MINUTES

BOARD OF REGENTS COMMITTEE ON RESEARCH AND INNOVATION MEETING

JUNE 3, 2021

Note: On January 30, 2020, the World Health Organization declared the outbreak of COVID-19 a public health emergency of international concern, subsequently declaring it a pandemic on March 11, 2020. On March 16, 2020, Governor David Y. Ige issued a supplementary proclamation that temporarily suspended Chapter 92, Hawaii Revised Statutes, relating to public meetings and records, "to the extent necessary to enable boards to conduct business in person or through remote technology without holding meetings open to the public."

I. CALL TO ORDER

Chair Eugene Bal called the meeting to order at 8:32 a.m. on Thursday, June 3, 2021. The meeting was conducted virtually with regents participating from various locations.

Committee members in attendance: Chair Eugene Bal; Vice-Chair Jan Sullivan; Regent Randy Moore; and Regent Michelle Tagorda.

Committee members excused: Regent Ernest Wilson.

Others in attendance: Board Chair Benjamin Kudo; Regent Alapaki Nahale-a; Regent Robert Westerman; (ex officio committee members); President David Lassner; Vice President (VP) for Legal Affairs/University General Counsel Carrie Okinaga; VP for Research and Innovation Vassilis Syrmos; VP for Information Technology/Chief Information Officer Garret Yoshimi; VP for Budget and Finance/Chief Financial Officer Kalbert Young; UH-Mānoa (UHM) Provost Michael Bruno; UH-Hilo Chancellor Bonnie Irwin; UH-West O'ahu Chancellor Maenette Benham; Executive Administrator and Secretary of the Board of Regents (Board Secretary) Kendra Oishi; and others as noted.

II. APPROVAL OF MINUTES

Board Chair Kudo arrived at 8:33 a.m.

Regent Moore moved to approve the minutes of the March 4, 2021, meeting, seconded by Regent Tagorda, and noting the excused absences of Regent Sullivan and Regent Wilson, the motion carried with all members present voting in the affirmative.

III. PUBLIC COMMENT PERIOD

Board Secretary Oishi announced that the Board Office did not receive any written testimony, and no individuals signed up to provide oral testimony.

IV. AGENDA ITEMS

A. University of Hawai‘i Research: *“UH’s Search for the Process of Building a Habitable Planet”* Presentation by Dr. Karen Meech, Acting Director and Astronomer, Institute for Astronomy (IfA), UHM

VP Syrmos introduced Dr. Karen Meech and provided her educational background highlighting numerous accomplishments and awards received during her career including the Regents' Medal for Excellence in Research. While Dr. Meech is one of the most renowned researchers and astronomers at the university, he noted that she also serves as the Acting Director for IfA and cited her exceptional performance as an administrator.

Dr. Meech delivered a presentation on astrobiology, a scientific field dedicated to the study of the formation of habitable worlds, the basis of which resides in an understanding of how life begins, how it evolves, and the conditions necessary to allow for its existence elsewhere within the universe. She stated that technological advances, as well as collaborative efforts between leading astronomy facilities across the globe, including IfA, have resulted in the expansion of this scientific field giving astronomers and other scientists the opportunity to obtain a glimpse of the potential processes used to build life-supporting planetary systems. To date, over 10,000 exoplanets have been discovered within more than 3,000 planetary systems with approximately 50 of those planets having the potential for life. It is anticipated that, by 2030, the next generation of telescopes, satellites, and arrays will give scientists the ability to not only view planetary formation in increasingly relevant scales but also allow for a better understanding of the chemistry behind this formation. The manner in which planets and solar systems are formed and the processes used for exploring habitable planet formation in our own solar system, the only known solar system where life exists, were reviewed with it being noted that understanding exactly how Earth was formed as a habitable planet allows scientists to gain a better grasp on how this process could work in other solar systems.

Vice-Chair Sullivan arrived at 8:40 a.m.

The university’s role in the study of planetary formation and the formation of our solar system through its School of Ocean and Earth Science and Technology and cosmochemistry program, in addition to IfA and university assets on Maunakea and Haleakalā was reviewed by Dr. Meech. She highlighted several astronomical and astrochemical findings made by university programs using these assets noting that many of these discoveries were the result of interdisciplinary science consultation and cooperation across the campuses of the university system. She also spoke about collaborative efforts being undertaken with space science exploration entities across the globe to conduct additional research on habitable planet formation through the use of spacecraft in conjunction with existing university assets. These efforts, in addition to the university’s location and access to invaluable astronomy assets, provide a tremendous opportunity for it to continue to be a world leader in space science.

Regent Moore thanked Dr. Meech for her fascinating presentation expressing his amazement at the miniscule amount of knowledge we possess collectively regarding our own solar system. Dr. Meech agreed that an incredible amount of exploration and discovery within the field of space science remains.

Referencing the role the Pan-STARRS1 telescope played in some of the scientific discoveries highlighted, Chair Bal asked about the importance of other instruments on Maunakea and Haleakalā with regard to space exploration research. Dr. Meech replied that astronomy assets located on Haleakalā and Maunakea are making ground-breaking and important discoveries in space science and exploration. She highlighted the critical role played by all of the telescopes located at both sites in observing and tracking an extremely large and mysterious interstellar object first discovered by Pan-STARRS1 and named ʻOumuamua, which came into very close proximity of the Earth. Although collaboration was occurring between every large telescope on the planet to provide scientific analysis of ʻOumuamua, the facilities in Hawaiʻi, particularly those atop Maunakea, performed the lion's share of the work. As for ongoing scientific research in the area of astrobiology, the university is heavily utilizing the Gemini North Telescope and Canada–France–Hawaii Telescope on Maunakea. However, all of the facilities play a role in the scientific research of space.

B. University of Hawaiʻi Innovation: *Overview of the UH Office of Innovation and Commercialization* Presentation by Steven Auerbach, Interim Director, Office of Innovation and Commercialization (OIC), University of Hawaiʻi

VP Syrmos introduced Mr. Steven Auerbach, Interim Director for OIC, citing his educational background and work experience and highlighting his extensive knowledge of the realm of innovation and commercialization, much of which was obtained during his employment with Hewlett-Packard (HP). It was noted that during the short time Mr. Auerbach has been with OIC, he has instituted a number of new processes and initiatives aimed at improving innovation commercialization at the university.

Mr. Auerbach provided information on his personal and professional life, explaining that, although his interest in technology began as a student at the university, he left Hawaiʻi after graduation to pursue career opportunities that were unavailable locally. He reviewed his career at HP stating that the most meaningful and impactful role he held at the company was that of leading a unit responsible for driving innovation and entrepreneurship to develop new services and products. After over two-decades of service at HP, he decided to return home and pursue his interest in developing commercial innovation and entrepreneurship into an emerging sector that could increase the economic diversification of Hawaiʻi.

Mr. Auerbach stated that the mission of OIC is to bridge connections and build partnerships between the university, the community, and the world; strategically advance discoveries; and inspire innovators and entrepreneurs to create new opportunities for Hawaiʻi. He reviewed the organizational structure of OIC stating that it is comprised of three key entities including the Office of Technology Transfer, which translates research into commercial opportunities; University of Hawaiʻi Ventures, which facilitates the commercialization of technology and innovation developed across all 10 campuses of the university system; and the newly established Office of Indigenous Innovation, which will drive commercialization and entrepreneurship centered on indigenous innovation and societal impacts. He also provided a glimpse of the day-to-day operations of OIC, which have evolved from being primarily transactional in nature to operations that strive to increase programming geared toward building agency and

industry partnerships, and underscored that the university is the key to developing and nurturing new economic sectors in Hawai‘i through these partnerships.

At 9:12 a.m. Regent Moore stepped out to address a personal matter and participated intermittently on Agenda Item B. However, quorum of the committee was maintained throughout this period.

A three-point plan that will be used to grow and scale the operations of OIC was presented by Mr. Auerbach. The approaches contained within the plan include the launching of a new innovation and commercialization strategy geared toward operationalizing a comprehensive platform to bolster the pipeline of high-growth and deep technology ventures; leveraging the university's partnerships and accessibility to government agencies and private industry to establish and build upon collaborative partnerships to develop dual-use ventures; and prioritization of targeted outreach to support innovation and entrepreneurship for faculty researchers and research units with less than five years of experience in this area. He reviewed the details of each of these strategies, provided examples of how each can be successful in improving the university's commercialization and entrepreneurship efforts; and drew attention to two assets recently obtained by the university that will help to drive dual-use ventures. An idea to implement a program to reward researchers and incentivize research patent filing by including the publishing of patents, generation of royalties through licensing of patents, or initiation of start-ups as acceptable metrics for tenure and promotion was also discussed as a means of increasing innovation and commercialization at the university.

Data and statistics on innovation, commercialization, and entrepreneurship, including innovation and entrepreneurship targets versus actuals for fiscal year 2021, as well as the impacts of these activities on the university were provided by Mr. Auerbach. He opined that, while some success has been achieved, a tremendous amount of untapped opportunities in technological research and entrepreneurship remain and OIC is committed to improving outcomes in this area for the university.

Regent Nahale-a asked whether there are unique aspects about Hawai‘i that provide it with a competitive advantage when considering the establishment of entrepreneurial opportunities locally. Mr. Auerbach replied that Hawai‘i has a respect for the culture, values, and history of its indigenous population which can help to drive indigenous innovation; that the large military presence in the State also lends well to the leveraging of military funding for assets to help drive innovation through dual-use and other technological ventures; and that, from a technology standpoint, Hawai‘i has the wherewithal and potential for developing things like artificial intelligence, machine learning, and cyber operations. Regent Nahale-a agreed that opportunities exist in Hawai‘i but noted his belief that the setting-aside of some longstanding conflicts and development of a spirit of cooperation and collaboration will be required to seize these opportunities.

Regent Westerman arrived at 9:23 a.m.

Vice-Chair Sullivan stated that the COVID-19 pandemic has resulted in a clamoring for the increased diversification of Hawai'i's economy. However, over the past 12 to 18 months, actions taken by the State do not appear to address this issue. Additionally, reductions to the university's budget made by the Legislature seems to indicate a lack of appreciation and support for the development of the innovation and technology sector in Hawai'i. She asked about actions that could be taken to gain broader community support for the development of the technology sector. Mr. Auerbach replied that educating lawmakers and the general public to better understand the ripple effect research innovation conducted by the university has throughout the economy, as well as how this can translate into potential commercial opportunities, is one key to improving support for the development of a technology sector. In addition, local, private industry needs to improve its development of an innovation and entrepreneurship culture so that more companies performing meaningful and significant innovation can be established in Hawai'i.

C. Fiscal Year (FY) 2020 – 2021 3rd Quarter Extramural Awards Update

1. Extramural Awards Analysis Report

2. Research and Innovation Metrics Summary

3. Monthly Report of Extramural Awards (as of April 30, 2021)

VP Syrmos reported on the receipt of extramural awards for the third quarter of FY 2021; provided a breakdown of trends, significant awards, and award amounts by campus; and summarized data pertaining to various research and innovation metrics. He noted that the university received $60.7 million in extramural awards during the third quarter, which was 8.9 percent higher than the same period in FY 2020. Overall, the university has received $440 million in extramural awards to date and anticipates reaching nearly $500 million by the end of the fiscal year. VP Syrmos also provided information on approximately $54 million in competitively-awarded COVID-19 related extramural awards received by the university.

While the university continues to do well in obtaining extramural funding, the growth of its successes is flattening. VP Syrmos stated that it was imperative that a hiring freeze implemented as a result of the COVID-19 pandemic be lifted and the investment in personnel be prioritized so that the university does not begin to experience a decline in research enterprise funding which will begin to occur next fiscal year if no action is taken.

Referencing an extramural award of $210 million recently received by the university from the National Oceanic and Atmospheric Administration (NOAA), Chair Bal asked if this money was accounted for in the extramural funding report and whether these funds would be distributed over a specified period of time. VP Syrmos clarified that the university was chosen as the site for a new Cooperative Institute for Marine and Atmospheric Research to conduct the work of the Joint Institute for Marine and Atmospheric Research currently operated under a joint agreement with NOAA. As a result, the university is eligible to receive up to $210 million in awarded research funding

throughout the course of five years, with the potential for renewal for another five years based on successful performance. These funds were not included in the extramural awards report.

D. Cancer Center Update

VP Syrmos provided an update on the University of Hawai‘i Cancer Center’s early phase clinical research center business plan. After discussions with President Lassner, a five-member committee has been established to review the business plan and validate some of the assumptions made by the plan with the university’s external partners.

E. Committee Annual Review

Chair Bal referenced the committee annual review matrix provided in the materials packet and asked for comments from committee members. Hearing none, he stated that VP Syrmos requested an opportunity to make a statement.

VP Syrmos offered his thanks to Vice-Chair Sullivan for her service and commitment; outstanding work as both a member of the board and as a leader in the technology sector; vision with a purpose; leadership with meaning; loyalty; professionalism; intelligence; insightfulness; candor; and establishment of a high bar of excellence for the university. He also praised the work of Regent Tagorda, as well as her commitment and dedication to the university and the community.

V. ADJOURNMENT

There being no further business, Vice-Chair Sullivan moved to adjourn, seconded by Regent Tagorda, and noting the excused absence of Regent Wilson, and with all members present voting in the affirmative, the meeting was adjourned at 9:43 a.m.

Respectfully Submitted,

/S/

Kendra T. Oishi
Executive Administrator and Secretary
of the Board of Regents