

# UNIVERSITY OF HAWAI‘I SYSTEM ANNUAL REPORT



REPORT TO THE 2021 LEGISLATURE

Annual Report on Technology Transfer Activities

HRS 304A-121

December 2020

**REPORT TO THE LEGISLATURE ON TECHNOLOGY TRANSFER ACTIVITIES  
PURSUANT TO §304A-121, HAWAII REVISED STATUTES**

*Technology Transfer Activities of the University of Hawai'i through October 2020.*

The University of Hawai'i (UH) is the primary public institution in the state conducting basic, academic, or sponsored research. Where appropriate to its mission and to the larger strategic initiatives of the state, UH commercializes inventions and discoveries produced by its faculty and staff by obtaining patents or other forms of protection for the intellectual property, licensing the intellectual property to commercial business, and providing administrative support to faculty who wish to start up their own companies to commercialize the discoveries, with UH retaining an equity interest in the private enterprise.

The pursuit of commercialization is designed to strengthen local economies by getting new ideas, inventions, and processes developed in a university to the private sector as effectively as possible. This technology transfer and commercialization effort occurs throughout the nation at other universities.

Many states have general conflict of interest laws that could potentially hinder timely and efficient commercialization. These laws, for example, may forbid equity participation in startup companies by state institutions, limit direct involvement by faculty in new business ventures, or may broadly and strictly prohibit use of public property--such as university equipment, facilities or support personnel--for private business purposes. In order to remain competitive for research funding and to strengthen their local economy, several other states have enacted specific exemptions to their ethics laws, or have created some form of "safe harbor" from specific sections of their respective ethics code, or have established parallel, but exempt institutions for their university researchers or research activities.

Act 38, Session Laws of Hawai'i 2017, HRS §84-10, provides this purpose for UH-sponsored technology transfer activities. Significantly, Act 38 does not exempt technology transfer activities from all ethical oversight; it shifts the responsibility from the State Ethics Commission to UH. The University of Hawai'i continues its work developing and implementing its own set of policies, procedures and guidelines to apply to technology transfer activities it sponsors, drawing from its existing compliance infrastructure, the State Ethics Code, and relevant federal conflict of interest and organizational conflict regulations.

Because of its importance to the success of University of Hawai'i's current and future commercialization efforts to help diversify and bolster the state's economy, UH and its supporters from the local business and innovation community will be working with the Legislature in the upcoming session to remove the sunset provision of Act 38, HRS §84-10 slated for June 20, 2022.

## **Progress on Development and Implementation of Regulatory and Compliance Framework**

To fulfill the responsibilities conferred to the University of Hawai'i by Act 38, titled *Ethical Guidelines in the Conduct of Technology Transfer Activities*, the University of Hawai'i Board of Regents approved a Regents Policy at the August 20, 2020 meeting and is now part of the University's Policies and Procedures as RP 12.211. The University of Hawai'i has drafted an Executive Policy that is being vetted through the normal internal consultation process, including review by faculty committees and collective bargaining unions for UH employees.

The University of Hawai'i is also updating its review processes for its employees to assure that technology transfer activities are conducted ethically and in a manner that promotes public purposes and supports UH's core missions. In addition, the University is providing guidance and information on Act 38 and the University's related policies and procedures to employees throughout the campuses.

The University of Hawai'i is implementing a protocol to review technology transfer activities that may be subject to Act 38, including development of a management plans as appropriate, and is reviewed and updated as needed. The webpage addressing ethics and technology transfer activities has been updated to include, a request form for employees to request review of technology transfer activities that may be subject to Act 38, and resources and responses to frequently asked questions.

## **Technology Transfer and Commercialization Activities at the University of Hawai'i**

Through the Office of the Vice President for Research and Innovation and the Office of Innovation and Commercialization (OIC)/Office of Technology Transfer (OTT), UH supported and engaged in the following activities as part of its technology transfer program:

### Entrepreneurship

Companies that participated in UH's accelerator in Spring 2020:

- Hawai'i Innovations Laboratory, Inc.: low-cost reflective coating for deformable mirrors, and embryo assessment technology
- PharmacistFirst: telehealth service that partners a clinical pharmacist with primary care providers
- Radial3D: next generation 3D viewer for medical imaging
- RendezView: a collaboration and remote working platform
- Selective HA: sustainable, reusable, multi-functional, designed and made in Hawai'i face masks

## New Initiatives

- UH Ventures hosted the first cohort through its UH Ventures Accelerator program in Spring 2020. The accelerator is being run by the Pacific Asian Center for Entrepreneurship (PACE) in the Shidler College of Business at UH Mānoa and is open to UH faculty, staff, students and alumni from all 10 campuses across the UH System. Five teams participated in the program.
- OIC/OTT partnered with the Hawai'i Technology Development Corporation (HTDC), Innovate Hawai'i to build the next generation of SBIR companies. With the resources and support provided by HTDC, Innovate Hawai'i, OIC/OTT established a Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) program to provide information and resources on SBIR/STTR programs to UH startups, /researchers and the local community. The program focused on raising awareness of SBIR/STTR programs and opportunities with UH faculty/researchers, identifying UH startups and/ researchers interested in pursuing SBIR/STTR opportunities, and identifying resources gaps for current UH startups/ and researchers seeking SBIR/STTR opportunities.
- To address this economic devastation, answer these questions, and help our small businesses and community, OIC/OTT, in partnership with Maui Economic Development Board STEMworks, mobilized to bring our community together during the summer of 2020. OIC/OTT launched a demonstration project -- the Hacking for Recovery, Hawai'i (H4R Hawai'i) program, modeled after Stanford's H4R program, to spread knowledge, develop and instill an innovation and entrepreneurial mindset, and engage our community during this time of crisis to develop and build an idea to support our recovery or reinvent an existing business.
- Office of Indigenous Innovation, in collaboration with the UH Office of Sustainability, the UH Mānoa Native Hawaiian Place of Learning Advancement Office, and the Purple Maia Foundation, launched the (K)new Futures Challenge in Spring 2020. The 8-week co-curricular program was open to students at all campuses and focused on supporting the deployment of ancestral frameworks to solve pressing contemporary issues related to our changing climate. The program seeks inspiration from indigenous ancestral knowledge systems to develop solutions for contemporary contexts, with an explicit focus on developing enterprises optimized for the repair, restoration and regeneration of peoples and places.

## Ongoing OIC/OTT activities

- OTT received 56 invention disclosures, filed 15 U.S. non-provisional patent applications, received 14 U.S. patents, and executed 14 new license agreements. The inventions were generated by different units at UH: College of Engineering, John A. Burns School of Medicine, UH Cancer Center, College of

Natural Sciences, College of Tropical Agriculture and Human Resources, School of Ocean and Earth Sciences and Technology, Daniel K. Inouye College of Pharmacy, Kapi'olani Community College and Kaua'i Community College.

OIC/OTT continues its educational outreach on UH's technology transfer program to faculty, researchers and students through visits to or online meetings (e.g. Zoom) with UH Mānoa, UH Hilo, UH Maui College, UH West O'ahu, Kapi'olani Community College, Leeward Community College, Windward Community College and Kaua'i Community College.

- OIC/OTT did presentations on intellectual property to classes at UH Mānoa and Kapi'olani Community College.
- OIC/OTT continues its Lab Ambassadors program (connecting OTT directly with UH research laboratories using liaisons in the laboratories to assist in the commercialization process); Biological materials licensing program through its partnership with Kerafast; and its Hi-Touch marketing of UH technologies through a contract with IN-PART to market and facilitate introductions between UH and industry professionals.
- HI-END (Hawai'i Entrepreneurial Network Developers): an informal network of people and programs involved in entrepreneurship, innovation and tech investment meeting monthly to coordinate community events, share ideas, contacts and referrals and leverage resources to build and foster Hawai'i's entrepreneurship and innovation ecosystem. Various innovation and entrepreneurial spaces have hosted HI-END, including HPU's eSports arena.
- Collaborative workspaces UH iLab, sPACE and the UH FabLab are available to UH students to exchange ideas, work on projects and create prototypes.
  - PACE sponsors innovation and entrepreneurship competitions for students, as well as workshops and mentorships to encourage innovation and entrepreneur activities
- MIND Hawai'i (Medical Innovation and Design) held at the UH iLab brings students and faculty from various fields to develop solutions to medical challenges and is supported by UH faculty and the community
- Future Focus 2019: a collaboration with the Hawai'i business community spotlighting emerging technologies, resources and opportunities available in Hawai'i's growing innovation ecosystem. The Future Focus 2019 conference focused on sustainability and resiliency with an emphasis on combating sea level rise.
- OIC/OTT continues its Innovation Impact Challenge program. UH's partner this year is Hawaiian Telcom. This University + Industry collaboration is to inspire cross-disciplinary teams to develop novel ideas that will address local challenges

and have potential broader impacts and applications to communities across the country. This program is focused on finding solutions to identified challenges and building a business around those solutions.

- OIC/OTT joined a western regional technology transfer accelerator hub (ASCEND) that provides resources to help build an entrepreneurial culture at member institutions and support, educate and encourage researchers to commercialize their research in the biomedical area. The goal of this National Institutes of Health (NIH) sponsored program is to bridge the gap between NIH-funded research and improved healthcare solutions. The ASCEND hub includes members from Montana, Alaska, Nevada, New Mexico, Idaho and Wyoming. As part of the ASCEND hub, OIC/OTT developed and delivered a commercialization program for researchers, faculty and students. Two cohorts were completed with participants from JABSOM, UH Cancer Center, College of Engineering and other units. The program covered topics including intellectual property, 10 steps to commercialization, funding and how to do a pitch.