

The Regents of the University of California

SPECIAL COMMITTEE ON INNOVATION TRANSFER AND ENTREPRENEURSHIP

October 21, 2021

The Special Committee on Innovation Transfer and Entrepreneurship met on the above date by teleconference meeting conducted in accordance with California Government Code §§ 11133.

Members present: Regents Leib, Park, Reilly, and Sherman; Chancellors Christ, Khosla, and Munoz; Advisory members Green, Kahn, Taylor, Walker, and Wallace

In attendance: Regent-designate Timmons, Faculty Representative Horwitz, Secretary and Chief of Staff Shaw, General Counsel Robinson, Chief Investment Officer Bachher, Executive Vice President Bustamante, Executive Vice President and Chief Financial Officer Brostrom, Vice President Maldonado, and Recording Secretary Lyall

The meeting convened at 10:05 a.m. with Committee Chair Leib presiding.

Chair Leib announced the Board Chair's appointment of Regent Hernandez to the Special Committee due to the resignation of Regent Butler.

Chair Leib acknowledged the passing of Regent Emeritus Mendelson, who was a Cal alumnus and served as an alumni Regent from 2011 to 2013. He commented on the guidance that Regent Emeritus Mendelson provided to him personally, especially with regards to intellectual property policy.

1. PUBLIC COMMENT

There were no speakers wishing to address the Committee.

2. APPROVAL OF MINUTES OF PREVIOUS MEETING

The meeting minutes were not approved due to lack of a quorum.

**3. INNOVATION TRANSFER AND ENTREPRENEURSHIP TRANSFORMATION:
PROJECT GOVERNANCE AND PLANNING UPDATE**

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

Vice President Maldonado began the discussion by remarking that the effort to improve the knowledge transfer and research and innovation services offered by the UC Office of the President is an opportunity to transform innovation and entrepreneurship across the University. While recognizing that a culture shift is needed, she described the organizational structure adopted by the Research and Innovation Department in order to

coordinate the successful implementation of the recommendations of the Working Group on Innovation Transfer and Entrepreneurship Report (Working Group).

The Research and Innovation Department was created to assist the campuses, faculty, alumni and other constituents in the development of knowledge and other forms of innovation that were previously located in campus incubators. In the 1980's, the campuses did not have the function to effectively translate this work to industry, start-up companies and/or public use, therefore this effort was delegated to the Research and Innovation Department. The department has reviewed their principles, policies and workflows and is reevaluating 20 workflows for efficiency.

Ms. Maldonado introduced the new Executive Director for Innovation Transfer and Entrepreneurship, Bruce Hunter. She explained that Mr. Hunter is undertaking a comprehensive assessment of the innovation and knowledge transfer process.

Ms. Maldonado presented a chart showing an overview of the proposed governance structure for innovation and entrepreneurship transformation. The Special Committee provides oversight of the successful implementation of the Working Group proposals and reviews and approves the deliverables; the Innovation and Entrepreneurship Transformation Executive Committee (EC), comprising Office of the President leadership and the Academic Senate chair provides executive support and steering, makes recommendations to present to Special Committee; and Ms. Maldonado and Mr. Hunter, who provide leadership of the project.

Core teams have been created, including subject matter experts, consulting groups and strategic advisors, to implement the 13 recommendations of the Working Group. These recommendations have been divided into four work streams that each have an executive sponsor – the business process, policies and systems led by Provost Brown; legal and compliance led by Senior Vice President Bustamante and General Counsel Robinson; funding augmentation led by Executive Vice President Brostrom and Chief Investment Officer Bachher; and academic personnel guidelines led by Provost Brown and Academic Senate Chair Horwitz. Each work stream will specify key deliverables, identify risks, and analyze alignment with each other. Ms. Maldonado remarked that some of the recommendations involve coordination among multiple work streams. These interdependencies are being discussed as well as the estimated time of milestone completion and resource allocation.

To assist with this process, five consulting firms have been interviewed and the procurement process has begun to engage one of the firms. Further work will be done to determine how current policies and guidelines may affect the implementation of the recommendations. Timelines for implementation of the recommendations have been drafted but final dates have yet to be determined.

Chair Leib underscored the enormity of the implementation project. He applauded Ms. Maldonado for the work to date, especially due to its complexity, but cautioned about creating additional bureaucracy within the review process.

Advisory member Taylor remarked that there did not appear to be substantial campus involvement or representation on the various work stream groups, noting that campus leadership should be engaged in the process. Ms. Maldonado replied that the technology transfer officers and the innovation and entrepreneurship directors at the campuses are involved in the process, as well as Academic Senate faculty.

Regent Park emphasized the importance of the word “transformation” in the recommendations, particularly how the culture will be transformed.

Chancellor Khosla remarked that the framework seems exhaustive and questioned how it differs from the recommendations of the Working Group. Ms. Maldonado responded that a review of the recommendations led to the identification of additional issues to be addressed.

Chancellor Khosla commented that the Working Group recommendations focused on simplicity and the reduction of bureaucracy. He observed that the governance chart Ms. Maldonado presented seemed to be a complex structure. Ms. Maldonado provided assurances that the overall goal is to create a simplified process despite the complexities of roles and responsibilities presented.

Regent Sherman asked about the completion timeline for each step of the implementation. Ms. Maldonado responded that her team is diligently working on a timeline and hope to send specific timeframes to the Special Committee in the next month.

4. THE UC INVESTMENTS WAY – THE TEN PILLARS CULTURE

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

Chief Investment Officer Bachher thanked Regent Emeritus Wachter and Regent Sherman for their partnership in helping to create the successful results and strategy of UC Investments over the last seven years.

The challenge for UC Investments was to create simplified goals to improve the performance of the endowment and to establish relationships with the campuses. He described his journey of creating a funding mechanism for innovation and entrepreneurship at the University which, in turn, helped him to simplify a way of collaborating with the campuses.

With the goal of improving the endowment performance, the UC Investments team brainstormed and created the ten guiding investment pillars. No committees, organizational structures, or hierarchical approaches were created as the thought was that a more structured process would not allow the team to think outside of the box. Not having these structures also allowed for a tremendous degree of freedom rather than stifling the process.

The ten pillars are 1. Less is More; 2. Risk Rules; 3. Concentrate; 4. Creativity Pays; 5. Build Knowledge; 6. Team Up; 7. What Makes UC, UC; 8. Perfect Alignment; 9. Human Meets Machine; and 10. Centennial Performance. He emphasized the importance of these ten ideas visible to all as a constant reminder, embedded in the fabric of the organization.

Less is more became the goal within UC Investments. Mr. Bachher shared that when he first joined the University in 2014, about 60 external managers handled the University's assets in the stock market, consisting of about 55 of the 170 billion dollars that UC Investments managed. When Mr. Bachher and the UC Investments team reviewed the performance of the portfolio they realized that it was no better than index returns, yet they were paying fees to each of these managers. Mr. Bachher asked where he wanted UC Investments to be ten years hence. There are currently 15 managers investing over one hundred billion dollars of the 170 billion in passive indexes, paying one basis point, reducing the cost structure of the organization and saving a few billion dollars in fees. The 15 managers now have a better understanding of their portfolios and derive better results as they have more time to analyze decisions.

By utilizing technology and managing portfolios on the Cloud, the team created a simple way to manage costs. Currently 48 people in UC Investments manage 170 billion dollars; the industry standard is \$1.1 billion per investor, but UC manages \$6.7 billion per investment professional. Less is more is not only about the portfolio but about the people.

Mr. Bachher reviewed the second pillar, "risk rules." Mr. Bachher wanted to create a culture where the team thinks about themselves as risk managers, not asset managers, and the investments, operations, and risk aspects of organizations carry an equal voice. If an organization does not have an operating infrastructure that is dependable and transparent, UC will forego the deal despite being a great investment with a high-return.

Mr. Bachher remarked briefly on the other pillars, citing UC Investments' path breaking focus on environmental, social, and governance factors in guiding investments as an example of how the pillars are effective.

A key lesson from the transformation of UC Investments' culture is that the biggest changes must be translated into day-to-day business. The UC Investments team makes decisions with a ten year life cycle in mind. The Regents set asset allocations, while giving the Investments office the flexibility to implement them. The ten pillars are a compass to drive decision making and performance, mindful of risk and return.

Advisory member Kahn remarked that the commonality between Mr. Bachher and Ms. Maldonado's presentations is process, culture, and most importantly the end metric performance. One could have a well-thought out process but if the results are not positive, then none of it matters.

Special Committee members emphasized focusing on results, not process, and a sense of urgency, focusing on the future, not evaluating the existing state. Regent Sherman emphasized the need for a clear timeline and accountability in the process.

Regent Park underscored the amount of autonomy that the investments office has within the UC system and noted the importance of the team's relationship with the Regents. She asked how important this autonomy is in conjunction with success and culture. Mr. Bachher explained that investments markets are rapidly changing and do not allow for hesitation surrounding decisions. This does not mean the team circumvents the rules--they are driven by investment policy statements and remain in compliance with those checks and balances. However, an entrepreneurial and innovative culture allows people the freedom to make mistakes with controlled guardrails.

Regent Park asked for clarification of pillar #9, "human meets machine," and questioned if this means having modern tools to support the work. She discussed the concerns surrounding the outdated nature of the Patent Tracking System (PTS) and noted the importance of leveraging knowledge within the UC system to modernize and develop PTS to its full capability. Mr. Bachher replied that this pillar describes how technology has been an important competitive advantage allowing for more operational efficiency.

Advisory member Wallace questioned if the investments office was able to evaluate impact in the performance metrics, beyond simply earnings, specifically when looking at climate change. Mr. Bachher explained that UC Investments takes a long-term approach and that metrics cannot be determined from a short-term perspective; they must be performance and impact based. This approach goes beyond climate change. It is embedded in all aspects of UC Investments, including the diversity of the team. Urgency and patience are of equal importance in the metrics.

Regent Leib commented on the great value of this presentation and noted that the culture established in the UC Investments division can translate to the Research and Innovation Office.

Regent Reilly asked what advice Mr. Bachher would give to transform the innovation transfer and entrepreneurship culture. Mr. Bachher encouraged the Special Committee to disregard the existing process and instead focus on where the process should be in ten years. He also encouraged the team to take advantage of Cloud-based technology solutions to manage patents intellectual property. He encouraged review of policies, aiming to decentralize as much as possible and to delegate authority to the campuses, chancellors, and the technology transfer offices where the research occurs.

5. REALIGNMENT OF LEGAL AND POLICY COMPLIANCE FOR EQUITY AND LICENSING CONTRACTS

[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.]

General Counsel Robinson explained that UC Legal has been reviewing legal and policy compliance efforts regarding innovation transfer and intellectual property with the campuses. He noted that controls are important but are properly and responsibly placed at

the campus level.

Deputy General Counsel Darnele Wright provided a high-level overview of the recommendations regarding localized control of legal review and policy compliance and UC Legal's proposed approach. UC Legal recommended that it serve as a resource to the Regents, campuses, and technology transfer offices rather than as a control agent. The chancellors would be given responsibility for policy compliance as well as the choice of whether to select UC Legal, campus counsel, or outside counsel to handle their innovation transfer legal affairs. She reported that UC Legal is currently engaged in discussions with various stakeholders about how to implement the process.

Business decisions are made at the campus level and equity policy exceptions are coordinated with innovation transfer and entrepreneurship offices. The role of the legal team was defined as a review of intellectual property provisions in order to ensure compliance with University policies, legal integrity, consistency within agreements, and consistency across the system for the projects. Lawyers assist with negotiations, review license agreements, and request changes to University templates.

In regards to equity intake, Ms. Wright underscored the legal team's responsibility to review equity provisions in license agreements, incubator/accelerator agreements, inter-institutional agreements, collaboration agreements, and stock issuance agreements for consistency with policy and forms, coordinate policy exceptions, provide assistance with negotiations, equity calculations, and market standard terms, and review index milestone/phantom equity provisions.

Once the equity is received, the lawyers would advise on equity management after intake until a liquidity event. The legal team would provide corporate governance and operational guidance as well as provide training to the campuses.

The Regents Working Group recommended vesting the chancellors with responsibility for policy compliance. Since each campus varies in need, chancellors would have the option of choosing if UC Legal campus counsel, UC Legal Office of the President (UCOP) attorneys, or outside counsel. UC Legal at UCOP will remain a resource.

UC Legal's proposed approach involves three phases. Phase one is to prepare a report describing current technology transfer policies requiring legal review, compliance practices, options for transferring authority for legal review to campuses, and recommendations for policy changes. Phase two is to develop a compendium of legal resources for campus use. Phase three would involve implementation of recommendations through amendments to existing policies and/or development of new policies. Phase one and two are currently in progress and phase three would be undertaken by the policy owners.

Ms. Wright briefly reviewed UC Legal's proposed deliverables which included a policy summary report, recommended policy updates, a compendium of legal resources available to campuses (i.e. legal forms, legal trainings, outside counsel directory, best practices guidelines, and equity roundtable meetings to promote cross-campus knowledge sharing).

She provided an overview of UC Legal's progress to date.

Regent Leib asked about the campuses' response to UC Legal's survey and inquired how to ensure that all stakeholders' views are heard. Ms. Wright commented that the campus technology transfer directors revealed that the campuses need legal support while also requesting autonomy in technology transfer operations. As a result of the survey, she is focusing on the appropriate guardrails in the process, such as thresholds for legal review and the circumstances that should elicit legal review.

Regent Leib requested that Chancellor Christ share her campus' experience, as UC Berkeley has a strong technology transfer program. Chancellor Christ noted that it is important to focus not just on policies but on transactional time and complications. She explained that often faculty receive contradictory advice in an untimely manner. Regent Leib encouraged UC Legal to have a point person that campuses can directly access with questions. Concern regarding timely responses was also brought up in discussions with the Working Group. Chancellor Christ suggested that the contact not be solely with the technology transfer offices, but that UC Legal should engage in discussion with a representative set of faculty members that are very active in technology transfer discoveries.

Regent Park discussed the interrelation between the various recommendations and questioned if an audit schedule will be envisioned after the realignment to better understand if trainings have been effective or if other items need to be altered. Ms. Wright replied that the Working Group's recommendation 12, to probe the strengths and weaknesses of UC's existing efforts to protect its intellectual property right, will capture any process improvements. General Counsel Robinson replied that transaction reporting by the campuses would be implemented to provide a mechanism to gauge the effectiveness of trainings and identify any issues. He remarked that UC Legal is mindful of not making the process too bureaucratic. Regent Park requested that Vice President Maldonado keep the Regents informed of the process.

Regent Park asked for clarification regarding the relationship between the realignment of equity management and the realignment of legal and policy compliance. Senior Counsel Nima Katz explained that regardless of which office is managing the equity, there will likely be an attorney involved to assist with legal documents. Mr. Robinson noted that campus technology transfer staff are likely to continue to request legal assistance from Ms. Katz and the other staff of UC Legal in Oakland due to the complexities surrounding the management of equity.

Regent Leib noted that UC Merced and other campuses that do not have a robust legal team expressed concern about the Working Group's recommendations related to decentralization and transitioning responsibility to the campuses. Chancellor Muñoz commented that UC Merced appreciates the assistance of UC Legal in Oakland as well as Ms. Maldonado's office.

Advisory member Wallace urged that clear and consistent standard deal terms be applied across campuses in order to make it simple for investors and attract capital. Mr. Robinson underscored that one of the deliverables of his office will be to create templates, standard forms and standard deal terms for the campuses to use to produce some uniformity across the system. Use of these templates will be voluntarily.

Chancellor Khosla commended Mr. Robinson on his efforts and significant progress on reducing bureaucracy within the UC system. However, he urged UC Legal to talk directly to the chancellors in addition to campus staff. Mr. Robinson acknowledged UC Legal's responsibility to the chancellors as the University navigates through these issues.

Regent Park remarked that framing and communication in this process is necessary for successful implementation. Information needs to be communicated to reduce fear of culture change and communicate an opportunity for positive transformation.

Regent Leib praised the work and effort of UC Legal and Mr. Robinson in development of a working plan and timeline, in spite of the many complexities.

6. SPEAKER SERIES: UC INNOVATION – FROM LABORATORY TO MARKETPLACE

[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.]

Regent Leib remarked that the speaker series will be an item at each Special Committee meeting to allow the members to hear from an entrepreneurial student, faculty member, or researcher within the UC system. He explained that these presentations will assist the Special Committee in the creation of an environment that promotes innovation and entrepreneurship as well as identify any challenges associated with the current innovation and entrepreneurship ecosystem/process.

He introduced Gene Yeo, one of UC San Diego's most prolific inventors and founder of multiple start-up companies. Professor Yeo is a professor of cellular and molecular medicine at UCSD, a founding member of the Institute for Genomic Medicine, and a member of the UCSD Stem Cell Program and Moores Cancer Center. Chancellor Khosla praised Professor Yeo's as a multinational, multilingual researcher and entrepreneur who is on the cutting edge of science and technology.

Professor Yeo presented a high-level overview of his work, the process of creating companies, and thought behind diversity training. His lab focuses on studying how RNA binding proteins control gene expression. His over 40-person multi-disciplinary lab has developed technologies enabling the characterization of the largest number of human RNA binding proteins (RBPs) to date, identified RBPs as drug targets, and has developed engineered RBPs.

He described the five or six companies established that build on themes of his work. Eclipse

Bioinnovations, which offers next generation sequencing technologies to simplify RNA research, is based on tools developed in Professor Yeo's laboratory at UCSD. The National Institutes of Health (NIH) provided funding in the form of small business grants and the company recently raised funding of approximately \$20 million. Eclipse has been on the leading edge of enabling RNA medicine, and they have approximately 300 clients which include biotech and pharmaceutical companies in RNA, cancer, and neurospace.

Professor Yeo described the process of creating another company, Locana. This was the first company that received funding for RNA target gene therapeutics. Professor Yeo and his lab repurposed CRISPR to target RNA instead of DNA. At the time, there was some concern among investors with funding RNA targeting since DNA targeting was so successful. He met with over 100 investors to raise the initial seed funding and then Series A funding of \$55 million. This company started with Professor Yeo, a graduate student, and others within the UC system, and is intending to bring medicines to the clinic that target rare diseases like Huntington's disease, myotonic dystrophy, and Alzheimer's disease. He described the importance of keeping it as a San Diego based company as part of the ecosystem in the area.

Most recently, Professor Yeo co-founded Trotana Therapeutics with his postdoctoral student, Sebastian Markmiller. This company corrects dysfunctional RNA by combining RNA-binding proteins with the durable effect of a one-time gene therapy to address underlying RNA defects in patients suffering from rare neuromuscular, neurodegenerative and retinal diseases.

In each of these companies, Professor Yeo played a substantial role in recruitment of the venture partner and senior executive leadership team. He explained that he also sits on the boards of many of these companies.

Professor Yeo described the lessons he has learned as an entrepreneur, inventor, and researcher within the University system, specifically in the creation of companies. He noted that at all levels, the companies incorporate justice, equity, diversity, and inclusive (JEDI) principles and culture. He highlighted the importance of diversity in the recruitment process. For example, at a recent virtual event, over 300 biomedical researchers came together to discuss fostering diversity, equity, and inclusion in neuroscience.

Professor Yeo also established a trainee-led lecture series called the Diversity and Science Lecture series, which arose from the need for students to discuss scientific research and diversity challenges. This lecture series recently received funding from the Chan Zuckerberg Initiative to expand the concept and start a pilot program across five other universities.

He remarked on the different innovation ecosystems around the globe, specifically commenting on Israel and Singapore. When creating a start-up at a university in Singapore, the laboratory carves out space for IP by literally using masking tape to divide the laboratory from the start-up. At UC, start-ups have always had to set-up a separate space off-site which requires a significant amount of effort, funding, and rebuilding of

infrastructure.

Professor Yeo underscored the importance of educating undergraduate and graduate students about entrepreneurship. He remarked that students are now doing this themselves through a student-led organization that is currently raising substantial funding.

He stated that there needs to be an alignment of interest and commitment between the University and inventors rather than a conflict mentality. He encouraged technology transfer offices on campuses to hire development staff to partner with students and faculty in building startup companies. He opined that faculty should be allowed to pursue ventures as part of University service and have this reflected in academic performance indicators, including encouragement of mentoring. Graduate students should be allowed time to pursue entrepreneurial activities; these endeavors could be funded externally and would further deepen ties with surrounding communities. He further recommended establishment of a working group of entrepreneurial faculty to develop UC-based incubators/accelerators and fellows programs for every campus department.

Advisory member Taylor asked Professor Yeo to discuss teaching entrepreneurship to undergraduate and graduate students in more detail. Several of the campuses do not have business schools so he questioned how to empower students to be entrepreneurial. Professor Yeo suggested developing an education system where students are embedded into existing entrepreneurial networks. In addition, part of the curriculum could be to connect students with start-up companies rather than just have them learn in a classroom or from a textbook. This would allow students to learn first-hand, generate the knowledge, and disseminate it to their peers and campus.

Advisory member Green inquired how the connection between an outside entrepreneur and a faculty member or researcher on campus is established. Professor Yeo described this as a combination of luck and preparedness. Because of Professor Yeo's success in establishing companies and credible ventures, investors contact him directly. He, in turn, directs the entrepreneurs to the Office of Technology Transfer. He advised building a network using graduate students and alumni.

Regent Sherman asked if Professor Yeo considered collaborating with the UC Investments Office, noting the paucity of UC-related investors in Professor Yeo's companies. Professor Yeo responded that the Office of Technology Transfer recommended he utilize Osage University Partners for venture capital in funding his companies. He noted that the venture partner is important in terms of setting the culture of the company.

Regent Sherman inquired if having a fundraiser, either on campus or in a systemwide capacity, would be helpful in the process. Professor Yeo responded that a fundraiser or guide to assist in the process would be highly valuable, noting the immense time and energy he has spent meeting with investors and learning about the venture capital industry.

Regent Leib remarked that creating a mentoring and fundraising process is an important focus for the Special Committee. The President's Innovation Council would be a good

resource to assist in this endeavor.

Faculty Representative Horwitz remarked that entrepreneurship education at UCSD is located at UC Extension, with the creation of incubators and accelerators. Professor Yeo agreed and noted the benefit of providing training opportunities at venture firms to interested students and postdoctoral students, establishing a network.

Regent Leib asked Professor Yeo to indicate what he believes would improve the innovation and entrepreneurship process within the University. Professor Yeo responded that the licensing process with companies that he has founded has been challenging because of perceived conflicts of interest, despite the fact that he has raised the funding. His laboratory has not received a sponsored research agreement with any of the companies that he founded as it is often easier to give the agreements to faculty at other universities. Chancellor Khosla explained that the National Science Foundation or National Institutes of Health perceives it as a conflict to issue a faculty's company a sponsored research contract to the same faculty's laboratory. There might be inappropriate influence in the structure of research or a research program to create companies, using taxpayer dollars and assets for a personal gain rather than for educational advancements. Regent Leib reported that the Special Committee is reviewing the University's conflict of interest policies. General Counsel Robinson stated that there are structures that could be implemented to strike a fair balance.

7. UPDATE ON INNOVATION AND ENTREPRENEURSHIP FUNDING STRATEGIES

[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.]

Executive Vice President Brostrom provided updates on the Regents Working Group's recommendation #6, budget augmentations for select campuses to develop the infrastructure needed to develop and grow innovation transfer programs. These funds will be in the 2022-23 UC budget proposal and allocated to UC Merced, UC Riverside, and UC Santa Cruz.

Regarding the Working Group's recommendation #5, the establishment of a proof of concept fund, Mr. Brostrom indicated that a proof of concept fund, pre-seed fund, and seed funding are all needed to make this successful. The Chief Financial Officer's staff will be meeting with each campus' vice chancellors of research and planning and budget to gauge current levels of proof of concept funds and determine the need for additional funding. The funding source has not yet been determined but will likely be a combination of discretionary local funds and systemwide reserves, and be implemented in the next fiscal year.

Regent Leib asked if the chancellors have been involved in the discussions regarding funding. Chancellor Khosla noted that different campuses are at varying stages of maturity. Creating a tax for all campuses and then redistributing it, may penalize the less established

entrepreneurial campuses. He recommended that every campus be mandated to allocate a specific fund to invest in entrepreneurial activity. The Office of the President can then reserve additional funds to assist the campuses that are in the early entrepreneurial stages. Mr. Brostrom indicated that systemwide reserves would be better utilized for budget augmentation rather than a uniform campus tax.

Regent Park asked when the augmentations for UC Merced, UC Riverside, and UC Santa Cruz will be approved. Mr. Brostrom replied that this augmentation will be in the Office of the President budget which will be approved by the Regents in May 2022; however, a preview of the budget will be presented to the Board in November 2021.

Regent Park requested clarification regarding the two funding discussions – augmentation of funding allocated to three campuses and the proof of concept fund. Chancellor Khosla explained that the proposal is for a tax to be placed on seven of the campuses to build up the infrastructure of UC Merced, UC Riverside, and UC Santa Cruz. The second item, the proof of concept fund, is to assist in the funding of start-up companies by taxing the ten campuses differentially depending on maturity.

Regent Leib suggested that a matching fund would be beneficial, allowing the campuses to support the proof of concept funds with additional support provided by the UC Office of the President (UCOP).

Regent Park discussed incentivizing campuses with matching funds from UCOP but questioned utilizing outside philanthropic funds to support this effort and asked who would be responsible for this. Mr. Brostrom replied that it is always best to have fundraising done at the campus level. Different proof of concept funds will likely be different on campuses where there is first-hand knowledge of subject matter rather than at UCOP.

8. OVERVIEW OF ROYALTY AUDIT PROGRAM

[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.]

Senior Vice President and Chief Compliance and Audit Officer Bustamante provided an overview of the UC royalty audit program, its historical results, and the potential future state of the program.

The audit process begins once an agreement with a business, entrepreneur, or start-up is developed and royalties have been generated, providing a mechanism for the University to determine if the licensees are underpaying royalties. Currently this is a decentralized process allowing the campuses to select candidates for a royalty audit; no systemwide process is established to identify audit candidates. Eight campuses are currently utilizing the royalty audit program; UC Merced and UC Santa Cruz have not yet implemented use of this program. The role of the Office of Ethics, Compliance, and Audit Services (ECAS) at the Office of the President is to facilitate the audit by engaging an outside vendor and connecting the campuses directly with the auditor. ECAS has limited visibility into the

underlying data or licenses.

Mr. Bustamante presented a chart identifying the number of royalty audits completed each year in comparison to the number of active licenses within the UC system. There has been a significant return on investment with only a small percentage of audits. In 2019-20, the University had 2,260 inventions but only six royalty audits were completed, which produced \$108,909,040 in royalties and fees.

From 2009 to 2021, underpayment of over six million dollars was identified, a recovered underpayment of two and half million dollars at a net audit cost to the University of under six hundred thousand dollars. Once a violation is identified, the recovery process is handled by UC Legal and the campuses.

Mr. Bustamante outlined several ways in which the current process can be improved. A risk assessment process can be established to identify audits that will be most likely to yield underpayments and recovery of royalty revenues.

Retention of appropriate expertise and possible outside advisors are needed to develop risk assessment and target processes, document current data elements, and identify risk indicators. The creation of a unit is needed to provide systemwide monitoring of licenses and identify the best candidates for auditing, and resources will be required to develop a beta process with the campuses while the new Patent Tracking System (PTS) is being built. It will be important to have a mechanism allowing feedback to improve the licensee process, future risk assessment, and audit process.

Advisory member Taylor called attention to the high amount of identified underpayment in comparison to the low number of audits completed. Mr. Bustamante remarked that there is a multiplier of the cost with the audit costing between five thousand and thirty thousand dollars.

Advisory member Taylor agreed that a centralized team to investigate audits and manage the process would likely produce substantial results of identified and recovered underpayments.

Advisory member Kahn suggested that it is clear the limited number of audits creates a significant amount of risk to the University, which needs to be mitigated. Mr. Bustamante replied that the lack of audits creates a situation allowing for a more aggressive interpretation of negotiation terms with the University, especially if there are complex contract terms.

Advisory member Green asked how the audits are structured in relation to importance of worth, noting that likely five percent of the patents at the University carry 95 percent of the value in the portfolio. Mr. Bustamante replied that ECAS does not participate in the analysis of the audits as this is performed at the campus-level. The proposal is that in the future ECAS would perform risk based audit assessments to analyze complex contract terms based on the type of licensees and the size/scope of company.

Advisory member Green questioned why some of the underpayment recovered amounts are more than the actual identified underpayment. Mr. Bustamante responded that in some instances additional monies are identified after the audit is completed.

Regent Park asked for clarification on the distinction between identified underpayments and recovered underpayments. Mr. Bustamante replied that in some cases the recovered underpayments are more than the identified underpayment but that is not the average. She asked if the recovered payment is a negotiated settlement amount and if so, who negotiates this amount. General Counsel Robinson responded that the negotiation is handled at the campus-level usually by the technology transfer offices, unless there is a patent litigation in which the Office of General Counsel would assist. Chancellor Khosla explained that identifying the targets of an audit is a campus-based decision since the campuses know the specifics of the patent. The faculty often reveal suspected patent violations, as they receive a third to half of the patent income and have an incentive to protect their work. The amount of patent theft is low because the penalties and risk to companies is substantial.

Regent Park asked what resources need to be secured in order to develop a beta process while the new PTS is being developed. Mr. Bustamante replied that he is working with the Office of General Counsel to develop a request for proposals to determine costs of this process.

Regent Park suggested that the funding for audits come from the recovered underpayment that the campuses receive rather than ECAS' general fund. Mr. Bustamante responded that is currently not the way the system is configured.

Mr. Robinson shared that UC Legal and ECAS are co-sponsoring an effort to review enforcement activities related to royalty audits, hire an outside consultant to determine the current processes on campuses and research how other institutions engage in enforcement.

Regent Reilly asked if a monetary determination could be made regarding unidentified payments that have not been recovered. Mr. Bustamante commented that a more disciplined process will yield returns. Further research and development discussions will allow for growth that will likely be significant.

Regent Sherman recommended that the University audit every licensee over a specific threshold. Mr. Bustamante replied that a targeted process of analyzing the complexities of operations and licenses will yield a higher return on investments, rather than using a dollar threshold. Advisory member Kahn explained that establishing a specific threshold is not necessarily beneficial in receipt of royalty income due to the complexities surrounding discoveries.

Regent Sherman questioned if the royalty participants share in the audit costs. Chancellor Khosla replied that royalty participants indirectly contribute because the audit costs are allocated prior to the division of royalty income.

Advisory member Wallace recommended establishing training regarding patent violations for inventors and faculty members. She remarked that public companies are already audited and suggested that use of public financials might be more accurate than an outside auditor's review. Mr. Bustamante replied that he is working with UC Legal in this arena, noting that some dealings are with private companies that do not have public financials.

Regent Leib underscored the opportunities for revenue generation by royalty audits and emphasized the importance of this area.

The meeting adjourned at 2:00 p.m.

Attest:

Secretary and Chief of Staff