients. In order to train AI models with data sets that were as big and diverse as possible, the University could partner

with other institutions across the state and the country. This applied to both treatment and prevention. UC Health planned to track access to care as a new metric and was considering how AI models could improve the quality of care at UC and beyond.

Dr. Longhurst stated that, since UCSD Health was an Accountable Care Organization (ACO), the Jacobs Center for Health Innovation remotely monitored over 3,500 Medicare patients and used an algorithm to identify patients for case management and intervention. This pilot program has been highly successful; patients saw improvement in their conditions without the addition of new medications. In order to generate trust, transparency has been built into program processes. Dr. Longhurst remarked that more value-based care models would be needed to fund this type of program.

Committee Chair Sarris asked how UC Health data could be used to help inland communities, whose Latino(a) and American Indian populations had specific health issues. Dr. Butte responded that work in the Inland Empire was growing through UC Riverside. The data that UC Health gathered from centers, clinics, and hospitals that it owned and operated did not account for the UC physicians and nurses who practice at non-UC sites. UC Health needed to do better to gather data from those sites.

Staff Advisor Frias expressed concern that UC's efforts to address biases would not keep pace with the expansion of AI. She stated that, when testing these models, UC should ask more specific questions and disaggregate the data by variables associated with underserved communities and systems of oppression. She was suspicious about the idea that AI would be able to solve problems that have not been solved for so long. Dr. Longhurst replied that, over the last five to ten years, there has been tremendous progress in reviewing and uncovering health equity gaps and opportunities. He noted that the White House statement "Delivering on the Promise of AI to Improve Health Outcomes" discussed equity but did not specifically address bias. There might be an underlying bias in the sepsis algorithm that helped UCSD Health detect heretofore undetected sepsis cases. AI might be progressing very quickly in the economy at large, but it must be implemented in health care carefully and thoughtfully and must be measured. By stratifying outcomes by health equity variables, UC Health could identify opportunities to use AI to close those gaps.

Regent-designate Wang asked how UC Health, through process and infrastructure, would engage in partnerships and procurement that would enable it to remain at the cutting edge of innovation while measuring unexpected outcomes related to bias, equity, and data privacy. She noted that large language models might not be as relevant in the future. Dr. Longhurst replied that the Jacobs Center for Health Innovation used dashboards on quality of care, which included factors such as efficiency, patient safety, timeliness, and equity, to determine how it prioritized resources for AI development. AI tools could help reduce costs and improve outcomes. Dr. Butte stated that campuses were drafting more contracts for the use of UC data to train AI tools that UC was thinking of purchasing. To ensure consistency, these data transfer contracts were being evaluated at a systemwide level, and UCOP and UC Health were stewarding and convening campus workgroups. UC data sharing policies were also being revised. Dr. Lungren projected that setting benchmarks for AI tools would present the next great opportunity for collaboration

between industry and UC. Dr. Longhurst shared that UCSD Health looked forward to running small language models and local computing devices, which do not require data sharing and paying partners for computing time.

Regent-designate Wang encouraged UC Health to explore the return on investment of AI over time.

Regent Salazar underscored the risk associated with data sharing and recording conversations between physicians and patients. He asked if UC was developing best practices that would enhance industry standards regarding data security. Dr. Butte replied that what UC has done could be considered best practices. Campuses knew to elevate complex contract clauses for systemwide review, and there was no singular approach to drafting these contracts. For instance, when contracting with an ambient listening company, UC must account for the fact that de-identifying patients' voices might not be possible. Dr. Longhurst underscored the relationship between AI, cybersecurity, and privacy. With the help of a federal grant, UC San Diego established the Center for Healthcare Cybersecurity. In its contracts, UCSD was advocating data retention strategies that were new to the industry and would help set best practices.

Regent Pack asked whether the National Institutes of Health (NIH) was involved and whether the NIH wished to incorporate these tools into nationwide clinical trials. Dr. Butte shared that he served on the NIH's Advisory Committee to the Director. The NIH, which encountered similar challenges in its own clinical center, was aware of UC's work in this field. There has been an increase in NIH requests for proposals related to AI and data science, and UC sought to empower faculty to respond to them. The grant that helped establish the Center for Healthcare Cybersecurity was the first Advanced Research Projects Agency for Health grant received in California.

4. UC MERCED IN THE VALLEY AND SIERRA K–16 COLLABORATIVES

[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.]

Brian O'Bruba, Interim Vice Chancellor for Student Affairs at UC Merced, stated that, since the Center for Educational Partnerships (CEP) was established at UC Merced in 2002, it has served over 95,000 students in over one dozen programs and partnered with 93 K–12 schools in seven counties. To help families navigate financing higher education, CEP has also served over 18,000 parents of students from 66 schools. All CEP programs aimed to increase UC and California State University (CSU) eligibility and admission rates in the San Joaquin Valley (SJV).

Orquídea Largo, Associate Vice Chancellor and Chief Outreach Officer, described how CEP accessed the $250 million that was allocated in the State Budget Act of 2021 for regional K–16 collaboratives. CEP aimed to create strong education-to-workforce pathways while addressing inequities in education and employment. The more mature collaboratives could pursue an implementation grant of up to $18.1 million, and regions

without mature collaboratives could pursue a planning grant of up to $250,000 and were given one year to prepare to pursue an implementation grant. The grant program tasked collaboratives with addressing at least two of four priorities set by the State to produce high-quality talent and create access to high-paying jobs. Collaboratives were also asked to address at least four of the seven recommendations in the "Recovery with Equity" report, which was issued by the Governor's Council for Career Education in February 2021. Collaboratives decided to build on their existing efforts, and CEP focused on expanding Student Academic Preparation and Educational Partnerships (SAPEP) programs such as the Early Academic Outreach Program. CEP also sought to expand transfer outreach, mathematics readiness, early credit recovery, mentorship, and UCSF's Raices healthcare program. With this funding, CEP has reached communities that it had not been able to serve in the past, like the Eastern Sierra. During Phase 1 of funding, UC Merced was invited to join mature collaboratives serving the Central SJV and Kern County. With no mature collaboratives serving the Northern SJV, UC Merced successfully pursued a planning grant to establish the WE Will! regional collaborative with CSU, the community colleges, K–12 districts, and industry. WE Will! focused on the priorities of health care and education in the Merced, Stanislaus, and San Joaquin Counties. CEP established the Office of K–20 Regional Alliances to oversee UCM's collaborative engagement and to serve as fiscal agent for WE Will!. As of February 2024, UCM has funded 31 projects with $9.9 million and engaged 66 partners in the Northern SJV alone. CEP has developed its own data systems to manage this operation and distribute resources, one of which has been recognized by the State as a best practice. The Eastern Sierra K–16 Collaborative has also contracted with UC Merced for dashboard access and technical assistance. Through its work with these collaboratives, the Merced campus aimed to improve access to and completion of A–G courses, completion of the Free Application for Federal Student Aid and California Dream Act Application, dual enrollment and early college credit, and work-based learning. Collaboratives helped bridge the gap between education and the workforce.

Chancellor Muñoz noted that UC Merced has never before extended its reach this far. He projected that the dividends of these efforts would emerge in the coming years.

Committee Chair Sarris asked if recruitment, retention, and graduation data from these regions were available. Ms. Largo responded in the negative. She did not yet have access to data from the Kern County and Central SJV collaboratives, and WE Will! and the Eastern Sierra collaboratives were still new. UC Merced was able to release subawards quickly because the campus had started planning prior to receiving implementation funding. CEP has partnered with school districts in order to upload their data into CEP's data systems, which helped school districts track truancy, dropouts, and A–G completion rates. CEP could assess students' academic readiness and postsecondary preparation and make recommendations to school districts. CEP also subscribed to the National Student Clearinghouse to track student matriculation and persistence.

Committee Chair Sarris underscored the importance of engaging parents in underserved communities, who might not be familiar with the education system or have language barriers.

Regent Salazar praised UC Merced for its outreach to communities that the University does not typically reach, and its potential effect on UC enrollment. He looked forward to future reports and data. Chancellor Muñoz praised Ms. Largo's leadership, through which UCM joined four collaboratives and was awarded major grants.

Committee Chair Sarris invited Student Observer Saens to make remarks.

Student Observer Saens (who uses they/them pronouns) began their remarks by calling for the expansion of the alumni network through the recruitment of underrepresented students. Many students of color, especially Black students, did not have the same experiences and support as their peers. According to the UC Student Association Racial Justice Now campaign, in 2022, 91 percent of Black UC students did not complete an honors program, 83 percent did not engage in research under faculty guidance, and 81 percent did not conduct independent research. Engaging in laboratory research under faculty guidance motivated Student Observer Saens to pursue graduate education. The University did not establish its first Black student resource center until 1979, and this delay in acknowledging the unique needs of Black students has contributed to the challenges that this population faced today. Student Observer Saens, a first-generation student, developed close friendships and found academic support at Hispanic student centers on campus. Meanwhile, Black student resource centers were severely underfunded. The expansion of the alumni network has not occurred without bias either. The international student population has grown from 4.7 percent of the total student population to 15 percent in 2022, but students from African countries made up zero percent of this demographic. UC must recruit and support Black students, reach out to donors to fund Black student recruitment, and expand UC's international student body. Student Observer Saens called on the Regents to help with retention efforts and support Black student resources, noting that these students' unique experiences and perspectives enriched the UC academic community and strengthened its network. Investing in the success of Black students and the expansion of the international student body was a matter of both equity and excellence.

5. **ACTIVATING ALUMNI ASSOCIATIONS FOR ADVOCACY**

[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.]

Interim Senior Vice President Turner stated that alumni represented one of largest constituencies at the University and were among UC's most dedicated volunteers and supporters, as well as some of UC's fiercest advocates. She introduced the speakers.

Regent Emeritus Keith Ellis, the immediate past Vice President of the Alumni Associations of the University of California (AAUC), explained that Alumni Regents were ex officio Regents given their role as officers of AAUC, a confederation of the ten campus alumni associations. AAUC had previously served as a forum for collaboration and best practices and was a source for regental rotation, but did not meet for nearly two years and lost staff support at the Office of the President (UCOP) during the COVID-19 pandemic. He and Regents Emeriti Raznick, Pouchot, and Timmons wished to revitalize AAUC and,

observing that alumni might not have the same love for UC that they had for their campuses, decided to select an "issue of the moment" for AAUC to address every year.

Regent Emeritus Joel Raznick, immediate past AAUC President, shared that Alumni Regents selected alumni advocacy after considering whether it was in sync with UCOP goals and objectives, whether there were key elements for its success, and whether it would have a long-term, positive impact on UC. Alumni were not a monolith but could find alignment through shared experiences and how much they valued education and UC. The Alumni Regents involved campus alumni associations and Regents Emeriti and worked closely with UCOP, which included the Office of State Governmental Relations (SGR), and the Office of Federal Governmental Relations (FGR). Broadening alumni engagement to include advocacy would be valuable to the University, and AAUC planned to make advocacy part of UC alumni culture. To do so, AAUC would need to create awareness, understand what alumni are passionate about, and communicate with the alumni associations. AAUC has also created an advocacy toolkit.

Regent Emeritus Ellis stated that, when developing the toolkit, AAUC explored what strengths could be harnessed from the different alumni associations. Alumni advocacy was not limited to government relations but could also include alumni relations when alumni engage with elected officials who were themselves UC alumni. AAUC partnered with the UC Advocacy Network (UCAN), SGR, and FGR and campus alumni associations partnered with campus government relations to receive State budget and legislative updates. In the last two years, alumni engagement through UCAN has doubled and has activated Chicano(a)/Latino(a) and Black alumni leadership. AAUC also sent letters to Sacramento and Washington, D.C., including one letter supporting the general obligation bond that was signed by all ten alumni association presidents. Alumni were now advocating on behalf of the University with a unified voice.

Regent Salazar, AAUC President, introduced the new AAUC officers. Regent Pack was serving as the new AAUC Vice President, Regent-designate Wang as the new Treasurer, and Regent-designate Komoto as the new Secretary.

Regent Pack shared several near-term aims. AAUC sought to improve campus-level support of UC advocacy and its ability to respond to legislative issues; expand its reach within the alumni and UC communities; develop metrics to better understand alumni advocacy; and improve alumni presence and visibility in Sacramento and Washington, D.C. He invited Regents to participate in a systemwide alumni career fair in Riverside in August and share the event with their professional networks. This year, employers would focus on careers that support health equity and climate resilience.

The meeting adjourned at 2:20 p.m.

Attest:

Secretary and Chief of Staff