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## Notice of Meeting UNIVERSITY OF HAWAI'I

#### **BOARD OF REGENTS COMMITTEE ON RESEARCH AND INNOVATION**

Members: Regents Bal (Chair), Haning (Vice-Chair), Acopan, Tochiki, and

Wilson

Date: Thursday, October 6, 2022

**Time:** 10:45 a.m.

Place: University of Hawai'i at Mānoa

Information Technology Building 1st Floor Conference Room 105A/B

2520 Correa Road

Honolulu, Hawai'i 96822

See the Board of Regents website to access the live broadcast of the meeting and related updates: <a href="www.hawaii.edu/bor">www.hawaii.edu/bor</a>

#### **AGENDA**

- I. Call Meeting to Order
- II. Approval of Minutes of the May 5, 2022, Meeting
- III. Public Comment Period for Agenda Items:

Individuals who are unable to provide testimony at this time will be allowed an opportunity to testify when specific agenda items are called.

All written testimony on agenda items received after posting of this agenda and up to 24 hours in advance of the meeting will be distributed to the board. Late testimony on agenda items will be distributed to the board within 24 hours of receipt. Written testimony may be submitted via the board's website through the testimony link provided on the Meeting Agendas, Minutes and Materials page. Testimony may also be submitted via email at bor.testimony@hawaii.edu, U.S. mail at 2444 Dole Street, Bachman 209, Honolulu, HI 96822, or facsimile at (808) 956-5156.

Those wishing to provide oral testimony virtually may register <a href="here">here</a>. Given the constraints with the format of hybrid meetings, individuals wishing to orally testify virtually must register no later than 7:30 a.m. on the day of the meeting in order to be accommodated. Registration for in-person oral testimony on agenda items will also be provided at the meeting location 15 minutes prior to the meeting. It is highly recommended that written testimony be submitted in addition to registering to provide oral testimony. Oral testimony will be limited to three (3) minutes per testifier.

All written testimony submitted are public documents. Therefore, any testimony that is submitted orally or in writing, electronically or in person, for use in the public meeting process is public information and will be posted on the board's website.

For disability accommodations, contact the Board Office at (808) 956-8213 or <a href="mailto:bor@hawaii.edu">bor@hawaii.edu</a>. Advance notice requested five (5) days in advance of the meeting.

#### IV. Agenda Items

- A. Research Project Briefing: "University of Hawai'i Center for Indigenous Innovation and Health Equity" Presentation by Kamuela Enos, Director, Office of Indigenous Innovation, and Dr. Aimee Grace, Director, Office of Strategic Health Initiatives
- B. Research and Innovation Fiscal Year (FY) 2022 Year-in-Review and FY 2023 Outlook
- C. Strategic Directions: Extramural Awards Targets vs. Actuals FYs 2015 2022
- D. Committee Work Plan

#### V. Adjournment

## DISCLAIMER - THE FOLLOWING ARE DRAFT MINUTES AND ARE SUBJECT TO FURTHER REVIEW AND CHANGE UPON APPROVAL BY THE COMMITTEE

#### **MINUTES**

## BOARD OF REGENTS COMMITTEE ON RESEARCH AND INNOVATION MEETING

MAY 5, 2022

#### I. CALL TO ORDER

Chair Bal called the meeting to order at 8:32 a.m. on Thursday, May 5, 2022, with regents participating from various locations.

<u>Committee members in attendance</u>: Chair Eugene Bal; Vice-Chair William Haning; Regent Simeon Acoba; and Regent Kelli Acopan.

Committee members excused: Regent Ernest Wilson.

Others in attendance: Board Chair Randy Moore; Regent Wayne Higaki; Regent Benjamin Kudo; Regent Diane Paloma; Regent Robert Westerman (ex officio committee members); President David Lassner; Vice President (VP) for Community Colleges Erika Lacro; 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; UH Mānoa (UHM) Provost Michael Bruno; UH Hilo (UHH) Chancellor Bonnie Irwin; UH West Oʻahu Chancellor Maenette Benham; Executive Administrator and Secretary of the Board of Regents (Board Secretary) Kendra Oishi; and others as noted.

#### II. APPROVAL OF MINUTES

Chair Bal thanked Vice-Chair Haning for serving as Chair at the last committee meeting. He inquired if there were any corrections to the minutes of the February 3, 2022, committee meeting which had been distributed. Hearing none, the minutes were approved.

#### 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. Research Project Briefing: "Basic to Applied Research: Volcanology to Hydrology to Managing Community Risks" Presentation by Dr. Donald Thomas, Geochemist, Hawai'i Institute of Geophysics and Planetology, at UHM

VP Syrmos introduced Dr. Donald Thomas, reviewed his educational background, highlighted the numerous accomplishments and awards he received during his career, and spoke about the relevance of Dr. Thomas' work on hydrology and geology

propagation modeling given the recent Red Hill water contamination crisis. He also drew attention to the university's pivotal role in addressing this crisis, stating that its scientific expertise and research capabilities, as well as its deep understanding of the complex issues surrounding the Red Hill fuel storage facility, were critical factors in providing unbiased technical support to various state and federal organizations.

Dr. Thomas spoke about the local, national, and international relevance of research occurring at the university and illustrated this significance through a presentation on the Hawai'i Scientific Drilling Project (HSDP), a project initiated over 30 years ago to gain a better understanding of the planetary processes involved in Hawai'i vulcanism, as well as to investigate the basic geochemical activities occurring within a volcano's base. He reviewed the distinctive way in which the Hawaiian Islands were formed; noted the various research and scientific activities conducted by HSDP; and discussed some of the notable findings made by HSDP that increased the understanding of mantle plumes and their role in the formation of Hawai'i's volcanos.

The work undertaken by HSDP also resulted in the unearthing of information about the geological composition of the Hawaiian Islands that challenged some of the assumptions used in establishing the prevailing model for the subsurface occurrence and movement of groundwater in Hawaii. Findings suggest that there are different mechanisms for storing varying degrees of fresh water within the Hawaiian Islands and that the abundance of this resource may be much higher than the traditional groundwater model would indicate. It was noted that the knowledge gained about the hydrogeology of Hawaiii through HSDP will allow for better freshwater resource management that will lead to long-term sustainability for the future.

Dr. Thomas also discussed the technical support the university has provided to various state and federal organizations regarding the potential groundwater system impacts of the Red Hill fuel storage facility noting that the complexity of the region's hydrogeology makes it difficult to ascertain the effects dissolved contaminants from fuel leaks could have on nearby freshwater artesian wells. He also stated that a source of disagreement between the university, regulatory agencies, and United States Navy contractors has been the latter's insistence on using Hawai'i's traditional groundwater model to describe groundwater flow in this region despite the new discoveries made by HSDP. However, the Office of Naval Research has recently approved a project that will be conducted by the university and apply current geophysical, geochemical, and modeling techniques to the Red Hill region so that groundwater movement and contaminant transport in the area can be better understood.

Citing HSDP's discovery of increased freshwater storage capacity within the Hawaiian Islands, Regent Westerman questioned whether this capacity diminishes as each island moves farther away from the mantle plume. Dr. Thomas replied that significant geological changes occur as an island moves further away from the mantle plume including weathering and subsidence. However, a vast amount of uncertainty exists with respect to the presence of freshwater within the Hawaiian Islands and the best way to determine the existence of this resource is continued investigation and research. He stated that the university's ability to carry out this type of work has eroded

over time and it was his hope that this capacity could be rebuilt in the future given recent events which have highlighted the importance and fragility of this resource.

Given that continued research about the existence of fresh groundwater involved core drilling, Vice-Chair Haning asked if any opposition has been encountered regarding these efforts. Dr. Thomas stated that fresh water is a key commodity that is necessary for survival and a resource coveted by multiple interests. He stressed the importance of properly managing freshwater resources through the use of good, scientific information regarding the hydrogeology of Hawai'i rather than flawed speculation.

In view of the Red Hill incident and the present understanding of water migration that has been enhanced by HSDP, Regent Kudo inquired about future recommendations for the placement of facilities, such as underground fuel storage tanks, in order to better preserve and protect freshwater resources in Hawai'i. Dr. Thomas replied that this is a complex matter but stated that an important key to this issue is the use of proper science to make decisions that will lessen the potential risks to Hawai'i's natural resources posed by any such facility regardless of where it is located. Regent Kudo expressed his belief that discoveries made by HSDP with respect to the location of water resources should be considered when determining the placement of these types of facilities.

Regent Kudo opined that State policy regarding freshwater resources should be directed toward islands or counties where the demand for freshwater is at, or exceeds known supply and asked Dr. Thomas about his thoughts on this matter. Dr. Thomas replied that all islands will experience increased demands for freshwater, although Oʻahu is near the precipice of this demand exceeding known supply. However, he reiterated that there remains a lack of sufficient understanding of the distribution and movement of fresh water within the Hawaiian Islands and findings from HSDP suggest that an abundance of this resource may be present on some islands. As such, it is important that research on this critical issue continue and that information obtained from these efforts be integrated into the structure of freshwater resource management.

Referencing the abundance of offshore freshwater resources detected by HSDP, Regent Kudo asked whether the drilling of submarine wells will occur in the future. Dr. Thomas replied that he did not believe this action would be necessary given that the source of the fresh water detected offshore is land-based and could be accessed via the drilling of onshore wells. He noted that the Hawai'i County Department of Water Supply is currently working to obtain resources for drilling a land-based well to tap into one of the offshore freshwater resources discovered by HSDP.

Regent Acoba inquired about the provision of information gathered by HSDP to assist policymakers in instituting long-range plans to preserve and protect freshwater resources. Dr. Thomas replied that the multijurisdictional nature of certain aspects of freshwater resource management in Hawai'i complicates this matter but that, in general, a water board or commission is charged with establishing policies and long-range planning with respect to the use of freshwater resources in each respective county. However, many of these policies are based upon the concept of sustainable yield which HSDP has determined relies on incorrect assumptions. As such, these policies should

be reexamined, taking into account new modeling information with respect to aquifer existence and recharge, so that they can be redeveloped to allow for the sufficient provision of freshwater resources to the community while providing adequate protections for this resource.

#### B. Fiscal Year 2021-2022 (FY22) 3rd Quarter Extramural Awards Update

#### 1. FY 22 3<sup>rd</sup> Quarter Research and Innovation Metrics Summary

#### 2. FY 22 Monthly Report on Extramural Awards

VP Syrmos reported on the extramural awards received for the third quarter of FY22; provided a breakdown of trends, significant awards, and award amounts by campus; and summarized data pertaining to various research and innovation metrics. He stated that the university received \$440 million in extramural awards to date, which was 10 percent higher than the same period in FY 2020-2021, and anticipates reaching nearly \$500 million by the end of the fiscal year. He also highlighted that increases in award counts at UHM were experienced across all levels of funding and emphasized the widespread nature of these awards across programs on the flagship campus which indicates a healthy research enterprise system.

Referencing past government policies that placed an emphasis on funding for applied research activities, Regent Kudo asked whether there has been a shift in this emphasis and if particular areas of research that can be further monetized had been identified by the university. VP Syrmos replied that the emphasis on applied research continues to be a mainstay of current government policies and is expected to remain so for decades. He noted that applied research in areas such as climate change, public health and healthcare, water resource and energy resiliency, data science, and cybersecurity have been identified as having the potential of benefitting the university and increasing extramural revenues. Regent Kudo questioned whether this information has been communicated to faculty. VP Syrmos replied in the affirmative.

Regent Acoba asked about the types of activities that were encompassed by the innovation and entrepreneurship engagement data metric and requested clarification on the large decrease in this data metric in FY22 as compared to FY21. VP Syrmos replied that innovation and entrepreneurship engagement refers to activities involving start-up companies including actions such as investments made, consultations, and workshops. He stated that he did not have information readily available about the reasons for the large decrease in engagements experienced in FY22 and would get back to the committee.

Board Chair Moore arrived at 9:36 a.m.

#### C. Committee Annual Review

Chair Bal referenced the committee annual review matrix provided in the materials packet stating that it sets forth the actions carried out by the committee throughout the year. He noted that the item relating to Organized Research Units (ORU) was blank, which is understandable given that the committee did not consider any ORUs. Chair

**DRAFT** 

Bal stated that it was a very productive year for the committee and thanked the committee members, administration, Board Office staff, and university staff for all of their efforts that allowed the committee to complete the tasks set forth in the committee work plan.

#### V. <u>ADJOURNMENT</u>

There being no further business, Chair Bal adjourned the meeting at 9:43 a.m.

Respectfully Submitted,

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



## UNIVERSITY OF HAWAII BOARD OF REGENTS

\*22 SEP 30 A8:55

September 29, 2022

#### **MEMORANDUM**

TO:

Eugene Bal III, Chairperson

BOR Committee on Research and Innovation

VIA:

**David Lassner** 

President

FROM:

Vassilis L. Syrmos 🚄

Vice President for Research and Innovation

SUBJECT:

BOR COMMITTEE ON RESEARCH AND INNOVATION AGENDA MATERIALS

FOR OCTOBER 2022 MEETING

Please find attached the following materials that will be discussed at the October 6, 2022 BOR Committee on Research and Innovation meeting:

#### IV. Agenda Items:

- A. Research Project Presentation: "University of Hawai'i (UH) Center for Indigenous Innovation and Health Equity" Presentation by Kamuela Enos (Director, Office of Indigenous Innovation, UH System) and Dr. Aimee Grace (Director, Office of Strategic Health Initiatives, UH System)
- B. R&I FY22 Year-in-Review and FY23 Outlook (\*VPRI presentation)
  - 1. FY22 Q4 Extramural Awards Analysis Report
  - 2. FY22 Q4 Research and Innovation Metrics Summary
  - 3. FY22 Monthly Report of Extramural Awards (as of June 30, 2022)
  - 4. FY22 Annual Report on Extramural Awards & Expenditures
- C. Strategic Directions: Extramural Awards Targets vs. Actuals FY15 FY22 (\*VPRI presentation)

# University of Hawai'i (UH) Center for Indigenous Innovation and Health Equity



Kamuela Enos, MA
Director, Office of Indigenous Innovation
University of Hawai'i System



Aimee Malia Grace, MD, MPH, FAAP Director, Office of Strategic Health Initiatives University of Hawai'i System



UH Board of Regents Committee on Research and Innovation
October 6, 2022

## Hypothesis

"We posit that there is no intervention so effective in reducing health disparities and achieving health equity as the restoration of ancestral practices for Indigenous communities."

"Culture as health" (Barker, Goodman, DeBeck)

https://link.springer.com/article/10.17269/CJPH.108.5754

"Culture as a health intervention"



## CIIHE: New Federal Initiative

- Established in the FY21 Federal Appropriations Process
- Under jurisdiction of the U.S. Department of Health and Human Services' Office of Minority Health
- Joint initiative with two arms
  - Native Hawaiians and Pacific Islanders (University of Hawaiii)
  - American Indian/Alaska Native populations (Oklahoma State University and University of Alaska)



## CIIHE Core Collaborators and Community Partners

















#### **KEY POINT TO UNDERSTAND**

POVERTY
is
RECENT and LEARNED
BEHAVIOR

So

Our RESTORATION is the INTERVENTION





## Framing Equity as an Exit Strategy from Disparity











Lualualei, Waiʻanae, Hawaiʻi



Photo Credits: MA'O Farms





#### **HEALTH OUTCOMES**





## Mauli Ola Study Investigating the Gut Microbiome in Social Networks

- Addressing increased prevalence of chronic diseases among Hawai'i's unique populations, including Native Hawaiians and Pacific Islanders.
- Examining how social and economic networks influence individuals' choices and behaviors, leading to to (un)healthy lifestyles.
- Exploring how MA'O, a community program not specifically designed around health, impacts the health of individuals, especially in the reduction of obesity and other cardiometabolic disorders.

120

Participants in first study cohort, all interns in MA'O Youth Leadership Training (YLT) program. Future study cohorts include additional interns and members of interns' social networks.

70%

Study cohort of Native Hawaiian ancestry

26

Median age of study cohort



Reduction in lifetime risk of contracting T2 diabetes; measured after one year participation in the MA'O YLT internship program.



Reduced annual health care costs associated with diabetes alone, per individual who avoids contracting T2 diabetes.



Alika K. Maunakea, Ph.D. Epigeneticist, Faculty Researcher UH John A. Burns School of Medicine



#### YOUTH OUTCOMES

#### MA'O Intern College Degree Attainment

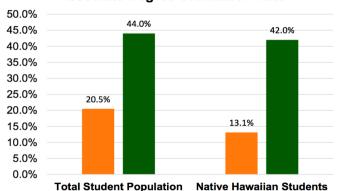
MA`O interns graduate at more than double the rate of their peers at Leeward Community College, while Native Hawaiian interns triple their chances of achieving their degree.





Degrees attained by MA'O interns during and after their participation in the Youth Leadership Training (YLT) program.

#### **Associate Degree Graduation Rate**



Leeward Community College 2015

MA'O Youth Leadership Training (YLT) interns - cumulative



## CENTER FOR INDIGENOUS HEALTH RESEARCH AND POLICY



## CENTER FOR INDIGENOUS HEALTH RESEARCH AND POLICY

OSU Center for Health Sciences

The Center for Indigenous Health Research and Policy brings together scientific collaborators, Indigenous knowledge holders, and community leaders to eliminate health disparities and cultivate health and wellness with Indigenous communities. These efforts are grounded in the principles of community-based participatory research and traditional Indigenous worldviews that emphasize equity, co-learning, and the interconnected and holistic nature of the health.

**SEE RESEARCH** 

The Center builds upon and extends the mission of Oklahoma State University to improve the health of Oklahoma's most underserved populations. The Center efforts are focused in three primary areas:

- Reconnection the recognition and strengthening of Indigenous knowledge and practices that foster wellness
- 2. Education the provision of pipeline programs that are culturallygrounded as well as scientifically rigorous to develop the next generation of health sciences professionals working with Indigenous communities
- 3. Training the development of cross-cultural and equitable learning opportunities that bring university and community partners together to address training needs within both settings so as to foster long-term, collaborative and co-learning relationships between Indigenous Nations and Oklahoma State University



Valarie Blue Bird Jernigan

Professor, Rural HealthExecutive Director, Center for Indigenous Health Research and Policy



## FY21 Omnibus Appropriations Bill

Office of Minority Health (OMH)

Center for Indigenous Innovation and Health Equity.—The agreement includes \$2,000,000 for the Office of Minority Health to create a Center for Indigenous Innovation and Health Equity to support efforts including research, education, service, and policy development related to advancing Indigenous solutions. The agreement urges HHS to consider partnering with universities with a focus on Indigenous health research and policy among Native Americans and Alaska Natives, as well as universities with a focus on Indigenous health policy and innovation among Native Hawaiians/Pacific Islanders. Potential partnerships should include Indigenous leaders and engage Indigenous community partners in both innovation and health disparities focus areas, as well as aligned goals and priorities. The Center should disseminate best practices and lessons learned to other Indigenous communities, including through Indigenous digital storytelling. The agreement requests a report within 120 days of enactment of this Act outlining Q the Department's plans for a Center for Indigenous Innovation and Health Equity.

## Hula

- Joseph Keawe'aimoku Kaholokula, PhD (UH JABSOM) and team
- Examined the effects of a 6-month behavioral intervention (cultural dance program based on hula) to improve blood pressure and cardiovascular disease risk among Native Hawaiians with uncontrolled hypertension.
- Randomized controlled trial (263 participants)
- Significant reductions in hypertension and CVD risk among intervention group compared to control group



https://www.civilbeat.org/2019/09/fighting-heart-disease-with-hula/



## Native Languages



https://mauinow.com/2022/04/27/%CA%BBaha-punana-leo-preschool-accepting-applications-for-enrollment/

- Languages are at the core of human culture and identity → Rejuvenation of Native languages has significant potential for health and public health impacts
- Language loss has been linked to poor mental health
- Language revival has been linked to mental health empowerment and decreased youth suicide
- Other benefits of preserving Indigenous languages:
  - Promoting resilience
  - Improved cognitive functioning
  - Increased employment options



https://www.thestar.com/news/canada/2016/06/03/restoring-indigenous-languages-key-to-preventing-youth-suicides-trudeau-says.html https://apo.org.au/node/269046

https://www.adelaide.edu.au/directory/ghilad.zuckermann?dsn=directory.file;field=data;id=34174;m=viewhttps://web.uvic.ca/~lalonde/manuscripts/2007CogDevt.pdf

## Post-war ceremonial cleansing practices

- Published work by Ty Kāwika Tengan, PhD in partnership with Judge Thomas
   K. Kaulukukui, Jr.
- Potential for post-war ceremonial cleansing practices, as done in other
   Native communities, to decrease rates of Post-Traumatic Stress Disorder
   (PTSD) among Indigenous veterans
- Recognizing spiritual and historic aspects of warriorhood in self-identity





## VIEW GRANT OPPORTUNITY



MP-CPI-21-007

Center for Indigenous Innovation and Health Equity Department of Health and Human Services Office of the Assistant Secretary for Health



# UH Center for Indigenous Innovation and Health Equity (CIIHE)



MAI HOPOHOPO...



"This new funding will help UH partner with HHS on its new Indigenous health center, giving researchers and policymakers more resources to better understand and directly address the health

disparities the Native Hawaiian and Pacific Islander communities face," said Senator Schatz.



September 23, 2021

A UH News

## Award Year 1

## Onboarding UH CIIHE Staff Members



Johnny Tudela Aldan, Jr.
Data & Policy Analyst
B.S. Biology (Chaminade University)
MPH (Eastern Washington University)

Chamorro, Pohnpeian

Research, public health



Sharde Freitas
Data & Policy Analyst

BA in Biology (University of Redlands)
MPH (UH Mānoa)
JD (William S. Richardson School of Law)

Kanaka 'Ōiwi

Public health, law, advocacy, policy, research



Shanda Delos Reyes Project Administrator

BA in Political Science (UH Mānoa)

Kampampangan, Ilokano

Government, admin, policy



#### Ikaika Ramones 'Āina-Based Org Liaison

BA in Anthropology (Harvard University)
MPhil and CAGS in Anthropology (NYU)
PhD candidate in Anthropology (NYU)

Kanaka 'Ōiwi, Ilokano

Social anthropology, political economy



## CIIHE's Indigenous Framework - Work-to-Date

#### Pewa Framework



**Pewa** - *n*. Rectangular patch or wedge used for mending bowls perhaps so called because of resemblance to a fishtail

**Equity:** A willingness to understanding the nature of the fracture

**Reciprocity:** A willingness to build interventions that address the reason for the fracture, and are built to hold each side equally strong

**Transparency:** The willingness to be clear and honest in intent, and to operate in a transparent way



## CIIHE's Indigenous Framework - Work-to-Date, cont.

- Papakū Makawalu process
  - Two-day workshop guided by the Edith Kanaka'ole Foundation
  - Developing kapu and kānāwai for our shared work

## 'Aelike

Formal agreement (submitted to federal government)
 representing our shared values and framework







## CIIHE Landscape Analysis Survey

 Co-designed in content and structure with CIIHE core partners and community network partners

## Key Questions

- What types of Indigenous innovations are there and where are they occurring?
- What are the preliminary/hypothesized health impacts?
- Gaps Analysis: What are the barriers that limit these practices from advancing (i.e., policy, research, funding, education)?



## Landscape Analysis Workshops

### USAPI Information Session

- Held on June 8, 2022
- Introducing Pacific Islander community-based organizations to CIIHE and encouraging their participation in the Landscape Analysis Workshops

## Landscape Analysis Workshops

- Co-designed with core network partners as a series of two-hour collaborative sessions co-presented with partners:
  - June 14, 2022 (Hau'oli Mau Loa Foundation)
  - June 22, 2022 (Hawai'i People's Fund)
  - July 15, 2022 (Kuaʻāina Ulu ʻAuamo)

## CIIHE Landscape Data Analysis & Synthesis

- Completed Summer 2022
  - 49 survey respondents across
     Hawai'i and the USAPI
     participated (largely 'āina-based organizations).
- Themes undergoing analysis:
  - Traditional Agriculture/Aquaculture
  - Traditional Medicine
  - Sailing and Navigation
  - Traditional Languages

By Organization	Percentage
Non-USAPI	65%
USAPI	35%
Total	100%
Location of community-based participating in CIIHE's landsd	_
Hawaii	
Northern Mariana	a Islands
_	
Guam	
Guam Marshall Isla	nds
	nds

# Continuing Work and Award Year 2

Advance community-centered ancestral and cultural practices as the intervention to improve holistic health for NHPI populations through research initiatives, policy strategies, and economic development initiatives that are all co-produced with community.

## **Funding Support**

- Carryover and Continuation of Office of Minority Health (OMH) CIIHE award
  - ~\$1.5 million for FY23

- Supplemental funds to focus on Research Initiatives
  - \$500,000

UH Foundation anonymous gift: \$4.6 million



- \$3 million Endowed fund for a Director
- \$1.6 million Unrestricted for programs and activities



## Strengthening our Team and Expanding our Reach

- Internal hiring: Director, Fiscal support
- Goal to establish a satellite campus in the USAPI
  - University of Guam

- Mauli Ola Internship Program Planning
  - Integrating students into CIIHE programs and activities

 National conference with CIIHE's Native American/ Alaska Native partners



## Research Initiatives

- Ongoing Landscape Analysis
  - Finishing data synthesis and analysis with member checking
  - Dissemination Workshops
- Literature review
  - o Traditional medicines, Native languages, Organic farming/traditional foods
- "Deep Dives" with core community partners
  - In-depth ethnographic studies examining two key community partners and their health innovations
  - Interviews, participant observation, semiotic analysis, and visual anthropology methods

### Research Incubator

- Building on the Landscape Analysis to invest in pilot projects
- Matching community-based organizations that desire a research partner with community-centered researchers
- Approximately 2-6 projects/year, mix of NH and PI
- Investments in UH faculty to partner with communitybased organizations
  - Share funding and data
  - Follow Pewa Framework



### Policy Strategies

 Advancing policy levers (i.e., legislative, budgetary, regulatory) at the federal, state, and local levels to advance practices of Indigenous innovation.

- Co-Identifying ways that policies could advance
   Indigenous innovation with community practitioners.
  - Goal: Alignment with CIIHE's mission and UH Strategic Plan



### **Economic Development Initiatives**

- Positioning Indigenous innovations as avenues for meaningful, community-based economic development
- Partnering with UH System Office of Innovation and Commercialization
- Exploratory conversations with Hawai'i Investment Ready
  - "Supports the people and organizations addressing Hawai'i's social and environmental opportunities by accelerating social enterprise impact and access to investment." -https://hiready.net/



### Our "How Will We Know" if this initiative is working?

- At the Community Level: Investment is being driven to community organizations.
- At the University Level: Research is co-designed with community and supports ancestral practices done in contemporary application.
- At the Government Level: Indigenous communities are repositioned as spaces of innovation and their practices and people are thriving.

## Mahalo!

Kamuela Enos: kenos@hawaii.edu

Aimee Malia Grace: amgrace@hawaii.edu





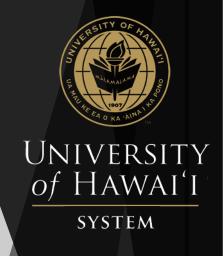
## FY22 Year in Review & FY23 Outlook

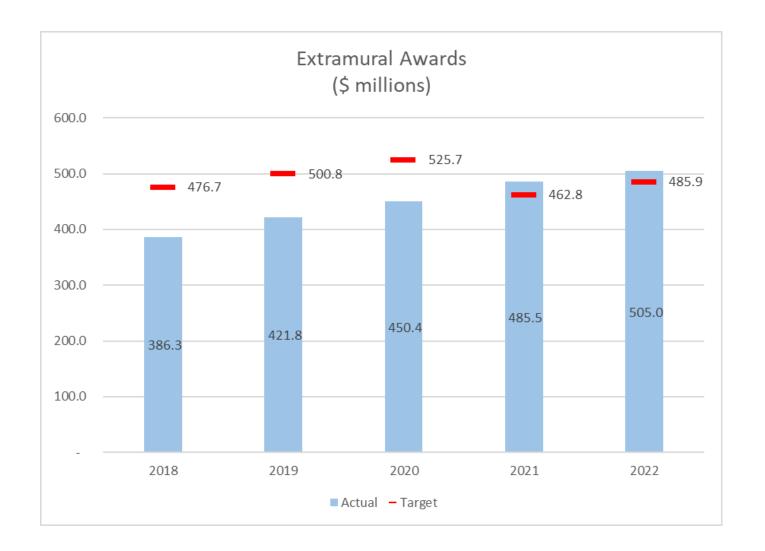
BOR Committee on Research & Innovation

October 6, 2022

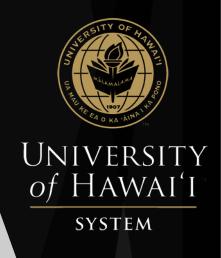
## Overview

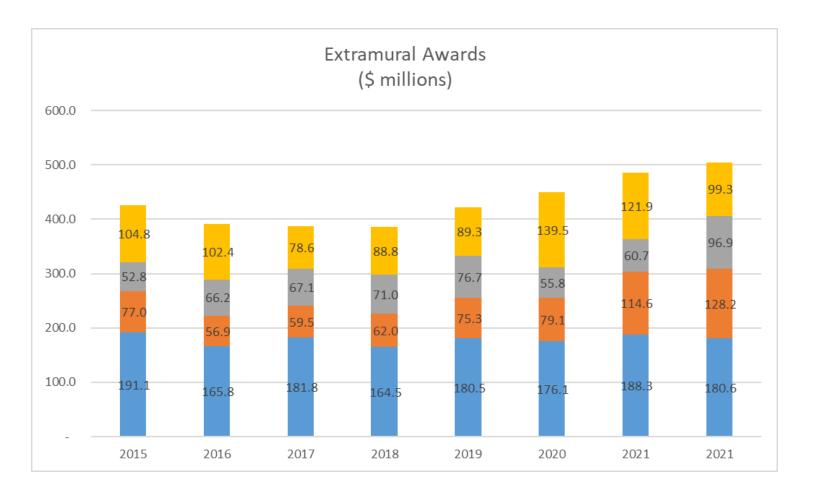
- ► FY 22 Performance Metrics
  - Extramural awards
  - Disclosures; patents; licenses
- ► FY 23 Projection
- Appendix (other metrics)



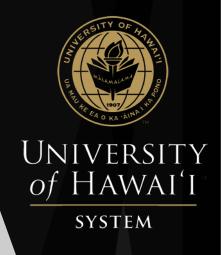


	FY 2	2020	FY 2	2021	FY 2022		
	Target	Actual	Target	Actual	Target	Actual	
Extramural Awards (\$ millions)	525.7	<b>450.4</b>	462.8	485.5	485.9	505.0	



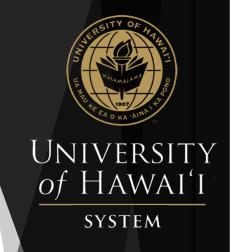


	2015	2016	2017	2018	2019	2020	2021	2022
Q1	191.1	165.8	181.8	164.5	180.5	176.1	188.3	180.6
Q2	77.0	56.9	59.5	62.0	75.3	79.1	114.6	128.2
Q3	52.8	66.2	67.1	71.0	76.7	55.7	60.7	96.9
Q4	104.8	102.4	78.6	88.8	89.3	139.5	121.9	99.3
FY	425.7	391.3	387.0	386.3	421.8	450.4	485.5	505.0



## UH Mānoa'17-'22

	2017	2018	2019	2020	2021	2022	
Campus Details	Amount	Amount	Amount	Amount	Amount	Amount	'17 vs. '22
College of Arts, Languages, and Letters	3,792,320	5,037,972	4,820,117	5,015,291	5,507,336	6,113,159	61.20%
College of Education	16,177,466	13,415,976	27,932,378	15,024,424	22,861,804	30,617,573	89.26%
College of Engineering	4,680,411	3,942,763	7,240,729	16,981,442	6,666,931	6,756,835	44.36%
College of Natural Sciences	32,794,485	32,165,964	36,609,301	39,984,754	34,430,078	39,490,257	20.42%
College of Social Sciences	11,544,031	13,811,775	15,766,251	17,321,277	21,223,378	24,862,421	115.37%
College of Tropical Agriculture and Human Resources	13,619,801	17,648,266	14,032,537	20,787,503	25,405,328	29,300,244	115.13%
Hawai'inuiakea School of Hawaiian Knowledge	1,996,314	2,555,214	3,238,552	1,813,078	1,075,675	2,070,787	3.73%
Institute for Astronomy	18,339,284	15,670,948	18,772,579	25,504,897	18,509,182	20,056,320	9.36%
John A. Burns School of Medicine	61,527,128	59,950,931	53,062,041	46,456,743	60,836,598	57,939,411	-5.83%
Lyon Arboretum	752,957	478,823	255,585	1,106,044	528,112	39,022	-94.82%
Nancy Atmospera-Walch School of Nursing	1,223,898	2,407,654	839,543	642,016	1,247,224	1,784,653	45.82%
Outreach College	165,214	149,263	167,295	121,258	151,296	165,000	-0.13%
School of Architecture	163,646	150,175	230,565	188,831	218,102	179,585	9.74%
School of Ocean and Earth Science and Technology	79,154,444	93,144,266	91,118,186	99,057,713	99,240,489	94,061,035	18.83%
Shidler College of Business	269,596	-	325,617	114,880	24,500	71,382	100.00%
Thompson School of Social Work & Public Health	5,923,941	7,024,273	6,368,791	6,729,137	16,887,672	16,464,844	177.94%
University of Hawaii Cancer Center	29,999,976	20,857,092	23,137,759	30,111,661	25,778,578	21,397,333	-28.68%
Vice Provost, Academic Excellence	1,463,442	1,426,738	1,318,498	1,645,862	2,019,732	2,023,494	38.27%
Vice Provost, Research and Scholarship	-	74,853	105,000	75,000	17,279	2,444	100.00%
Water Resources Research Center	1,458,277	3,989,558	638,833	677,921	1,715,198	3,499,813	140.00%
William S. Richardson School of Law	2,176,471	2,540,068	3,016,620	3,430,231	1,654,261	1,995,519	-8.31%
Non-academic & non-research units	6,783,457	4,652,694	5,533,030	5,220,493	6,557,941	7,250,645	6.89%
Grand Total	294,006,559	301,095,266	314,529,807	338,010,456	352,556,694	366,141,776	24.54%



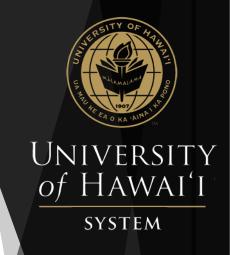
## UH Hilo and UH West O'ahu'17-'22

	2017	2018	2019	2020	2021	2022	
UH Hilo Campus Details	Amount	Amount	Amount	Amount	Amount	Amount	'17 vs. '22
Chancellor, UH Hilo	1,436,257	1,958,215	1,148,825	1,260,827	1,216,522	3,684,592	156.54%
College of Agriculture, Forestry and Natural Resource Mgt	1,409,810	1,077,332	1,527,095	914,014	1,402,821	718,193	-49.06%
College of Arts and Sciences	962,502	1,202,177	2,007,276	2,519,495	1,520,968	1,262,881	31.21%
College of Business and Economics	-	120,000	-	163,400	61,903	-	NC
College of Continuing Education and Community Svc	99,931	31,750	-	40,000	-	149,000	49.10%
College of Natural and Health Sciences	3,253,296	1,726,048	3,485,189	1,198,208	2,217,233	2,887,345	-11.25%
College of Pharmacy	667,726	196,873	672,673	300,271	657,634	669,878	0.32%
Hawaii Small Business Development Center	909,979	1,142,235	818,278	2,460,982	875,556	506,011	-44.39%
Imiloa Astronomy Center Of Hawaii	505,336	832,854	195,978	541,000	963,641	1,810,006	258.18%
Ka Haka'Ula O Ke'Elikolani-UHH	860,980	1,774,041	1,324,631	2,078,461	1,805,097	1,983,383	130.36%
Vice Chancellor for Academic Affairs (UH Hilo)	-	57,000	-	-	-	134,630	100.00%
Vice Chancellor for Administrative Affairs	-	2,250	2,250	4,375	22,500	-	NC
Vice Chancellor for Research	874,009	1,482,154	2,079,445	1,236,819	2,246,051	1,159,985	32.72%
Vice Chancellor for Student Affairs	1,901,860	1,347,664	3,925,512	1,607,354	2,975,114	3,066,426	61.23%
Grand Total	12,881,686	12,950,593	17,187,152	14,325,206	15,965,040	18,032,330	39.98%
	2017	2018	2019	2020	2021	2022	
Campus	Amount	Amount	Amount	Amount	Amount	Amount	'17 vs. '22
UH West Oahu	5,326,027	5,631,172	6,035,273	8,210,429	2,893,179	6,694,837	25.70%
Grand Total	5,326,027	5,631,172	6,035,273	8,210,429	2,893,179	6,694,837	25.70%



## UH Community Colleges '17-'22

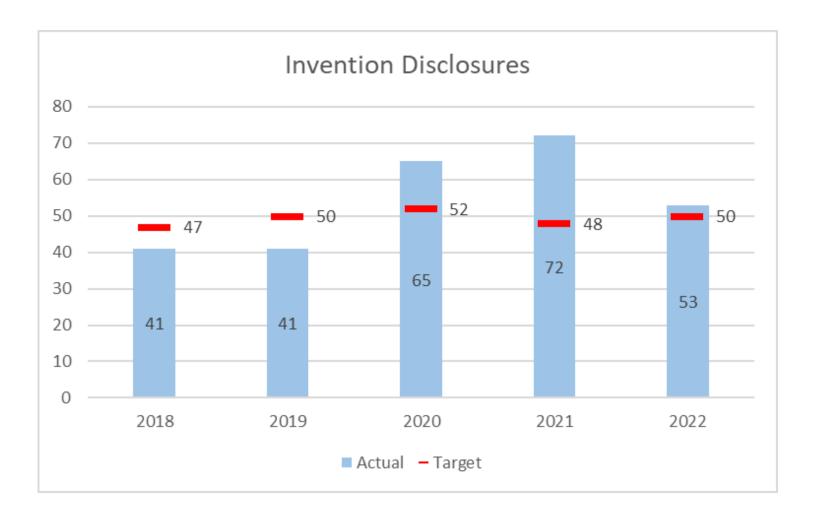
	2017	2018	2019	2020	2021	2022	
Campus	Amount	Amount	Amount	Amount	Amount	Amount	'17 vs. '22
Hawai'i Community College	179,897	557,101	766,655	1,775,648	1,938,010	4,603,628	2459.04%
Honolulu Community College	2,864,032	1,679,521	1,594,061	1,851,636	1,822,177	2,503,071	-12.60%
Kapi'olani Community College	6,736,316	5,211,039	5,950,760	2,991,758	3,487,491	5,373,897	-20.22%
Kaua'i Community College	2,007,725	876,089	971,368	1,240,530	1,116,840	3,020,939	50.47%
Leeward Community College	4,260,373	3,064,574	3,303,870	1,564,863	1,695,026	4,984,485	17.00%
University of Hawai'i Maui College	7,440,725	11,925,050	13,347,013	14,981,750	12,604,643	13,462,585	80.93%
Windward Community College	7,406,077	7,324,832	7,669,161	4,611,575	5,684,114	9,664,035	30.49%
Grand Total	30,895,145	30,638,206	33,602,888	29,017,760	28,348,301	43,612,640	41.16%



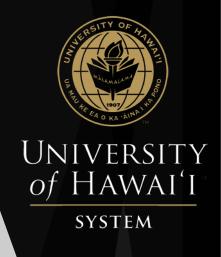
# UH System'17-'22

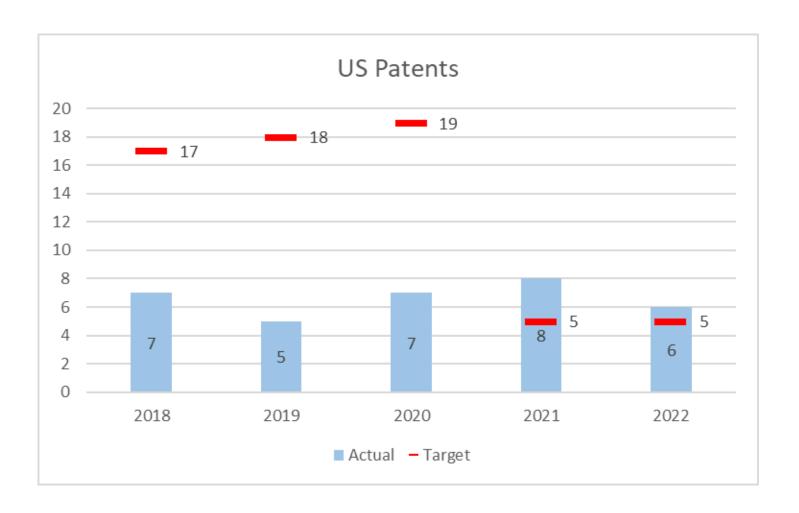
	2017	2018	2019	2020	2021	2022	
Campus Details	Amount	Amount	Amount	Amount	Amount	Amount	'17 vs. '22
Office of the Vice President for Community Colleges	1,329,109	1,409,610	504,702	13,324,533	19,175,798	4,476,517	236.81%
Office of the Vice President for Research and Innovation	8,817,197	8,149,281	18,093,132	22,266,107	32,287,342	37,440,713	324.63%
Office of the VP for Academic Planning and Policy	10,151,665	4,609,372	6,911,960	13,701,436	5,402,061	11,395,490	12.25%
Office of the VP for Information Tech/Chief Info Officer	23,252,872	21,414,102	22,668,032	16,687,933	28,537,133	16,676,186	-28.28%
Office of the VP for Student Affairs and Univ/Comm Relations	-	-	-	-	-	479,639	100.00%
President, University of Hawaii System	-	-	-	142,739	160,933	-	NC
Office of the VP For Administration	36,300	10,000	144,058	69,900	16,801	69,006	100.00%
Grand Total	43,587,143	35,592,365	48,321,884	66,192,648	85,580,068	70,537,551	61.83%



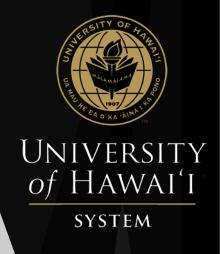


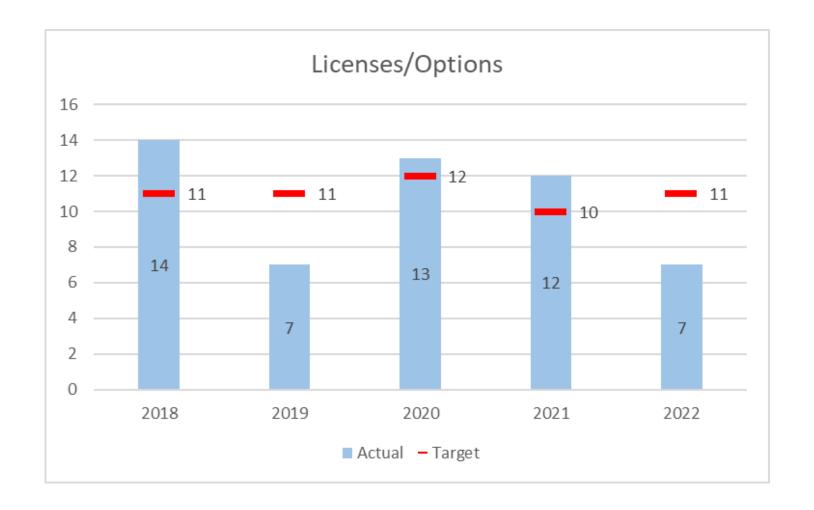
	FY 2	2020		FY 2	2021		FY 2022		
	Target	Actual		Target Actua		l Target		Actual	
Invention Disclosures	52	6	5	48	•	72	50	•	53



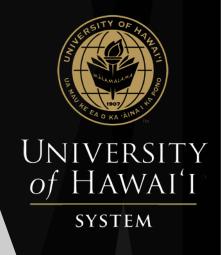


	FY 2020			FY 2021				FY 2022			
			Target Actual				Target Actual				
US Patents	19		7		5	•	8		5	•	6



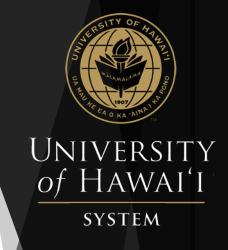


	FY 2020 Target Actual			FY 2	2021		FY 2022		
	Target Actual			Target	Actual		Target	Actual	
Licenses/Options	12	0	13	10	•	12	11	•	7

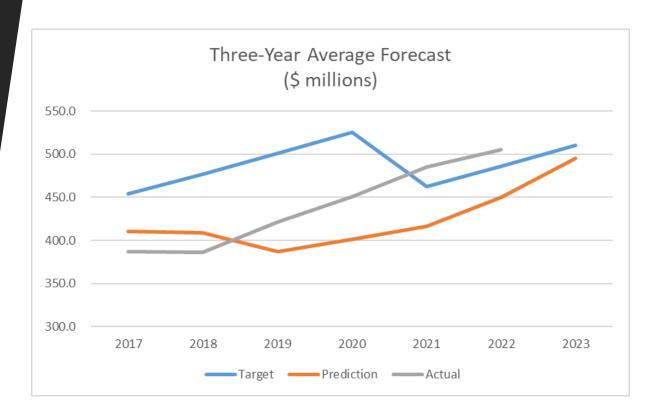


# Federal R&D Budget '17-'23

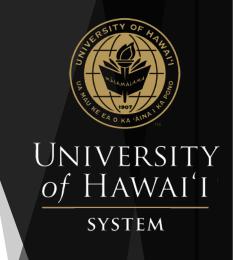
Total R&D by	Agency, FY 201	7-2023					
(budget autho	ority in millions	of dollars; act	uals except w	here noted)			
						Estimate	Requested
Fiscal Year	2017	2018	2019	2020	2021	2022	2023
DOD	49,197	52,386	54,691	62,438	70,079	65,691	83,769
NASA	10,704	11,755	10,698	14,801	12,176	12,279	13,547
DOE	14,896	17,482	18,271	19,476	17,788	21,027	23,731
HHS	34,222	36,942	38,511	44,455	42,226	42,023	61,816
NSF	5,938	6,327	6,586	6,800	7,515	7,065	8,448
USDA	2,585	2,618	3,026	2,989	3,031	3,193	3,579
Interior	953	885	958	1,043	1,009	1,123	1,443
DOT	904	1,043	1,071	1,094	1,070	1,281	1,498
EPA	497	492	489	516	524	523	614
DOC	1,794	2,029	1,959	1,953	2,099	1,994	2,918
DHS	724	725	668	532	590	748	681
VA	1,346	1,286	1,370	1,366	1,445	1,436	1,655
Other	1,529	1,795	1,836	1,163	1,172	1,230	1,237
Total R&D	125,289	135,765	140,134	158,626	160,724	159,613	204,936



## FY 23 Projection



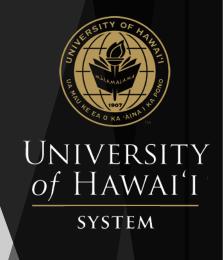
FY	Target	Prediction	Actual
2017	454.2	410.2	387.0
2018	476.7	408.5	386.3
2019	500.8	386.7	421.8
2020	525.7	401.5	450.4
2021	462.8	416.3	485.5
2022	485.9	449.9	505.0
2023	510.2	495.3	TBD

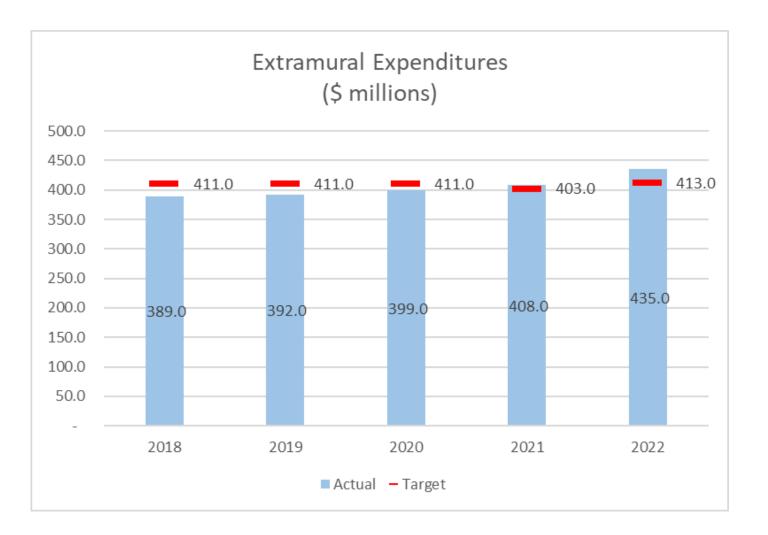


### Other Metrics

- Other Metrics

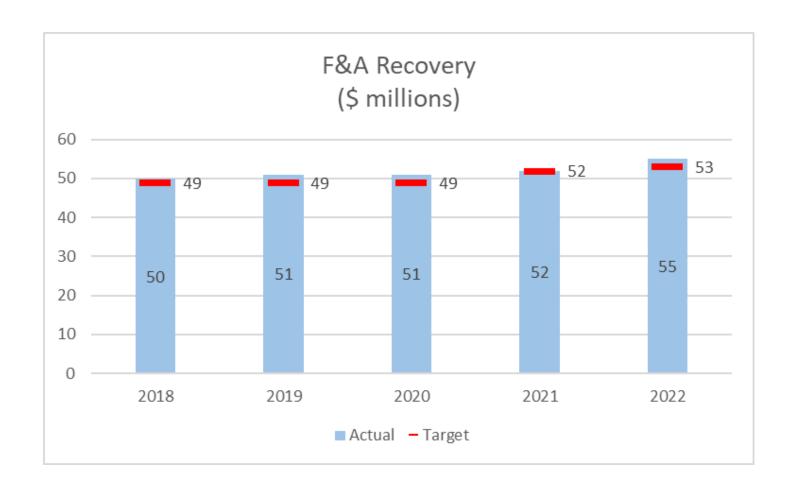
  - Active Licenses/Options
  - Royalties
  - Start-Ups Supported





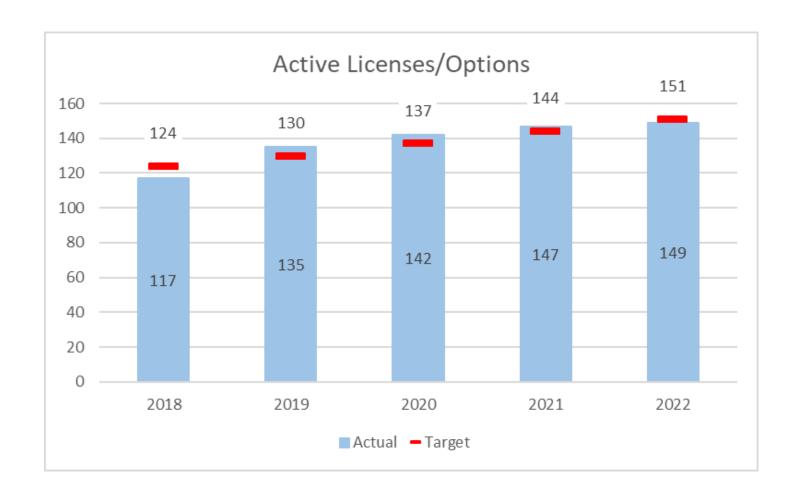
	FY 2	2020		FY 2021			FY 2022		
	Target	Actua	l	Target	Actual		Target	Actual	
Extramural Expenditures (\$ m)	411		399	403	•	408	413	•	435



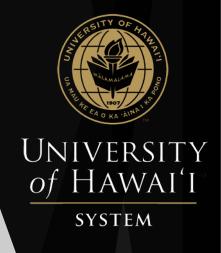


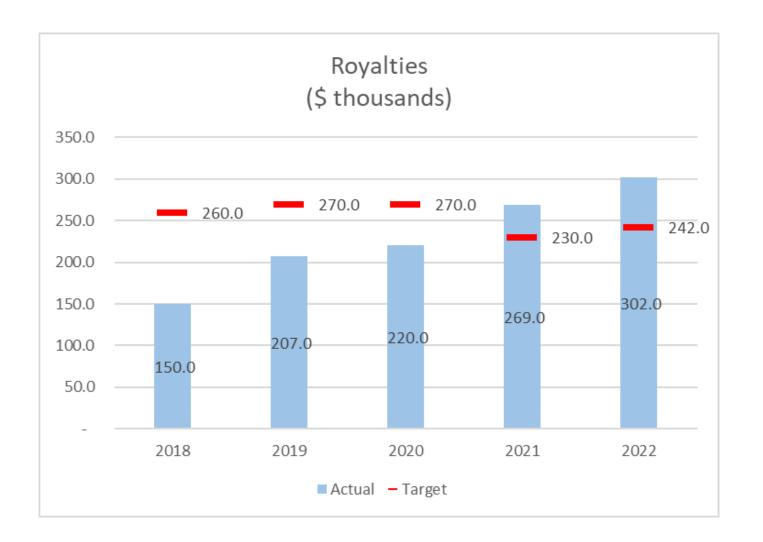
	FY 2020		FY 2021		FY 2022				
	Target	Actua		Target	Actu	ıal	Target	Actu	al
F&A Recovery (\$ millions)	49	•	51	52	•	52	53	•	55



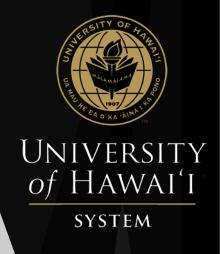


	FY 2020		FY 2021		FY 2022				
	Target Actual T		Target Actual		Target Actual		ıal		
Active Licenses/Options	130	•	142	144		147	151	•	149





	FY 2020		FY 2021		FY 2022				
	Target	Actu	al	Target	Actı	ual	Target	Actu	ıal
Royalties (\$ thousands)	270	•	220	230	•	269	242	•	302



# Other Technology Transfer Metrics

Metric	FY 21	FY 22
Start-ups supported	131	134
Innovation & Entrepreneurship engagement	309	308



## FY 23 - FY 27 Targets

Metric	Target
Extramural awards	4% annual increase
Invention disclosures	10% annual increase
US patents issued	10% annual increase
Active licenses	10% increase
Royalty revenue	10% annual increase
Start-ups supported	10% annual increase



#### FY 22 Semi-Annual Extramural Awards Analysis Report

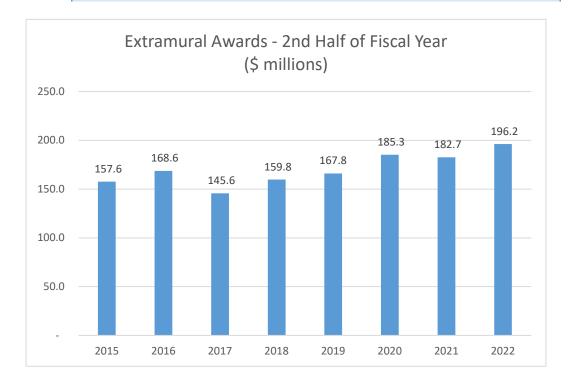
#### I. Summary

The University of Hawai'i's (UH)extramural awards for the second half of Fiscal Year (FY) 22 totaled \$196.2 million, which is \$13.5 million (or 7.3%) more than the second half total of FY 21. Overall results were 4% (or \$19.5 million) more than FY 21 and exceeded FY 2011's record of \$488.6 million by \$16.4 million.

#### II. Half-Year Performance Metrics

Extramural awards for the second half of FY 22 were \$13.5 million (or 7.3%) more than the second half of FY 21. See *IV. Award Trends by Campus* for an explanation of major increases or decreases that contributed to FY22 second half results.

			Extramı	ıral Award	<b>ls (</b> \$ millioı	ns)		
	2015	2016	2017	2018	2019 <sup>1</sup>	2020	2021	2022
1 <sup>st</sup> Half	268.1	222.6	241.2	226.5	258.4	255.2	302.9	308.8
2 <sup>nd</sup> Half	157.6	168.6	145.6	159.8	167.8	185.3	182.7	196.2
Total	425.8	391.2	386.9	386.3	426.2	440.4	485.5	505.0



<sup>&</sup>lt;sup>1</sup> Unlike prior fiscal years, FY 2019 does not include de-obligations or corrections to previously reported amounts. If included, FY 2019 would be \$421.8 million.

#### III. Significant Awards by Campus

In the second half of FY 22, UH received 840 awards from 293 different sponsors. The following table reports the largest awards received by campus.

Campus	<b>Sponsor Type</b>	Sponsor	Project Title	Amount
			Asia Pacific Research Initiative for	
		Department of	Sustainable Energy Systems 2021	
Mānoa	Federal	Defense	(APRISES21)	6,249,889
		Small Business	Veterans Business Outreach Center of	
Hilo	Federal	Administration	the Pacific	400,000
	Mainland	Kellogg (WK)	Hawaii Institute for Sustainable	
West Oʻahu	Non-Profit	Foundation	Community Food Systems	1,000,000
		National Science		
Hawai'i CC	Federal	Foundation	Workforce for Water	1,153,803
		Department of		
	State	Labor & Industrial	Employment and Training Fund	
Honolulu CC		Relations	Program (ETF) 2022-01 (Micro Vendor)	50,000
		Department of		
		Labor & Industrial	<b>Employment and Training Fund</b>	
Kapiʻolani CC	State	Relations	Program (ETF) 2022-01 (Micro Vendor)	800,000
		University Hawaii		
Kaua'i CC	Hawaii Non-Profit	Foundation	Kauai CC COGS Fund	46,000
		Department of		
		Labor & Industrial	<b>Employment and Training Fund</b>	
Leeward CC	Federal	Relations	Program (ETF) 2022-01 (Micro Vendor)	425,000
		Department of	UH Maui College Central Maui and	
Maui College	Federal	Education	Molokai Upward Bound	450,566
		Department of	Learning To Grow Child Care	
Windward CC	State	<b>Human Services</b>	Stabilization Grant	173,175
			University of Hawaii Pacific Disaster	
		Department of	Center (UoH PDC) Cooperative	
UH System <sup>2</sup>	Federal	Defense	Agreement 2021-2026	7,796,202

<sup>&</sup>lt;sup>2</sup> UH System represents units under Vice Presidents that receive extramural funding. Examples include the P20 and Gear Up grants under the VP for Academic Affairs; Maui High Performance Computing Center and Pacific Disaster Center contracts under the VP for Information Technology; Applied Research Laboratory task orders under the VP for Research and Innovation; and the Pacific Business Center Program under the VP for Community Colleges.

#### IV. Award Trends by Campus

The following table summarizes the awards received during the second half of the fiscal year by campus.

### Award Amounts by Location \$ millions

Campus	2019	2020	2021	2022	2022-21 Change <sup>3</sup>
Mānoa	129.0	148.3	150.9	149.4	-1.1%
Hilo	6.5	6.9	5.7	3.9	-30.2%
West Oʻahu	3.0	0.3	1.2	1.2	-4.5%
Hawai'i CC	0.4	-	0.4	1.5	310.5%
Honolulu CC	0.2	0.2	0.2	0.1	-58.0%
Kapiʻolani CC	2.8	0.5	0.7	1.2	69.8%
Kauaʻi CC	0.1	-	0.1	-	-37.0%
Leeward CC	0.7	0.1	0.5	1.3	131.2%
Maui College	3.3	0.9	0.9	1.0	8.5%
Windward CC	1.0	-	0.7	0.3	-63.0%
UH System	20.8	28.1	21.4	36.3	69.9%
TOTAL	167.8	185.3	182.7	196.2	7.3%

Major increases and decreases are attributed as follows:

#### UH Mānoa decrease:

There were 35 less awards in the second half of FY 22 compared to the second half of FY 21.

	Change in	Change in
Award size	Count	Amount
0 – 99,000	(49)	(2,387,369)
100,000 – 499,999	2	(2,978,369)
500,000 – 999,999	8	6,035,181
1,000,000 +	4	(2,146,417)
Total	(35)	(1,477,351)

<u>UH Hilo decrease:</u> In the second half of FY 21, UH Hilo received two new awards totaling \$1.4 million. There were no comparable awards in the second half of FY 22.

<u>Hawai'i Community College increase</u>: Attributed to a new National Science Foundation award totaling \$1.1 million.

<u>UH System increase</u>: Attributed to three (3) new federal awards totaling \$15.8 million:

1) Department of Defense - \$5.8 million; 2) Department of Education - \$6.5 million; and 3) National Science Foundation - \$3.5 million.

<sup>&</sup>lt;sup>3</sup> The percent change over the prior fiscal year is calculated using the actual figures not the rounded figures.

#### V. Annual Analysis

In FY 22, federal funds increased by \$16.9 million, which is around 87% of the \$19.5 million increase. The Department of Education accounted for \$17.4 million and was largely made up of cyclical funding such as for Title III awards.

Sponsor Type	FY 21	FY 22	Change
DA-Dept of Agriculture	18,959,135.00	20,230,941.00	1,271,806.00
DHHS-Dept of Health and Human Services	62,602,750.00	58,116,849.00	(4,485,901.00)
DOC-Dept of Commerce	24,553,870.00	24,094,195.00	(459,675.00)
DOD-Department of Defense	63,947,139.00	63,306,485.00	(640,654.00)
DOE-Dept of Energy	2,849,966.00	2,964,342.00	114,376.00
DOI-Dept of Interior	7,674,144.00	8,184,534.00	510,390.00
DOT-Dept of Transportation	200,000.00	50,734.00	(149,266.00)
ED-Dept of Education	53,510,948.00	70,960,115.00	17,449,167.00
Federal Agencies	7,408,023.00	11,927,551.00	4,519,528.00
National Aeronautics and Space Administration	19,287,603.00	20,953,184.00	1,665,581.00
National Science Foundation	52,878,091.00	50,061,550.00	(2,816,541.00)
Federal total	313,871,669.00	330,850,480.00	16,978,811.00
Foreign	11,327,252.00	10,509,821.00	(817,431.00)
Hawaii- Business and Other	7,572,360.00	6,704,629.00	(867,731.00)
Hawaii- Dept of Education	3,988,446.00	9,467,998.00	5,479,552.00
Hawaii- Government Agencies	83,122,450.00	72,099,887.00	(11,022,563.00)
Hawaii- Health Organizations	7,920,609.00	12,357,801.00	4,437,192.00
Hawaii- Non-Profit Organizations	26,038,426.00	26,453,935.00	415,509.00
Mainland- Business and Other	6,890,171.00	4,706,757.00	(2,183,414.00)
Mainland- Health Organizations	860,927.00	262,096.00	(598,831.00)
Mainland- Non-Profit Organizations	12,662,232.00	18,669,734.00	6,007,502.00
US Colleges and Universities	11,274,384.00	12,935,996.00	1,661,612.00
Non-federal total	171,657,257.00	174,168,654.00	2,511,397.00
Total	485,528,926.00	505,019,134.00	19,490,208.00

#### VI. Forecast vs. Actuals

Results for the second half of FY 22 were about \$16.3 million (or 9.0%) more than the forecast. Overall results were 12.2% more than the forecast.

FY22	Forecast	Actual	Variance
1 <sup>st</sup> Half	270.0	308.8	14.4%
2 <sup>nd</sup> Half	179.9	196.2	9.0%
Total	449.9	505.0	12.2%

#### Federal R&D Budget

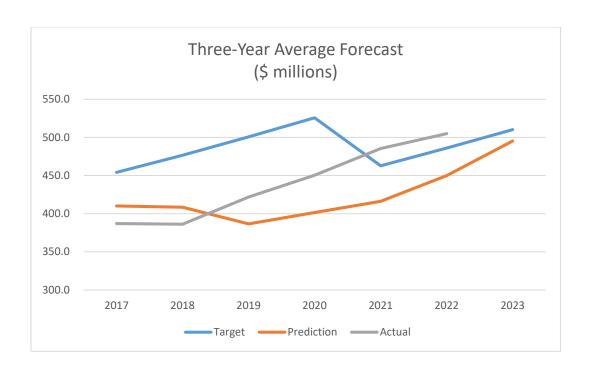
The updated Federal R&D Budget table is provided below, and as mentioned in prior years, funding is available. Federal funding could increase if the U.S. President's 2023 budget request is fulfilled by Congress. If so, we are hopeful UH will be able to continue its pace in FY 23.

Total R&D by A	gency, FY 201	7-2023					
(budget autho	rity in millions	of dollars; act	tuals except v	where noted)			
Fiscal Year	2017	2018	2019	2020	2021	Estimate 2022	Requested 2023
DOD	49,197	52,386	54,691	62,438	70,079	65,691	83,769
NASA	10,704	11,755	10,698	14,801	12,176	12,279	13,547
DOE	14,896	17,482	18,271	19,476	17,788	21,027	23,731
HHS	34,222	36,942	38,511	44,455	42,226	42,023	61,816
NSF	5,938	6,327	6,586	6,800	7,515	7,065	8,448
USDA	2,585	2,618	3,026	2,989	3,031	3,193	3,579
Interior	953	885	958	1,043	1,009	1,123	1,443
DOT	904	1,043	1,071	1,094	1,070	1,281	1,498
EPA	497	492	489	516	524	523	614
DOC	1,794	2,029	1,959	1,953	2,099	1,994	2,918
DHS	724	725	668	532	590	748	681
VA	1,346	1,286	1,370	1,366	1,445	1,436	1,655
Other	1,529	1,795	1,836	1,163	1,172	1,230	1,237
Total R&D	125,289	135,765	140,134	158,626	160,724	159,613	204,936
Source: 2021-	2023 Congress	sional Researc	ch Service (I A	ST UPDATE: Jur	ne 2022).		

FY 23 Forecast

Based on our model, the FY 23 forecast is set at \$495.3 million, and the target is \$510.2 million.

FY	Target	Prediction	Actual
2017	454.2	410.2	387.0
2018	476.7	408.5	386.3
2019	500.8	386.7	426.2
2020	525.7	401.5	450.4
2021	462.8	416.3	485.5
2022	485.9	449.9	505.0
2023	510.2	495.3	TBD



# Extramural Sponsor Awards Quarterly Summary

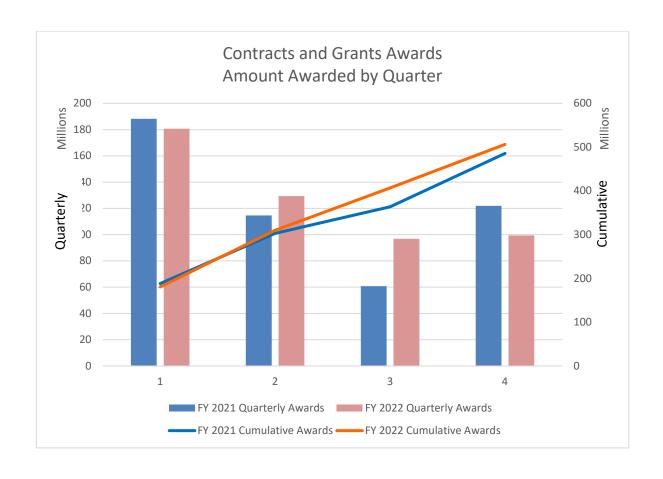
	Apr 1 – Jun 30, 2022		Apr 1 – Jun 30, 2001	
Program Type	<u>Count</u>	<u>Amount</u>	<u>Count</u>	<u>Amount</u>
Research	209	\$ 60,132,220	313	\$ 73,803,268
Non-Research	189	\$ 41,037,719	244	\$ 50,904,483
<u>Total</u>	<u>398</u>	<u>\$101.169.939</u>	<u>333</u>	<u>\$124,707,751</u>

Note: The detailed award listing is available at:

http://www.ors.hawaii.edu/index.php/bor-reports

The FY 2021 year-to-date total was: \$485,528,926 The unofficial FY 2022 year-to-date total is: 1,931 awards totaling \$505,019,134.

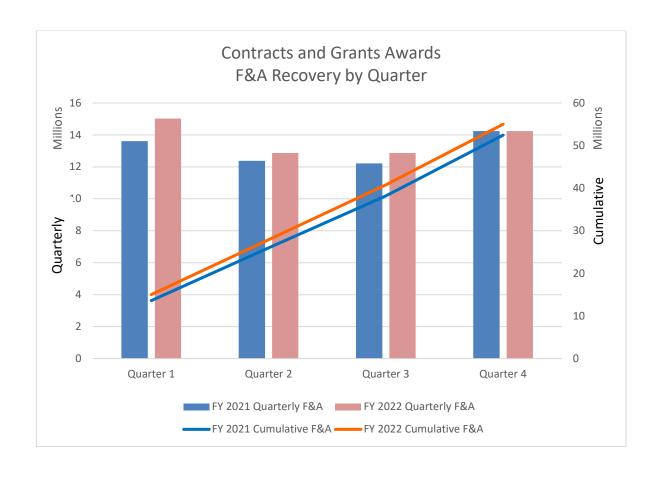
#### Contracts and Grants Awards As of Quarter Four – FY 2022



#### Contracts and Grants Expenditures As of Quarter Four – FY 2022



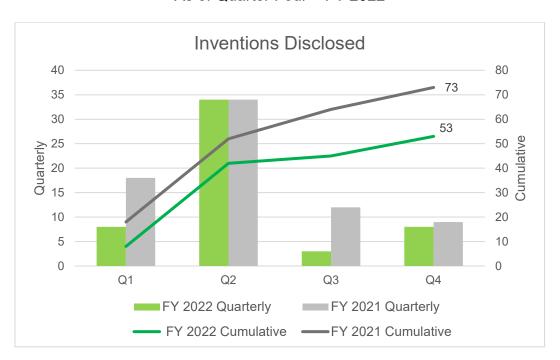
#### Contracts and Grants F&A Recovery As of Quarter Four – FY 2022



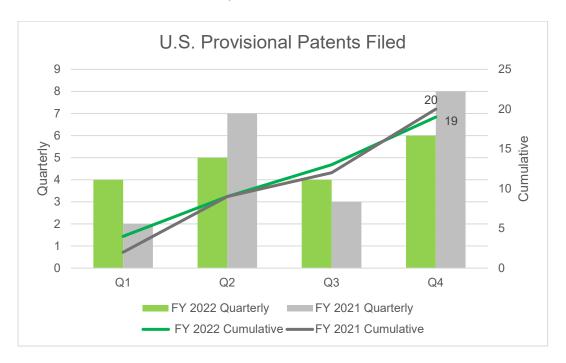
## OIC Research & Innovation Metrics FY 2022 – Fourth Quarter Summary

	FY 2022	FY 2021
<u>Metric</u>	<u>4/1/22 – 6/30/22</u>	<u>4/1/21 – 6/30/21</u>
Invention Disclosures	8	9
U.S. Provisional Patents Filed	6	8
U.S. Non-Provisional Patents Filed	1	3
U.S. Non-Provisional Patents Issued	1	1
License & Option Agreements Executed	2	4
Active License & Option Agreements	149	147
Royalty Revenue	\$59,525.80	\$22,382.14
Startup Support	90	22
Innovation & Entrepreneurship Engagement	119	103

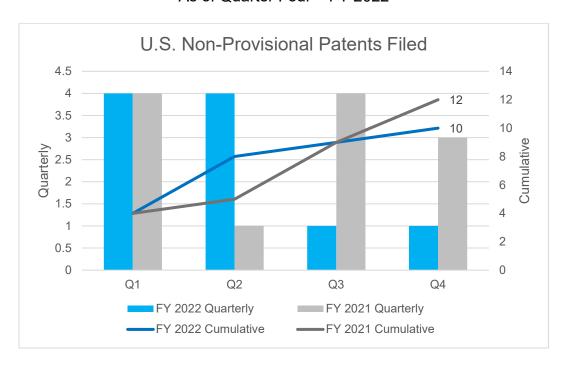
## Invention Disclosures As of Quarter Four – FY 2022



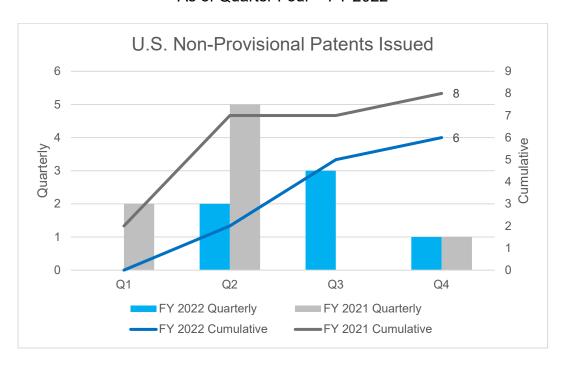
U.S. Provisional Patents Filed As of Quarter Four – FY 2022



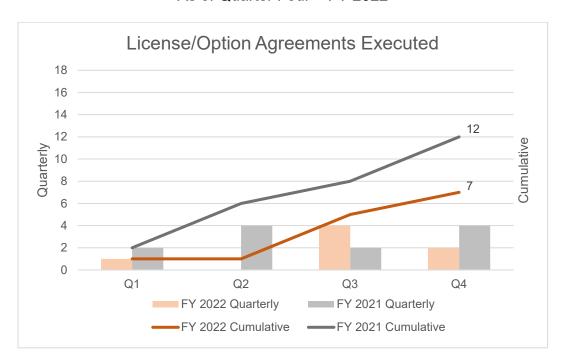
U.S. Non-Provisional Patents Filed As of Quarter Four – FY 2022



#### U.S. Non-Provisional Patents Issued As of Quarter Four – FY 2022



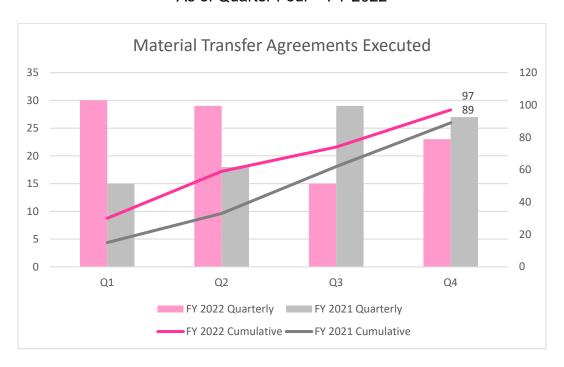
#### License/Option Agreements As of Quarter Four – FY 2022



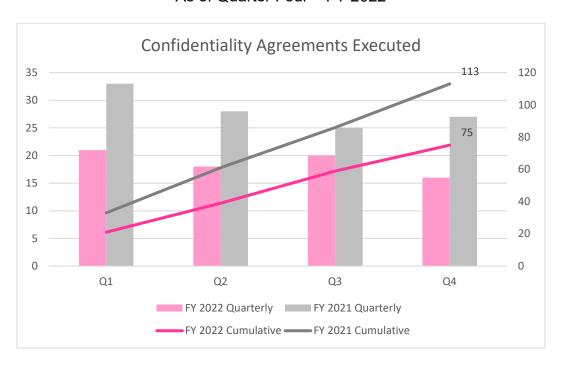
#### Royalty Revenue As of Quarter Four – FY 2022



### Material Transfer Agreements Executed As of Quarter Four – FY 2022



#### Confidentiality Agreements Executed As of Quarter Four – FY 2022



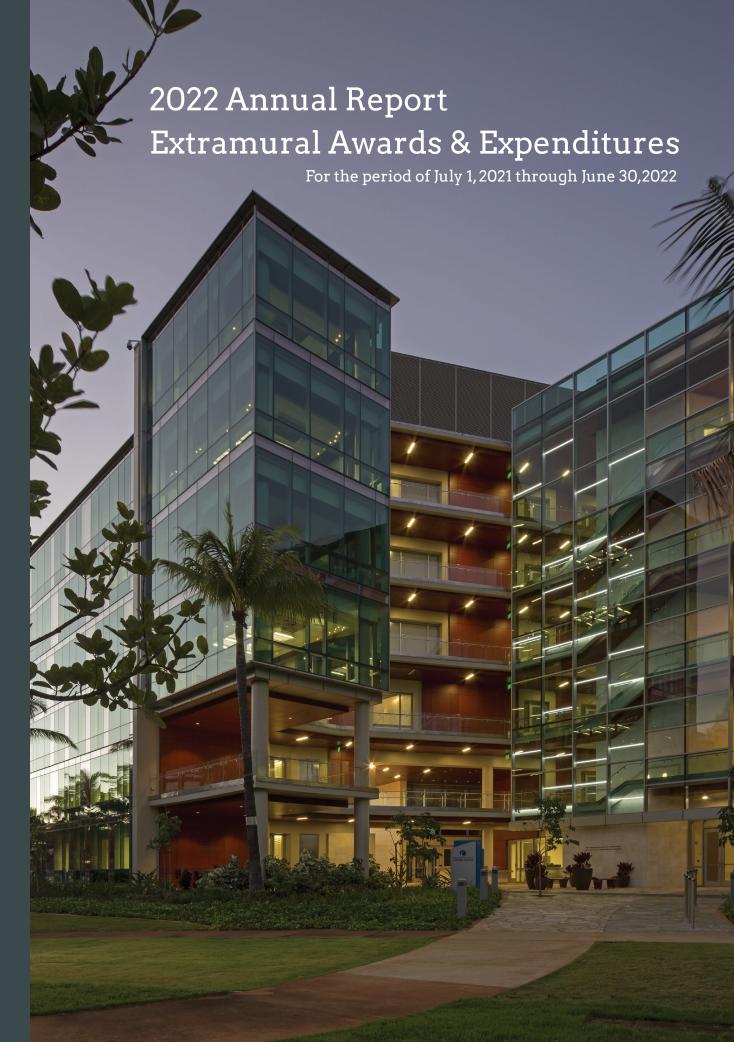
	1	1	ı	I	1	1
FY 2022 Monthly Report of Awards to Date as of June 30, 2022 Summary By Campus						
Summary by Campus	F\	/ 2021	FV			
Campus	Award Count	Award Amount	Award Count	Award Amount	\$ Change	% Change
Hawai'i Community College	11	1,939,388	14	4,603,628	2,664,240	137.4%
Honolulu Community College	12	1,822,177	11	2,503,071	680,894	37.4%
Kapi'olani Community College	24	3,504,496	21	5,538,628	2,034,132	58.0%
Kaua'i Community College	6	1,116,840	12	3,035,807	1,918,967	171.8%
Leeward Community College	10	1,695,026	18	4,984,485	3,289,459	194.1%
University of Hawai'i Maui College	39	12,604,643	47	13,508,783	904,140	7.2%
Windward Community College	21	5,684,114	20	9,664,035	3,979,921	70.0%
Subtotal Community Colleges and UH Maui College	123	28,366,684	143	43,838,437	15,471,753	54.5%
University of Hawai'i at Hilo	115	16,015,285	111	18,146,347	2,131,062	13.3%
University of Hawai'i at Manoa	1,603	357,864,608	1,559	369,428,145	11,563,537	3.2%
University of Hawai'i at West O'ahu	22	3,100,245	24	6,734,359	3,634,114	117.2%
University of Hawai'i System	100	86,743,175	94	70,859,113	(15,884,062)	-18.3%
Grand Total	1,963	492,089,997	1,931	509,006,401	16,916,404	3.4%
FY 2022 Monthly Report of Awards to Date as of June 30, 2022						
Campus Details						
	FY	2021	FY	2022		
Campus	Award Count	Award Amount	Award Count	Award Amount	\$ Change	% Change
Hawai'i Community College	11	1,939,388	14	4,603,628	2,664,240	137.4%
Chancellor, Hawaii Community College	11	1,939,388	14	4,603,628	2,664,240	137.4%
Chancellor, Hawaii Community College	5	1,559,663	8	4,217,312	2,657,649	170.4%
Liberal Arts and Public Services	1	23,205	1	17,000	(6,205)	-26.7%
Math and Natural Sciences (Hawaii CC)	1	18,000	-	-	(18,000)	-100.0%
Office of Continuing Education & Training	1	75,000	2	154,316	79,316	105.8%
UH Center at West Hawai'i	3	263,520	3	215,000	(48,520)	-18.4%
Honolulu Community College	12	1,822,177	11	2,503,071	680,894	37.4%
Chancellor, Honolulu Community College	12	1,822,177	11	2,503,071	680,894	37.4%
Chancellor, Honolulu Community College	2	322,960	2	494,137	171,177	53.0%
Early Childhood (Honolulu CC)	1	40,000	2	17,000	(23,000)	-57.5%
Pacific Center for Advanced Technology Training	3	123,300	1	50,000	(73,300)	-59.4%
Transportation and Trades Programs University College	3	55,214 1,280,703	5	7,269 1,934,665	(47,945) 653,962	-86.8% 51.1%
Kapi'olani Community College	24	3,504,496	21	5,538,628	2,034,132	58.0%
Chancellor, Kapiolani Community College	24	3,504,496	21	5,538,628	2,034,132	58.0%
Academic Affairs (KCC)	1	178,100	2	218,442	40,342	22.7%
Arts and Sciences Academic Program	-	-	1	93,691	93,691	100.0%
Chancellor, Kapiolani Community College	4	1,368,252	7	2,795,209	1,426,957	104.3%
Continuing Education / Non-Credit Program	2	129,897	2	892,268	762,371	586.9%
Culinary Arts (KCC)	1	13,520	3	440,729	427,209	3159.8%
Emergency Medical Services	3	629,480	2	149,480	(480,000)	-76.3%
Health Academic Program	3	66,000	1	313,581	247,581	375.1%
Health Sciences	6	318,210	-	-	(318,210)	-100.0%
Office for Institutional Effectiveness	2	117,976	1	1,500	(116,476)	-98.7%
Student Support Services	2	683,061	2	633,728	(49,333)	-7.2%
Kaua'i Community College	6	1,116,840	12	3,035,807	1,918,967	171.8%
Chancellor, Kauai Community College	6	1,116,840	12	3,035,807	1,918,967	171.8%
Chancellor, Kauai Community College	6	1,116,840	12	3,035,807	1,918,967	171.8%
Leeward Community College	10	1,695,026	18	4,984,485	3,289,459	194.1%
Chancellor, Leeward Community College	10	1,695,026	18		3,289,459	194.1%
Academic Affairs (Leeward CC)  Arts and Sciences	1	399,376	5	949,911	550,535	137.8%
	2	472,299			1,145,915	242.6% 100.0%
Career and Technical Education (Leeward CC) Chancellor, Leeward Community College	1	80,000	3	68,940 990,000	68,940 910,000	1137.5%
Continuing Education and Workforce Dev	3	489,976	3		193,444	39.5%
Drama and Theatre (Leeward CC)	1	2,375		- 005,420	(2,375)	-100.0%
Education (Leeward CC)	2	251,000	2	460,000	209,000	83.3%
Social Science (Leeward CC)	-	-	2	214,000	214,000	100.0%
University of Hawai'i at Hilo	115	16,015,285	111	18,146,347	2,131,062	13.3%
Chancellor, UH Hilo	2	1,216,522	7	3,684,592	2,468,070	202.9%
Chancellor, UH Hilo	2	1,216,522	7	3,684,592	2,468,070	202.9%
College of Agriculture, Forestry and Natural Resource Mgt	12	1,406,421	11	718,193	(688,228)	-48.9%
College of Agriculture, Forestry and Natural Resource Mgt	6	343,595	6	371,696	28,101	8.2%
Pacific Aquaculture and Coastal Resources Ctr	6	1,062,826	5	346,497	(716,329)	-67.4%
College of Arts and Sciences	10	1,520,968	16		(169,511)	-11.1%
College of Arts and Sciences	4	1,081,515	4	455,499	(626,016)	-57.9%
English (UH Hilo)	-	-	1	40,000	40,000	100.0%
Geography (UH Hilo)	6	439,453	7	463,958	24,505	5.6%
Psychology (UH Hilo)	-	-	1	5,000	5,000	100.0%
Social Sciences Division	-	-	3	387,000	387,000	100.0%
College of Business and Economics	1	76,956	-	-	(76,956)	-100.0%
College of Business and Economics	1	76,956	-	-	(76,956)	-100.0%
College of Continuing Education and Community Svc	-	-	1	149,000	149,000	100.0%
College of Continuing Education and Community Svc		- 2 222 422	1		149,000	100.0%
College of Natural and Health Sciences	24	2,223,433	26		663,945	29.9%
Biology (UH Hilo)  College of Natural and Health Sciences	2	74,523 577,319	1 11		33,526 944,933	45.0% 163.7%
Conjuge of Natural and Health Sciences  Computer Science (UH Hilo)	1	105,669	11		9,448	8.9%
comparer science (orr find)	1 1	103,009	1 1	113,11/	3,448	0.3%

FY 2022 Monthly Report of Awards to Date as of June 30, 2022 Summary By Campus		1			1	
Summary by Campus	FY	/ 2021	FY	2022		
Campus	Award Count	Award Amount	Award Count	Award Amount	\$ Change	% Change
Geology	-	-	1	106,399	106,399	100.0%
Hawaii Cooperative Fishery Research Unit	-	100 402	1	70,754	70,754	100.0%
Kinesiology and Exercise Sciences  Marine Science	1 5	106,462 445,171	3 5	217,975 297,835	111,513 (147,336)	104.7% -33.1%
Mathematics (UH Hilo)	1		-	297,033	(16,800)	-100.0%
Physics and Astronomy	2		1	90,000	(225,968)	-71.5%
Tropical Conservation Biology and Environmental Science	4		2	358,997	(222,524)	-38.3%
College of Pharmacy	14	657,665	7	669,878	12,213	1.9%
College of Pharmacy	8		3	360,908	156,118	76.2%
Pharmaceutical Sciences	2		1	124,011	(52,920) (170,880)	-29.9% -74.0%
Pharmacy Practice Research	3		2	60,000 124,959	79,895	177.3%
Hawaii Small Business Development Center	3		5	506,011	(369,545)	-42.2%
Hawaii Small Business Development Center	3		5	506,011	(369,545)	-42.2%
Imiloa Astronomy Center Of Hawaii	6	988,641	4	1,810,006	821,365	83.1%
Imiloa Astronomy Center Of Hawaii	6	988,641	4	1,810,006	821,365	83.1%
Ka Haka'Ula O Ke'Elikolani-UHH	6	1,805,097	8	1,983,383	178,286	9.9%
Hale Kuamo'o Center Ka Haka'Ula O Ke'Elikolani-UHH	5	950,000 855,097	6	1,085,424 897,959	135,424 42,862	14.3% 5.0%
Vice Chancellor for Administrative Affairs	2		3	134,630	112,130	498.4%
Vice Chancellor for Administrative Affairs	2	22,500	3	134,630	112,130	498.4%
Vice Chancellor for Research	23	2,246,051	12	1,162,210	(1,083,841)	-48.3%
Vice Chancellor for Research	23	2,246,051	12	1,162,210	(1,083,841)	-48.3%
Vice Chancellor for Student Affairs	12	2,975,475	11	3,089,609	114,134	3.8%
Student Affairs - Kipuka	1	630,588	-	-	(630,588)	-100.0%
Upward Bound	5		5	1,488,004	288,601	24.1%
Vice Chancellor for Student Affairs University of Hawai'i at Manoa	1,603	1,145,484 <b>357,864,608</b>	6 <b>1,559</b>	1,601,605 <b>369,428,145</b>	456,121 <b>11,563,537</b>	39.8% <b>3.2%</b>
College of Arts, Languages, and Letters	56	5,507,860	50	6,113,159	605,299	11.0%
Academy for Creative Media (Manoa)	-	-	1	32,000	32,000	100.0%
American Studies	1	350,000	-	-	(350,000)	-100.0%
Center for Chinese Studies	1	90,000	1	350,000	260,000	288.9%
Center for Japanese Studies	5		4	598,183	(7,000)	-1.2%
Center for Korean Studies	4	· · · · · · · · · · · · · · · · · · ·	3	68,000	(47,756)	-41.3%
Center for Language and Technology	3	1,186,333	2	156,000	(1,030,333)	-86.9%
Center for Pacific Islands Studies Center for Philippine Studies	-	-	1	71,958 141,616	71,958 141,616	100.0% 100.0%
Center for Frimppine Studies  Center for Southeast Asian Studies	1	118,703	2	563,500	444,797	374.7%
College of Arts, Languages, and Letters	-	-	5	2,113,420	2,113,420	100.0%
College of Language, Linguistics and Literature	-	-	1	5,200	5,200	100.0%
Department of East Asian Languages and Literature	12	1,873,533	11	1,436,207	(437,326)	-23.3%
Department of English	2	92,331	1	15,000	(77,331)	-83.8%
Department of Linguistics	2	32,258	4	112,276	80,018	248.1%
Department of Second Language Studies	2		2	36,731	(16,637)	-31.2%
Dept of Languages and Literatures of Europe and the Americas  College of Arts and Humanities	2		-	-	(12,080) (86,893)	-100.0% -100.0%
History (UH Manoa)	3	49,020	2	8,500	(40,520)	-82.7%
Music (UH Manoa)	4	46,013	2	23,000	(23,013)	-50.0%
Philosophy (UH Manoa)	=	´-	2	43,000	43,000	100.0%
Religion (UH Manoa)	-	-	1	91,710	91,710	100.0%
Theatre and Dance	3		3	20,858	3,155	17.8%
School of Pacific and Asian Studies	6		- 1	- 220,000	(568,339)	-100.0%
UHM Uehiro Academy for Philosophy and Ethics in Education  College of Education	3 <b>71</b>	210,347 <b>22,939,255</b>	1 81	226,000 <b>31,030,415</b>	15,653 <b>8,091,160</b>	7.4% <b>35.3%</b>
Center on Disability Studies/University Affiliated Pgms	31	13,157,827	27	11,796,396	(1,361,431)	-10.3%
College of Education	4		7	6,320,503	4,330,561	217.6%
Curriculum Research and Development Group	14	3,165,555	14	3,155,296	(10,259)	-0.3%
Department of Curriculum Studies	3	736,926	8	3,094,268	2,357,342	319.9%
Department of Educational Administration	-	-	1	4,000	4,000	100.0%
Department of Educational Foundations	1	15,000	1	913,779	898,779	5991.9%
Department of Educational Psychology		-	1	439,772	439,772	100.0%
Department of Kinesiology and Rehabilitation Science Department of Learning Design and Technology	5	401,134	6	1,427,506 996,552	1,026,372 996,552	255.9% 100.0%
Department of Learning Design and Technology  Department of Special Education	3	354,502	4	1,525,444	1,170,942	330.3%
Institute for Teacher Education	10		11	1,356,899	(1,761,470)	-56.5%
College of Engineering	46	7,029,321	42	6,832,308	(197,013)	-2.8%
Civil and Environmental Engineering	15	2,102,114	15	2,521,459	419,345	19.9%
College of Engineering	2		8	716,681	46,793	7.0%
Electrical Engineering	7		8	953,471	(903,259)	
Hawaii Center for Advanced Communications  Machanical Engineering	3 19	77,562 2,323,027	- 11	2,640,697	(77,562)	-100.0%
Mechanical Engineering  College of Natural Sciences	243	2,323,027 <b>34,319,851</b>	227	2,640,697 <b>40,062,334</b>	317,670 <b>5,742,483</b>	13.7% <b>16.7%</b>
Department of Biology (Biology Program)	8	1,558,807	-	+0,002,334	(1,558,807)	-100.0%
Department of Botany	149	21,801,367	1	275,000	(21,526,367)	-98.7%
Department of Chemistry	10		16	3,231,046	1,297,246	67.1%
Department of Mathematics	9		4	241,578	(694,857)	-74.2%
Department of Microbiology	3	1,324,489	_	-	(1,324,489)	-100.0%

FY 2022 Monthly Report of Awards to Date as of June 30, 2022						
Summary By Campus	E)	/ 2021	EV	7 2022		
Campus	Award Count	Award Amount	Award Count	Award Amount	\$ Change	% Change
Department of Physics and Astronomy	31	4,160,076	26	4,101,643	(58,433)	-1.4%
Information and Computer Sciences	13	773,793	9	1,566,277	792,484	102.4%
Pacific Cooperative Studies Unit	20	1,831,084	132	21,456,518	19,625,434	1071.8%
School of Life Sciences	-		39	9,190,272	9,190,272	100.0%
College of Social Sciences	101	21,472,756	107	24,928,939	3,456,183	16.1%
College of Social Sciences  Department of Anthropology	5 4		2	35,789 304,034	(385,725) 155,320	-91.5% 104.4%
Economics (UH Manoa)	3	· · · · · · · · · · · · · · · · · · ·	2	59,728	(35,417)	-37.2%
Ethnic Studies	2		5	418,178	317,631	315.9%
Geography (UH Manoa)	5	295,020	2	71,602	(223,418)	-75.7%
Political Science (UH Manoa)	2		2		(5,079)	-4.6%
Psychology (UH Manoa)	17		19	3,924,635	861,980	28.1%
Public Administration	2		1	108,000	92,300	587.9%
School of Communications Social Science Research Institute	5 49	616,297 11,273,461	3 57	78,654 13,586,365	(537,643) 2,312,904	-87.2% 20.5%
Sociology (UH Manoa)		-	1	51,854	51,854	100.0%
Urban and Regional Planning	6	5,318,802	9	6,184,180	865,378	16.3%
Womens Studies	1	13,902	-	-	(13,902)	-100.0%
College of Tropical Agriculture and Human Resources	169	25,307,062	152	29,338,746	4,031,684	15.9%
Agricultural Diagnostic Service Center	2	201,906	-	=	(201,906)	-100.0%
Center on the Family	7	663,165	10	1,726,914	1,063,749	160.4%
College of Tropical Agriculture and Human Resources Cooperative Extension	5	615,863 696,170	5	790,498 320,000	174,635 (376,170)	28.4% -54.0%
Family and Consumer Sciences		- 090,170	1	474,835	474,835	100.0%
Hawaii County	19	1,616,209	26	1,836,453	220,244	13.6%
Human Nutrition, Food and Animal Sciences	11	1,835,271	15	12,154,626	10,319,355	562.3%
Maui County	7	481,126	9	1,518,685	1,037,559	215.7%
Molecular Biosciences and Bioengineering	10		9	718,459	(771,480)	-51.8%
Natural Resources and Environmental Mgt (NREM)	27	2,092,583	13	1,027,580	(1,065,003)	-50.9%
Oahu County	7	869,269	5	911,994	42,725	4.9%
Office of The Assoc Dean for Academic and Student Affairs Plant and Environmental Protection Sciences	11 41	3,310,995 8,354,952	5 36	1,332,884 4,863,227	(1,978,111) (3,491,725)	-59.7% -41.8%
Tropical Plant and Soil Science	18	3,079,614	15	1,662,591	(1,417,023)	-46.0%
Hawai'inuiakea School of Hawaiian Knowledge	6		22	2,070,787	995,112	92.5%
Hawai'inuiakea School of Hawaiian Knowledge	1		2	684,396	563,646	466.8%
Kamakakuokalani Center for Hawaiian Studies	4	255,800	6	511,194	255,394	99.8%
Kawaihuelani Center for Hawaiian Language	1	699,125	9	254,190	(444,935)	-63.6%
Native Hawaii Student Services	-	-	5	621,007	621,007	100.0%
Institute for Astronomy	80	18,534,829	<b>80</b>	20,163,647	1,628,818	8.8%
Institute for Astronomy  John A. Burns School of Medicine	80 <b>203</b>	18,534,829 <b>63,683,362</b>	175	20,163,647 <b>58,038,027</b>	1,628,818 (5,645,335)	8.8% - <b>8.9%</b>
Associate Dean for Academic Affairs (ADAA)	14	2,309,086	14	5,345,108	3,036,022	131.5%
Department of Anatomy, Biochemistry, and Physiology	25	5,236,672	17	3,306,848	(1,929,824)	-36.9%
Department of Cell and Molecular Biology	5		5	593,589	(149,456)	-20.1%
Department of Family Medicine and Community Health	16		10	1,208,112	(2,101,140)	-63.5%
Department of Geriatric Medicine	10	2,176,551	8		(1,620,600)	-74.5%
Department of Medicine  Department of Native Hawaiian Health	25 5	3,942,943 795,581	18 14	3,374,192 8,324,020	(568,751) 7,528,439	-14.4% 946.3%
Department of Native Hawaiian Health  Department of Obstetrics, Gynecology and Women's Health	16				(1,062,471)	
Department of Pediatrics	14		21	6,700,132	2,377,055	55.0%
Department of Psychiatry	6		10	6,596,452	2,403,010	57.3%
Department of Quantitative Health Sciences	8	3,223,823	11	1,883,020	(1,340,803)	-41.6%
Department of Surgery	10		6		(146,533)	-15.7%
Department of Tropical Medicine, Medical Micro and Pharm	29	7,803,025	13	991,492	(6,811,533)	-87.3%
Fundamentals of Health Sciences (ADR)	-	40 404 522	1		23,838	100.0%
John A. Burns School of Medicine  Native Hawaiian Center of Excellence	18		19	14,738,054	(4,456,468) (700,000)	-23.2% -100.0%
Office of Biostatistics & Quantitative Health Sciences	1		-	_	(126,120)	-100.0%
Lyon Arboretum	5		2		(519,592)	-93.0%
Lyon Arboretum	5		2		(519,592)	-93.0%
Nancy Atmospera-Walch School of Nursing	15	1,247,425	19	1,939,653	692,228	55.5%
Department of Nursing	11		6	682,808	(123,088)	-15.3%
Hawaii State Center for Nursing	2		-	-	(78,729)	-100.0%
Nancy Atmospera-Walch School of Nursing	2	,	13	1,256,845	894,045	246.4%
Office of the Provost	-	-	5 1		<b>297,592</b> 59,048	100.0% 100.0%
Office of Global Engagement	_	1	4	238,544	238,544	100.0%
Office of Global Engagement Office of the Provost	-	-				
Office of Global Engagement Office of the Provost Outreach College	- 5	151,296	6	165,000	13,704	9.1%
Office of the Provost	-			165,000		
Office of the Provost  Outreach College	- 5 3 2	85,000 66,296	<b>6</b> 5 1	<b>165,000</b> 117,500 47,500	13,704	38.2%
Office of the Provost  Outreach College  Community Programs  Outreach College  School of Architecture	5 3 2 2	85,000 66,296 <b>218,102</b>	6 5 1 1	165,000 117,500 47,500 179,585	13,704 32,500 (18,796) (38,517)	38.2% -28.4% - <b>17.7</b> %
Office of the Provost Outreach College Community Programs Outreach College School of Architecture School of Architecture	5 3 2 2 2	85,000 66,296 <b>218,102</b> 218,102	6 5 1 1	165,000 117,500 47,500 179,585 179,585	13,704 32,500 (18,796) (38,517) (38,517)	38.2% -28.4% <b>-17.7%</b> -17.7%
Office of the Provost  Outreach College Community Programs Outreach College School of Architecture School of Architecture School of Ocean and Earth Science and Technology	- 5 3 2 2 2 2 386	85,000 66,296 <b>218,102</b> 218,102 <b>99,875,035</b>	6 5 1 1 1 1 371	165,000 117,500 47,500 179,585 179,585 95,023,693	13,704 32,500 (18,796) (38,517) (38,517) (4,851,342)	38.2% -28.4% -17.7% -17.7% -4.9%
Office of the Provost  Outreach College Community Programs Outreach College School of Architecture School of Architecture School of Ocean and Earth Science and Technology Center for Microbial Oceanography, Research and Edu (C-MORE)	- 5 3 2 2 2 2 386	85,000 66,296 <b>218,102</b> 218,102 <b>99,875,035</b> 1,718,806	6 5 1 1 1 371	165,000 117,500 47,500 179,585 179,585 95,023,693 1,572,443	13,704 32,500 (18,796) (38,517) (38,517) (4,851,342) (146,363)	9.1% 38.2% -28.4% -17.7% -17.7% -4.9% -8.5%
Office of the Provost  Outreach College Community Programs Outreach College School of Architecture School of Architecture School of Ocean and Earth Science and Technology	- 5 3 2 2 2 2 386	85,000 66,296 218,102 218,102 99,875,035 1,718,806 14,253,236	6 5 1 1 1 1 371	165,000 117,500 47,500 179,585 179,585 95,023,693	13,704 32,500 (18,796) (38,517) (38,517) (4,851,342)	38.2% -28.4% -17.7% -17.7% -4.9%

FY 2022 Monthly Report of Awards to Date as of June 30, 2022						
Summary By Campus						
		2021		2022		
Campus	Award Count	Award Amount	Award Count	Award Amount	\$ Change	% Change
Department of Oceanography Earth Sciences	45 25	11,255,495 7,467,676	36 24	8,281,020 4,167,282	(2,974,475)	-26.4% -44.2%
Hawaii Institute of Geophysics and Planetology (HIGP)	66		59	9,688,554	1,480,309	18.0%
Hawaii Institute of Marine Biology (HIMB)	44	6,787,419	58	9,751,518	2,964,099	43.7%
Hawaii Natural Energy Institute (HNEI)	17	11,970,477	17	8,495,089	(3,475,388)	-29.0%
International Pacific Research Center (IPRC)	7		5	760,805	(113,243)	-13.0%
Pacific Biosciences Research Center	46		38	7,320,398	(643,689)	-8.1%
School of Ocean and Earth Science and Technology	8		6	7,539,323	(6,718,081)	-47.1%
Sea Grant College Program University Marine Center/Ship Operations	45		46 5	8,939,298 1,351,794	1,394,996 (1,210,658)	18.5% -47.2%
Shidler College of Business	1		2	71,382	46,882	191.4%
Department of Information Technology Management	1		-		(24,500)	-100.0%
School of Travel Industry Management	-	-	1	35,382	35,382	100.0%
Shidler College of Business	-	-	1	36,000	36,000	100.0%
Thompson School of Social Work & Public Health	57	17,866,190	54	16,720,232	(1,145,958)	-6.4%
Center on Aging	16	6,297,917	12	8,461,610	2,163,693	34.4%
Department of Social Work	- 20	4 014 002	27	466,200 6,202,272	466,200	100.0%
Office of Public Health Studies Thompson School of Social Work & Public Health	28 13		13	1,590,150	1,387,280 (5,163,131)	28.8% -76.5%
University of Hawaii Cancer Center	80		80	21,933,869	(4,090,120)	-15.7%
Cancer Etiology (Epidemiology)	41	10,573,446	40	14,810,735	4,237,289	40.1%
Natural Products (Cancer Biology)	21	2,759,336	18	2,290,919	(468,417)	-17.0%
Social and Behavioral Sciences (Prevention in the Pacific)	4		6	1,130,773	484,078	74.9%
Translational and Clinical Research	3		3	1,343,274	(57,264)	-4.1%
University of Hawaii Cancer Center	11	, ,	13	2,358,168	(8,285,806)	-77.8%
Vice Provost, Academic Excellence Graduate Education	21		<b>23</b>	<b>2,027,926</b> 1,165,706	<b>8,194</b> 101,789	<b>0.4%</b> 9.6%
International & Exch Prog	1		- 4	1,165,706	(52,806)	-100.0%
Library (UH Manoa)	8		12	190,864	(77,808)	-29.0%
UH Press	2		-	-	(25,500)	-100.0%
Undergraduate Education	4	512,279	2	585,774	73,495	14.3%
Vice Provost, Academic Excellence	4		5	85,582	(10,976)	-11.4%
Vice Provost, Research and Scholarship	1		1	2,444	(14,835)	-85.9%
Vice Provost, Research and Scholarship	1		1	2,444	(14,835)	-85.9%
Vice Provost, Student Success  Health & Wellness to University Health Services	17	6,562,941	13 1	<b>4,838,427</b> 10,000	(1,724,514) 10,000	<b>-26.3%</b> 100.0%
Student Equity Excel & Diversity	13	4,858,305	10	3,986,609	(871,696)	-17.9%
Women's Center	4		2	841,818	(862,818)	-50.6%
VP For Administration	-	-	1	124,000	124,000	100.0%
Department of Public Safety	-	-	1	,	124,000	100.0%
Waikiki Aquarium	-	-	2	1,991,626	1,991,626	100.0%
Waikiki Aquarium	-	4 745 400	2	1,991,626	1,991,626	100.0%
Water Resources Research Center  Water Resources Research Center	12 12		17 17	<b>3,499,813</b> 3,499,813	<b>1,784,615</b> 1,784,615	<b>104.0%</b> 104.0%
William S. Richardson School of Law	26		26	1,995,519	281,183	16.4%
William S. Richardson School of Law	26		26	1,995,519	281,183	16.4%
University of Hawai'i at West O'ahu	22	3,100,245	24	6,734,359	3,634,114	117.2%
Chancellor, UH West Oahu	22	3,100,245	24	6,734,359	3,634,114	117.2%
Chancellor, UH West Oahu	8		6	3,223,778	1,679,979	108.8%
Distance Learning Office	1	,	-	- 204 074	(16,346)	-100.0%
Division of Business	2	,	1	201,871	16,783	9.1%
Division of Education Division of Humanities	1	100,000	2	100,000 20,000	20,000	0.0% 100.0%
Division of Mathematics, Natural and Health Sciences	2		3		752,383	1406.3%
Division of Social Sciences	2		5		938,065	306.0%
'Ulu'ulu Giugni Archives	2	140,000	-	-	(140,000)	-100.0%
Vice Chancellor for Academic Affairs (UH WO)	1		2	18,250	(91,750)	-83.4%
Vice Chancellor for Student Affairs	3		4		475,000	73.6%
University of Hawai'i Maui College	39		47	13,508,783	904,140	7.2%
Chancellor, UH Maui College Allied Health Department	39		47	13,508,783	<b>904,140</b> (57,000)	<b>7.2%</b> -100.0%
Chancellor, UH Maui College	37		43	13,098,485	625,842	5.0%
Cooperative Education (UH Maui College)	1		-		(75,000)	-100.0%
Science, Technology, Engineering and Mathematics Department		-	1	199,998	199,998	100.0%
University of Hawaii Center, Maui	-	-	3		210,300	100.0%
University of Hawai'i System	100	86,743,175	94	70,859,113	(15,884,062)	-18.3%
Office of the Vice President for Community Colleges	11		11	4,669,517	(14,506,281)	-75.6%
Office of the Vice President for Community Colleges Office of the Vice President for Research and Innovation	50		11 47	4,669,517	(14,506,281)	-75.6%
Office of the Vice President for Research and Innovation  Applied Research Laboratory	42		35	<b>37,569,275</b> 25,202,094	<b>5,188,748</b> 1,289,870	<b>16.0%</b> 5.4%
Office of the Vice President for Research and Innovation	7		11	12,342,243	3,884,643	45.9%
STEM Pre-Academy	1		1	24,938	14,235	133.0%
Office of the VP for Academic Planning and Policy	11		15	11,395,490	4,923,507	76.1%
Hawai'i P-20 Partnerships for Education Office	11		15	11,395,490	4,923,507	76.1%
Office of the VP for Information Tech/Chief Info Officer	25		18	16,676,186	(11,860,947)	-41.6%
Office of the VP for Information Tech/Chief Info Officer	16		14	7,485,980	(7,334,009)	-49.5%
Pacific Disaster Center	9	13,717,144	4	9,190,206	(4,526,938)	-33.0%

FY 2022 Monthly Report of Awards to Date as of June 30, 2022						
Summary By Campus						
	FY	2021	FY	2022		
Campus	Award Count	Award Amount	Award Count	Award Amount	\$ Change	% Change
Office of the VP for Student Affairs and Univ/Comm Relations	-	-	2	479,639	479,639	100.0%
Hawaii Commission for National and Community Service (HCNCS)	-	-	2	479,639	479,639	100.0%
President, University of Hawaii System	2	160,933	-	-	(160,933)	-100.0%
President, University of Hawaii System	2	160,933	-	=	(160,933)	-100.0%
VP For Administration	1	16,801	1	69,006	52,205	310.7%
VP For Administration	1	16,801	1	69,006	52,205	310.7%
Windward Community College	21	5,684,114	20	9,664,035	3,979,921	70.0%
Chancellor, Windward Community College	21	5,684,114	20	9,664,035	3,979,921	70.0%
Academic Affairs (Windward CC)	1	851,053	2	1,056,396	205,343	24.1%
Chancellor, Windward Community College	19	4,741,494	18	8,607,639	3,866,145	81.5%
Continuing and Community Education	1	91,567	-	=	(91,567)	-100.0%
Grand Total	1,963	492,089,997	1,931	509,006,401	16,916,404	3.4%



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Cover photo by: UH Cancer Center

#### Dear Colleagues:

I would like to commend our faculty, staff and graduate students for their resiliency, hard work and dedication that has kept the University of Hawai'i research enterprise on a steady upward trajectory over the last few years in spite of significant challenges posed by our economy, world affairs and fallout from the recent pandemic.

On that note, I am extremely pleased to report that for the first time in our history, UH has topped half a billion dollars in extramural funding with a record total of \$505.0 million in FY2022. This year's number represents a \$19.5 million or 4.0 percent increase over FY2021 and exceeds UH's previous record of \$488.6 million set in FY 2011 by \$16.4 million.

Our flagship University of Hawai'i at Mānoa campus topped the extramural award amounts this year with \$366.1 million, while the UH System brought in \$70.6 million, UH Community Colleges totaled \$43.6 million, the University of Hawai'i at Hilo received \$18.0 million and the University of Hawai'i at West O'ahu totaled \$6.7 million. Here are a few examples of UH programs that attracted the attention of funders:

- The Applied Research Laboratory at UH and UH Mānoa's School of Ocean and Earth Science and Technology (SOEST) was awarded \$5.5 million, part of a five-year \$25 million investment by the Defense Advanced Research Projects Agency, to develop an engineered coral reef ecosystem to protect coastlines.
- UH received over \$11 million for natural resource management programs covering endangered and invasive species, as well as marine and coastal ecosystems protection.
- UH Mānoa's Hawai'i Natural Energy Institute (HNEI) received \$6.2 million from the Office of Naval Research (ONR) for its Asia-Pacific Research Initiative for Sustainable Energy Systems for testing and evaluation of renewable generation and power system controls for smart- and micro-grids. HNEI also received \$6 million from ONR to continue its research and maintenance support of the U.S. Navy's Wave Energy Test Site in Kāne'ohe Bay.
- The UH System received over \$5 million from ONR for tank inspection (UH Mānoa College of Engineering), hydrogeological research of groundwater and contaminant flow (SOEST) and enhanced water quality testing (UH Mānoa's Water Resources Research Center) related to the Red Hill crisis.
- The John A. Burns School of Medicine was awarded \$4.6 million, part of a five-year \$23 million grant from the U.S. Department of Health and Human Services (DHHS) for Ola HAWAII, a multidisciplinary research center that addresses health disparities in the underserved, multiethnic populations in Hawai'i.
- UH's Established Program to Stimulate Competitive Research received \$3.5 million, part of a five-year \$20 million grant by the National Science Foundation, to integrate climate and data science research under its Change HI initiative.
- DHHS awarded \$2.9 million to the University of Hawai'i Cancer Center to continue its important Multiethnic Cohort Study.

- UH Maui College received \$2 million from the National Science Foundation for its Akeakamai I
  Ka Lā Hiki Ola initiative that encourages and promotes STEM education to Native Hawaiian
  students.
- UH West O'ahu received a \$1 million donation from the W.K. Kellogg Foundation to create the Hawai'i Institute for Sustainable Community Food Systems, a food system transformation hub grounded in complementary STEM disciplines, indigenous knowledge and cultural practices.
- UH Hilo's Center for the Study of Active Volcanoes received \$712,000 from the U.S.
   Department of the Interior to conduct geological, geochemical, geophysical and risk mitigation research related to the Kīlauea Mauna Loa and Haleakalā volcanoes.

While uncertain times still lie ahead, your "can-do" attitude and commitment to help expand the University of Hawai'i's role as an important driver of innovation, knowledge and economic development in this state and around the world, is most assuring and greatly appreciated. Thank you for making UH research a large part of your DNA.

Sincerely,

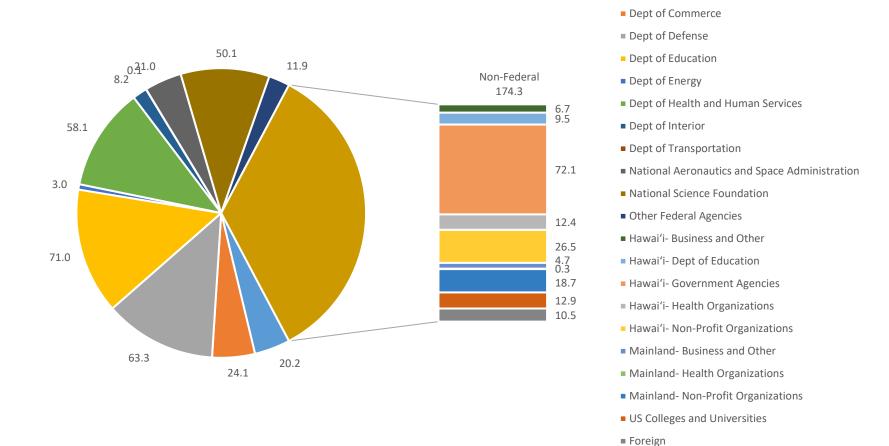
Vassilis L. Syrmos

Vice President for Research and Innovation

#### **Chart 1: Awards by Sponsor**

(in millions)

■ Dept of Agriculture



Institutional Awards received from Federal COVID-19 Higher Education Emergency Relief Funding (HEERF) acts and related expenditures are reported separately from extramural awards and extramural expenditures in this report. The HEERF award totals can be found in Chart 4: Total Federal CARES Act Awards by Campus and Figure 4: Summary of Federal CARES Act Awards; HEERF expenditures are presented in Chart 12: Total Federal CARES Act Expenditures by Campus and Figure 12: Summary of Federal CARES Act Expenditures.

**Figure 1: Contract and Grant Awards Summary by Sponsor Type** 

Sponsor Type	Amount Awarded	Award Count
Dept of Agriculture	\$20,230,941	59
Dept of Commerce	\$24,094,195	80
Dept of Defense	\$63,306,485	85
Dept of Education	\$70,960,115	123
Dept of Energy	\$2,964,342	9
Dept of Health and Human Services	\$58,116,849	101
Dept of Interior	\$8,184,534	54
Dept of Transportation	\$50,734	1
National Aeronautics and Space Administration	\$20,953,184	65
National Science Foundation	\$50,061,550	119
Other Federal Agencies	\$11,927,551	24
Hawai'i Business and Other	\$6,704,629	75
Hawai'i Dept of Education	\$9,467,998	26
Hawai'i Government Agencies	\$72,099,887	352
Hawai'i Health Organizations	\$12,357,801	33
Hawai'i Non-Profit Organizations	\$26,453,935	357
Mainland- Business and Other	\$4,706,757	80
Mainland- Health Organizations	\$262,096	6
Mainland- Non-Profit Organizations	\$18,669,734	79
US Colleges and Universities	\$12,935,996	152
Foreign	\$10,509,821	51
Grand Total	\$505,019,134	1,931

Chart 2: Breakdown of Federal and Non-Federal Awards
Five Year Comparison

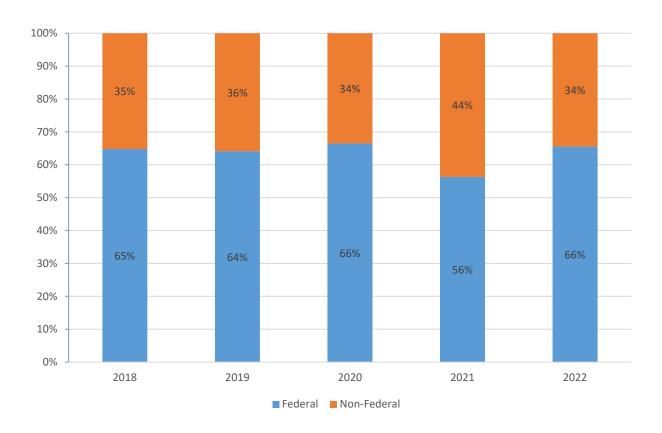
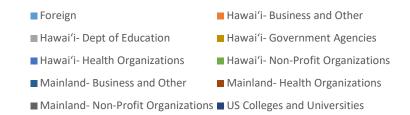
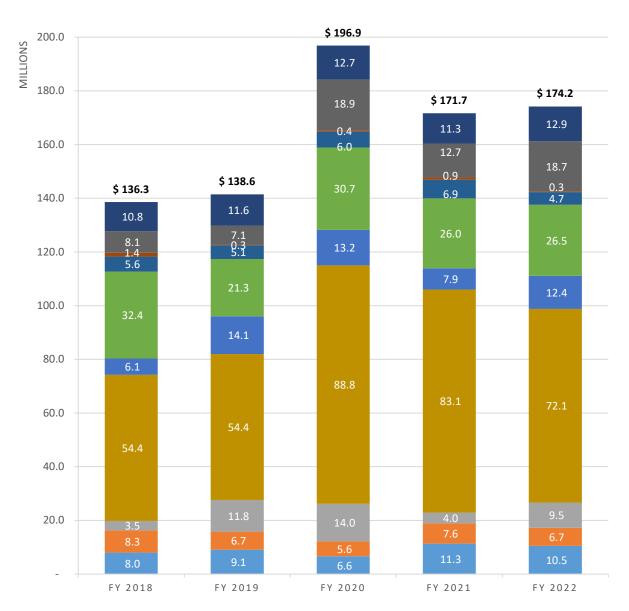


Figure 2: Summary of Federal and Non-Federal Awards

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Source of Funding	Amount Awarded	Amount Awarded	Amount Awarded	Amount Awarded	Amount Awarded
Federal	\$247,741,514	\$280,412,092	\$253,555,515	\$313,871,669	\$330,850,480
Non-Federal	\$138,570,189	\$141,440,068	\$196,883,734	\$171,657,257	\$174,168,654
Total	\$386,311,703	\$421,852,160	\$450,439,249	\$485,528,926	\$505,019,134

## Chart 3a: Non-Federal Awards by Fiscal Year Five Year Comparison





# **Chart 3b: Federal Awards by Fiscal Year Five Year Comparison**

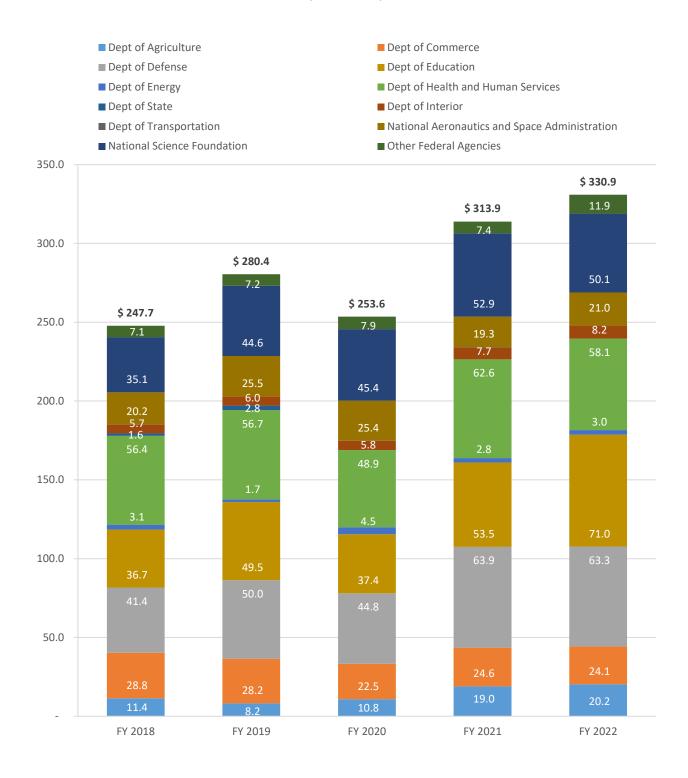
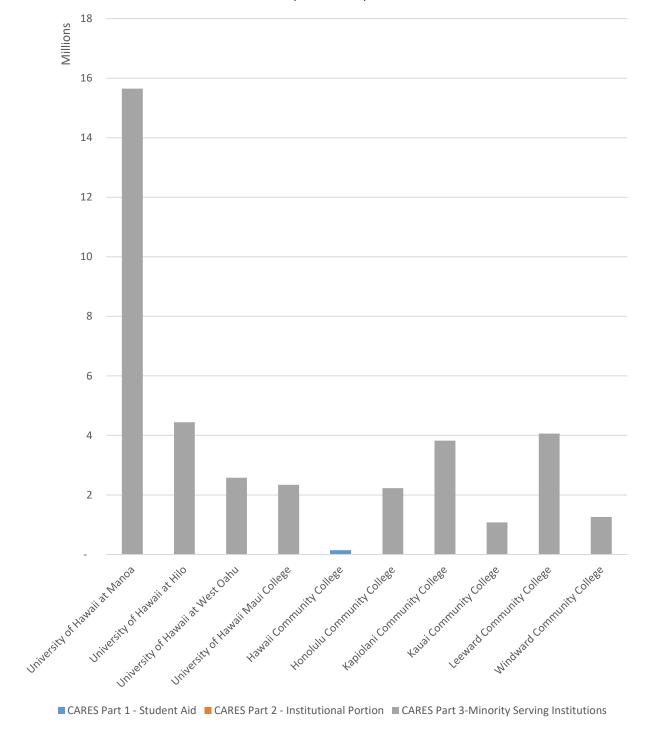


Figure 3: Total Contract and Grant Awards Received Five Year Comparison

		FY 201	8	FY 201	9	FY 202	0	FY 202	1	FY 2022	2
Source of Funding		Amount Awarded	% of Total	Amount Awarded	% of Total						
Federal	Dept of Agriculture	\$11,433,935	3%	\$8,222,884	2%	\$10,787,963	2%	\$18,959,135	4%	\$20,230,941	4%
. cac.a.	Dept of Commerce	\$28,794,795	7%	\$28,181,538	7%	\$22,488,575	5%	\$24,553,870	5%	\$24,094,195	5%
	Dept of Defense	\$41,426,235	11%	\$49,966,996	12%	\$44,780,906	10%	\$63,947,139	13%	\$63,306,485	13%
	Dept of Education	\$36,737,371	10%	\$49,540,646	12%	\$37,408,690	8%	\$53,510,948	11%	\$70,960,115	
	Dept of Energy	\$3,145,417	1%	\$1,658,015	0%	\$4,535,358	1%	\$2,849,966	1%	\$2,964,342	
	Dept of Health and Human Services	\$56,358,106	15%	\$56,714,095	13%	\$48,876,217	11%	\$62,602,750	13%	\$58,116,849	12%
	Dept of State	\$1,550,000	0%	\$2,775,000	1%	ŷ 10,070,217	0%	¥02,002,730	0%	<b>430,110,0</b> 13	0%
	Dept of Interior	\$5,737,236	1%	\$5,952,633	1%	\$5,777,494	1%	\$7,674,144	2%	\$8,184,534	
	Dept of Transportation	\$164,625	0%	-	0%	\$200,000	0%	\$200,000	0%	\$50,734	0%
	National Aeronautics and Space Administration	\$20,167,908	5%	\$25,529,759	6%	\$25,444,136	6%	\$19,287,603	4%	\$20,953,184	4%
	National Science Foundation	\$35,078,731	9%	\$44,634,050	11%	\$45,356,073	10%	\$52,878,091	11%	\$50,061,550	
	Other Federal Agencies	\$7,147,155	2%	\$7,236,476	2%	\$7,900,103	2%	\$7,408,023	2%	\$11,927,551	2%
Federal Total	Other rederal Agenties	\$247,741,514	64%	\$280,412,092	66%	\$253,555,515	56%	\$313,871,669	65%	\$330,850,480	
Non-Federal	Foreign	\$7,984,175	2%	\$9,075,877	2%	\$6,604,921	1%	\$11,327,252	2%	\$10,509,821	2%
Non-reactar	Hawai'i- Business and Other	\$8,321,278	2%	\$6,734,322	2%	\$5,601,377	1%	\$7,572,360	2%	\$6,704,629	1%
	Hawai'i- Dept of Education	\$3,513,321	1%	\$11,796,600	3%	\$13,971,439	3%	\$3,988,446	1%	\$9,467,998	
	Hawai'i- Government Agencies	\$54,395,732	14%	\$54,354,585	13%	\$88,827,235	20%	\$83,122,450	17%	\$72,099,887	14%
	Hawai'i- Health Organizations	\$6,067,920	2%	\$14,101,752	3%	\$13,238,347	3%	\$7,920,609	2%	\$12,357,801	2%
	Hawai'i- Non-Profit Organizations	\$32,407,127	8%	\$14,101,732	5% 5%	\$15,256,547	3% 7%	\$26,038,426	5%	\$26,453,935	2% 5%
	Mainland- Business and Other										5% 1%
		\$5,572,124	1%	\$5,129,155	1%	\$5,952,383	1%	\$6,890,171	1%	\$4,706,757	
	Mainland- Health Organizations	\$1,443,529	0%	\$262,863	0%	\$442,816	0%	\$860,927	0%	\$262,096	
	Mainland- Non-Profit Organizations US	\$8,065,294	2%	\$7,064,790	2%	\$18,899,232	4%	\$12,662,232	3%	\$18,669,734	
	Colleges and Universities	\$10,799,689	3%	\$11,618,287	3%	\$12,693,837	3%	\$11,274,384	2%	\$12,935,996	
Non-Federal Total		\$138,570,189	36%	\$141,440,068	34%	\$196,883,734	44%	\$171,657,257	35%	\$174,168,654	
Grand Total		\$386,311,703	100%	\$421,852,160	100%	\$450,439,249	100%	\$485,528,926	100%	\$505,019,134	100%

**Chart 4: Total Federal CARES Act Awards by Campus** 

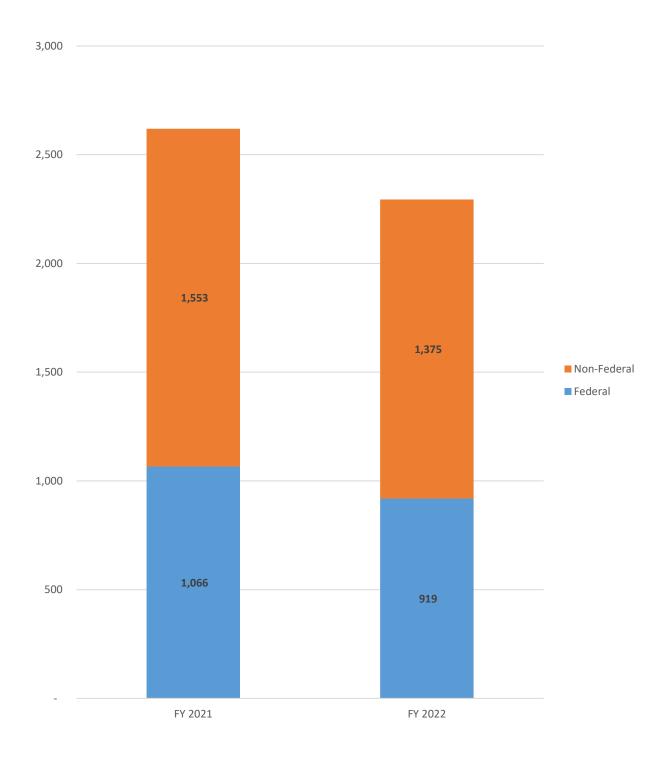


**Figure 4: Summary of Federal CARES Act Awards** 

Campus	CARES Part 1 Student Aid	CARES Part 2 Institutional Portion	CARES Part 3 Minority Serving Institutions	Total CARES Awards
Campus			mstitutions	
University of Hawaiʻi at Mānoa	-	-	\$15,649,501	\$15,649,501
University of Hawai'i at Hilo	-	-	\$4,444,443	\$4,444,443
University of Hawai'i at West Oahu	-	-	\$2,579,776	\$2,579,776
University of Hawai'i Maui College	-	-	\$2,343,617	\$2,343,617
Hawai'i Community College	\$133,538	-	\$16,931	\$150,469
Honolulu Community College	-	-	\$2,228,230	\$2,228,230
Kapiʻolani Community College	-	-	\$3,825,687	\$3,825,687
Kaua'i Community College	-	-	\$1,076,859	\$1,076,859
Leeward Community College	-	-	\$4,059,197	\$4,059,197
Windward Community College	<u>-</u>	-	\$1,264,171	\$1,264,171
Grand Total	\$133,538	-	\$37,488,412	\$37,621,950

Note: Federal CARES Act awards (HEERF) are not included in the \$505,019,134 FY22 award total

**Chart 5: Number of Proposals Submitted Prior Year Comparison** 



### Chart 6: Total Dollar Amount of Proposals Submitted Prior Year Comparison

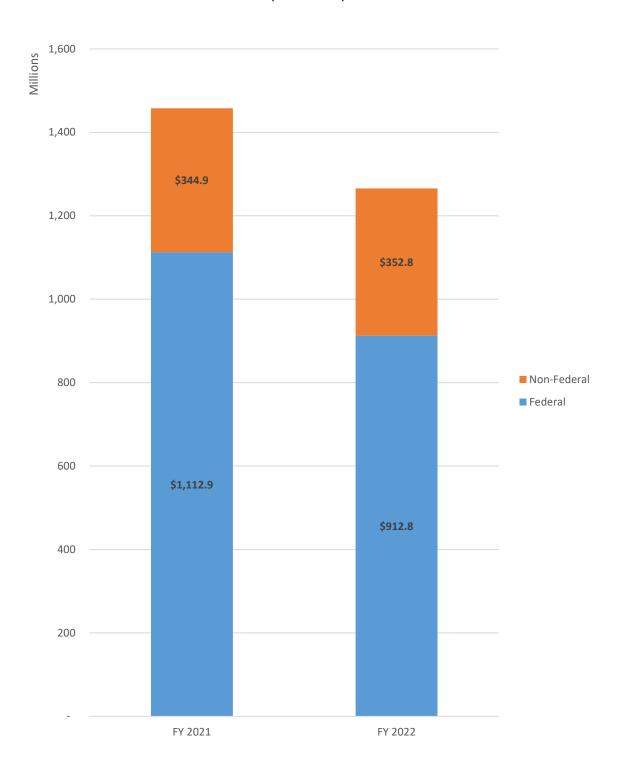


Figure 5: Proposal Summary by Source of Funding Prior Year Comparison

		FY 2021		FY 2022	
Source of Fund	ling	Requested Amount	Proposals Submitted	Requested Amount	Proposals Submitted
Federal	Dept of Agriculture	\$48,308,131	108	\$12,544,148	74
	Dept of Commerce	\$132,329,719	90	\$84,207,270	90
	Dept of Defense	\$148,246,277	95	\$66,712,988	74
	Dept of Education	\$130,208,519	68	\$138,445,361	123
	Dept of Energy	\$15,706,273	14	\$19,476,049	20
	Dept of Health and Human Services	\$297,670,874	179	\$334,852,275	143
	Dept of the Interior	\$10,444,229	60	\$12,395,260	49
	Dept of State	\$594,518	1	45,774,894	7
	Dept of Transportation	\$100,000	1	\$400,000	2
	National Aeronautics and Space Administration	\$103,420,830	158	\$64,537,471	105
	National Science Foundation	\$210,349,751	245	\$150,507,237	191
	Other Federal Agencies	\$15,493,843	47	\$22,971,728	41
Federal Total		\$1,112,872,964	1,066	\$912,824,681	919
Non-Federal	Hawai'i Business and Other	\$12,685,554	86	\$9,233,489	89
	Hawai'i Dept of Education	\$6,160,017	31	\$8,441,489	30
	Hawai'i Government Agencies	\$97,189,993	421	\$142,598,415	361
	Hawai'i Health Organizations	\$13,974,447	34	\$4,835,803	39
	Hawai'i Non-Profit Organizations	\$35,631,729	392	\$37,825,273	395
	Mainland- Business and Other	\$39,578,967	117	\$24,149,150	82
	Mainland- Health Organizations	\$2,407,647	21	\$5,194,334	17
	Mainland- Non-Profit Organizations	\$35,814,908	152	\$38,680,628	134
	US Colleges and Universities	\$85,782,989	239	\$70,455,331	162
	Foreign	\$15,696,128	60	\$11,379,831	66
Non-Federal To	otal	\$344,922,379	1,553	\$352,793,743	1,375
<b>Grand Total</b>		\$1,457,795,343	2,619	\$1,265,618,424	2,294

Chart 7: Total Contract and Grant Awards – 12 Year Comparison (in millions)



Figure 6: Total Contract and Grant Awards Summary
12 Year Comparison

Year	Total Awarded	% Change	Year	Total Awarded	% Change
FY2011	\$488,597,908	8%	FY 2017	\$387,001,705	-1%
FY2012	\$435,874,967	-11%	FY2018	\$386,311,703	0%
FY2013	\$409,783,318	-6%	FY2019	\$421,852,160	9%
FY2014	\$392,314,955	-4%	FY2020	\$450,439,249	7%
FY 2015	\$425,650,338	8%	FY2021	\$485,528,926	8%
FY 2016	\$391,334,528	-8%	FY2022	\$505,019,134	4%

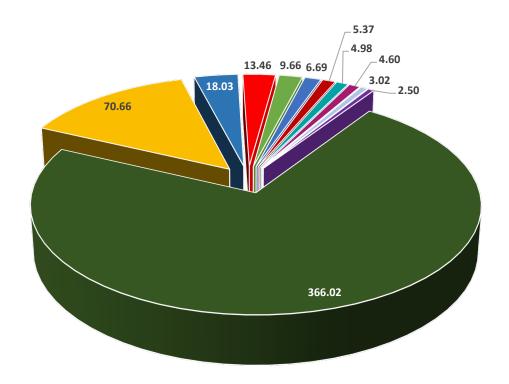
Figure 7: Top Individual Awards

Award Amount	PI Name	Department	Award Sponsor	Title
\$10,000,000	Rachel Novotny	Human Nutrition, Food and Animal Sciences	AGRICULTURE, DEPT-NATL INST FOOD AND AGRICULTURE	Food System Resiliency for Children's Healthy Living (CHL Food System)
\$7,965,691	John Rayner	Institute for Astronomy	NATIONAL AERONAUT & SPACE ADM	Operation of the Infrared Telescope Facility (IRTF) for NASA Headquarters
\$7,796,202	David Lassner	Pacific Disaster Center	DEFENSE, DEPT- WASHINGTON HEADQUARTERS SVCS	University of Hawai'i Pacific Disaster Center (UoH PDC) Cooperative Agreement 2021- 2026
\$7,204,791	Bruce Howe	Department of Ocean and Resources Engineering	MOORE (GORDON &BETTY) FOUNDATION	SMART Subsea Cables: Implementing for Geophysics, Early Warning and Oceans, Vanuatu-New Caledonia to Global
\$6,504,159	Stephen A Schatz	Hawai'i P-20 Partnerships for Education Office	EDUCATION, DEPT- FED TITLE 1 PERKINS	Career and Technical Education - Basic Grants to States
\$6,249,889	Richard Rocheleau	Hawaiʻi Natural Energy Institute (HNEI)	DEFENSE, DEPT- NAVY OFC OF NAVAL RSCH	Asia Pacific Research Initiative for Sustainable Energy Systems 2021 (APRISES21)
\$6,165,132	Jerris Hedges	John A. Burns School of Medicine	HEALTH & HUMAN SVC, DEPT-NIH-FED NATL INST MIN HLTH & DISP	Ola HAWAII
\$6,142,693	David Lassner	Applied Research Laboratory	DEFENSE, DEPT-AIR FORCE RESEARCH LABORATORY	Vanguard Center's Unified UARC for Maui High Performance Computing Center Support (VaCUUMS)
\$6,000,000	Patrick Stephen Cross	Applied Research Laboratory	DEFENSE, DEPT- NAVY NAVAL FAC ENGRG COMMAND	U.S. Navy Wave Energy Test Site (WETS) Research and Maintenance Support (WETS-6)
\$5,846,945	Benjamin Jones	Applied Research Laboratory	DEFENSE, DEPT- ADVANCED RSCH PRJ AGCY	Rapid Resilient Reefs for Coastal Defense (R3D)
\$5,092,725	Vassilis Syrmos	Office of the Vice President for Research and Innovation	DEFENSE, DEPT- US ARMY CORPS OF ENGINEERS	Oahu and Makua Implementation of Endangered Species Management, US Army Garrison, Hawaiʻi

**Figure 8: Top Fifty Principal Investigators in Award Dollars** 

Rank	Investigator	Total Awarded	Unit
1	David Lassner	19,708,685	President, University of Hawaii System
2	Lui Hokoana	12,209,506	Chancellor, UH Maui College
3	Stephen A Schatz	11,395,490	Office of the Vice President for Academic Strategy
4	Vassilis Syrmos	11,183,236	Office of the Vice President for Research and Innovation
5	Shaya Honarvar	11,154,204	College of Natural Sciences
6	Rachel Novotny	10,710,589	College of Tropical Agriculture and Human Resources
7	Douglas Scott Luther	8,714,801	School of Ocean and Earth Science and Technology
8	Bruce Howe	8,093,923	School of Ocean and Earth Science and Technology
9	John Rayner	7,965,691	Institute for Astronomy
10	Clifford Morden	7,567,138	College of Natural Sciences
11	Anita L Lopez	7,504,323	School of Ocean and Earth Science and Technology
12	Victoria Y Fan	7,385,339	Thompson School of Social Work & Public Health
13	Joseph Kaholokula	7,370,821	John A. Burns School of Medicine
14	Ardis Eschenberg	7,308,630	Chancellor, Windward Community College
15	Darren Lerner	6,849,253	School of Ocean and Earth Science and Technology
16	Benjamin Jones	6,558,735	Office of the Vice President for Research and Innovation
17	Jerris Hedges	6,470,354	John A. Burns School of Medicine
18	Richard Rocheleau	6,249,889	School of Ocean and Earth Science and Technology
19	Patrick Stephen Cross	6,212,629	Office of the Vice President for Research and Innovation
20	David Duffy	6,149,995	College of Natural Sciences
21	Karl Eujung Kim	5,779,180	College of Social Sciences
22	Anthony Guerrero	5,486,323	John A. Burns School of Medicine
23	Michael Hamnett	5,420,403	College of Social Sciences
24	Gwen Jacobs	5,358,141	Office of the Vice President for Information Technology
25	Melissa Iwamoto	5,261,411	School of Ocean and Earth Science and Technology
26	Loic Le Marchand	5,141,909	University of Hawaii Cancer Center
27	Kenneth Chambers	4,958,630	Institute for Astronomy
28	Kelley Withy	4,661,138	John A. Burns School of Medicine
29	Robert Nichols	4,507,439	John A. Burns School of Medicine
30	Nathan Murata	4,339,707	College of Education
31	Norman Hisao Okamura	4,099,561	College of Social Sciences
32	Ivica Zalud	3,589,601	John A. Burns School of Medicine
33	May Okihiro	3,327,639	John A. Burns School of Medicine
34	Michael Melzer	3,188,273	College of Tropical Agriculture and Human Resources
35	Kiriko Takahashi	3,165,935	College of Education
36	Mariana Gerschenson	3,108,086	John A. Burns School of Medicine
37	Rachel Maria H Solemsaas	3,063,509	Chancellor, Hawaii Community College
38	Brad Nakamura	2,927,468	College of Social Sciences
39	Gail Mililani Makuakane-lundin	2,667,811	Chancellor, UH Hilo
40	Miriam Stark	2,624,198	College of Arts, Languages, and Letters
41	Anthony Amend	2,543,104	College of Natural Sciences
42	Pohai Liana Kukea Shultz	2,520,224	College of Education
43	Marla Berry	2,515,202	School of Ocean and Earth Science and Technology
44	Neal Palafox	2,433,563	John A. Burns School of Medicine
45	John Barile	2,306,698	College of Social Sciences
46	Eric Folk	2,154,945	College of Education
47	Hye-Jin Park	2,152,027	College of Education
48	Thomas Giambelluca	2,086,414	Water Resources Research Center
49	John A Shepherd	2,070,841	University of Hawaii Cancer Center
50	Margaret McFall-Ngai	2,021,425	School of Ocean and Earth Science and Technology

### **Chart 8: Contract and Grant Awards by Campus**

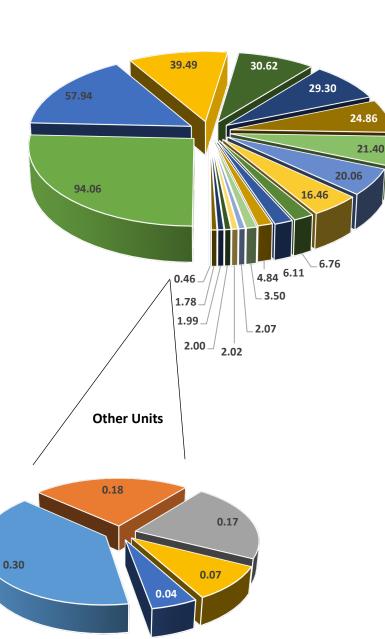


- University of Hawai'i at Mānoa
- University of Hawai'i at Hilo
- Windward Community College
- Kapi'olani Community College
- Hawai'i Community College
- Honolulu Community College

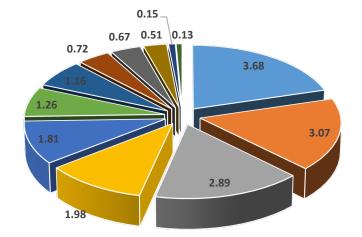
- University of Hawai'i System
- University of Hawai'i Maui College
- University of Hawai'i at West O'ahu
- Leeward Community College Kaua'i
- Community College

## Chart 9: UH Mānoa - Contract and Grant Awards by College/Department

- School of Ocean and Earth Science and Technology
- John A. Burns School of Medicine
- College of Natural Sciences
- College of Education
- College of Tropical Agriculture and Human Resources
- College of Social Sciences
- University of Hawai'i Cancer Center
- Institute for Astronomy
- Thompson School of Social Work & Public Health
- College of Engineering
- College of Arts, Languages, and Letters
- Vice Provost, Student Success
- Water Resources Research Center
- Hawai'inuiakea School of Hawaiian Knowledge
- Vice Provost, Academic Excellence
- William S. Richardson School of Law
- Waikīkī Aquarium
- Nancy Atmospera-Walch School of Nursing
- Other Units
  - Office of the Provost
  - School of Architecture
  - Outreach College
  - Shidler College of Business
  - Lyon Arboretum



## Chart 10: UH Hilo - Contract and Grant Awards by College/Department (in millions)



- Chancellor, UH Hilo
- Vice Chancellor for Student Affairs
- College of Natural and Health Sciences
- Ka Haka 'Ula O Ke'Elikolani-UHH
- 'Imiloa Astronomy Center Of Hawai'i
- College of Arts and Sciences
- Vice Chancellor for Research
- College of Agriculture, Forestry and Natural Resource Mgt
- College of Pharmacy
- Hawai'i Small Business Development Center
- College of Continuing Education and Community Svc
- Vice Chancellor for Administrative Affairs

**Figure 9: Contract and Grant Awards Summary by Campus** 

Campus	Award Amount	Award Count	% of Total
Hawai'i Community College	\$4,603,628	14	0.7%
Honolulu Community College	\$2,503,071	11	0.6%
Kapiʻolani Community College	\$5,373,897	21	1.1%
Kaua'i Community College	\$3,020,939	12	0.6%
Leeward Community College	\$4,984,485	18	0.9%
University of Hawai'i at Hilo	\$18,032,330	111	5.7%
University of Hawai'i at Mānoa	\$366,017,776	1,558	80.7%
University of Hawai'i at West O'ahu	\$6,694,837	24	1.2%
University of Hawai'i Maui College	\$13,462,585	47	2.4%
University of Hawai'i System	\$70,661,551	95	4.9%
Windward Community College	\$9,664,035	20	1.0%
Grand Total	\$505,019,134	1,931	100.0%

Figure 10a: UH Mānoa - Contract and Grant Awards Summary by College/Department

UH Mānoa College/Department	Award Amount	Award Count	% of Total
College of Arts, Languages, and Letters	\$6,113,159	50	1.67%
Academy for Creative Media (Mānoa)	\$32,000	1	0.01%
Center for Chinese Studies	\$350,000	1	0.10%
Center for Japanese Studies	\$598,183	4	0.16%
Center for Korean Studies	\$68,000	3	0.02%
Center for Language and Technology	\$156,000	1	0.04%
Center for Pacific Islands Studies	\$71,958	2	0.02%
Center for Philippine Studies	\$141,616	1	0.04%
Center for Southeast Asian Studies	\$563,500	2	0.15%
College of Arts, Languages, and Letters	\$2,113,420	5	0.58%
College of Language, Linguistics and Literature	\$5,200	1	0.00%
Department of East Asian Languages and Literature	\$1,436,207	11	0.39%
Department of English	\$15,000	1	0.00%
Department of Linguistics	\$112,276	4	0.03%
Department of Second Language Studies	\$36,731	2	0.01%
History (UH Mānoa)	\$8,500	2	0.00%
Music (UH Mānoa)	\$23,000	2	0.01%
Philosophy (UH Mānoa)	\$43,000	2	0.01%
Religion (UH Mānoa)	\$91,710	1	0.03%
Theatre and Dance	\$20,858	3	0.01%
UHM Uehiro Academy for Philosophy and Ethics in Education	\$226,000	1	0.06%
College of Education	\$30,617,573	81	8.37%
Center on Disability Studies/University Affiliated Pgms	\$11,796,396	27	3.22%
College of Education	\$6,320,503	7	1.73%
Curriculum Research and Development Group	\$2,742,454	14	0.75%
Department of Curriculum Studies	\$3,094,268	8	0.85%
Department of Educational Administration	\$4,000	1	0.00%
Department of Educational Foundations	\$913,779	1	0.25%
Department of Educational Psychology	\$439,772	1	0.12%
Department of Kinesiology and Rehabilitation Science	\$1,427,506	6	0.39%
Department of Learning Design and Technology	\$996,552	1	0.27%
Department of Special Education	\$1,525,444	4	0.42%
Institute for Teacher Education	\$1,356,899	11	0.37%
College of Engineering	\$6,756,835	42	1.85%
Civil and Environmental Engineering	\$2,454,649	15	0.67%
College of Engineering	\$708,782	8	0.19%
Electrical Engineering	\$952,707	8	0.26%
Mechanical Engineering	\$2,640,697	11	0.72%
College of Natural Sciences	\$39,490,257	227	10.79%
Department of Botany	\$221,556	1	0.06%

Department of Chemistry	\$3,231,005	16	0.88%
Department of Mathematics	\$207,978	4	0.06%
Department of Physics and Astronomy	\$4,093,225	26	1.12%
Information and Computer Sciences	\$1,539,741	9	0.42%
Pacific Cooperative Studies Unit	\$21,326,531	132	5.83%
School of Life Sciences	\$8,870,221	39	2.42%
llege of Social Sciences	\$24,862,421	107	6.79%
College of Social Sciences	\$35,789	2	0.01%
Department of Anthropology	\$304,034	4	0.08%
Economics (UH Mānoa)	\$59,728	2	0.02%
Ethnic Studies	\$418,178	5	0.11%
Geography (UH Mānoa) Political	\$71,175	2	0.02%
Science (UH Mānoa) Psychology	\$105,920	2	0.03%
(UH Mānoa) Public	\$3,924,635	19	1.07%
Administration	\$108,000	1	0.03%
School of Communications	\$78,654	3	0.02%
Social Science Research Institute	\$13,520,274	57	3.69%
Sociology (UH Mānoa)	\$51,854	1	0.01%
Urban and Regional Planning	\$6,184,180	9	1.69%
ege of Tropical Agriculture and Human Resources	\$29,300,244	152	8.01%
Center on the Family	\$1,726,914	10	0.47%
College of Tropical Agriculture and Human Resources	\$790,498	5	0.22%
Cooperative Extension	\$320,000	3	0.09%
Family and Consumer Sciences	\$474,835	1	0.13%
Hawai'i County	\$1,836,432	26	0.50%
Human Nutrition, Food and Animal Sciences	\$12,154,567	15	3.32%
Maui County	\$1,518,685	9	0.41%
Molecular Biosciences and Bioengineering	\$718,459	9	0.20%
Natural Resources and Environmental Mgt (NREM)	\$1,019,158	13	0.28%
Oahu County	\$911,994	5	0.25%
Office of The Assoc Dean for Academic and Student Affairs	\$1,332,884	5	0.36%
Plant and Environmental Protection Sciences	\$4,833,227	36	1.32%
Tropical Plant and Soil Science	\$1,662,591	15	0.45%
vai'inuiakea School of Hawaiian Knowledge	\$2,070,787	22	0.57%
Hawai'inuiakea School of Hawaiian Knowledge	\$684,396	2	0.19%
Kamakakūokalani Center for Hawaiian Studies	\$511,194	6	0.14%
Kawaihuelani Center for Hawaiian Language	\$254,190	9	0.07%
Native Hawai'i Student Services	\$621,007	5	0.17%
titute for Astronomy	\$20,056,320	80	5.48%
Institute for Astronomy	\$20,056,320	80	5.48%
n A. Burns School of Medicine	\$57,939,411	175	15.83%
Academic Affairs (ADAA)	\$5,345,108	14	1.46%
Department of Anatomy, Biochemistry, and Physiology	\$3,306,848	17	0.90%
Department of Cell and Molecular Biology	\$577,045	5	0.16%

Department of Family Medicine and Community Health	\$1,208,112	10	0.33%
Department of Geriatric Medicine	\$555,951	8	0.15%
Department of Medicine	\$3,374,192	18	0.92%
Department of Native Hawaiian Health	\$8,324,020	14	2.27%
Department of Obstetrics, Gynecology and Women's Health	\$3,607,444	8	0.99%
Department of Pediatrics	\$6,637,316	21	1.81%
Department of Psychiatry	\$6,596,452	10	1.80%
Department of Quantitative Health Sciences	\$1,883,020	11	0.51%
Department of Surgery	\$770,519	6	0.21%
Department of Tropical Medicine, Medical Micro and Pharm	\$991,492	13	0.27%
Fundamentals of Health Sciences (ADR)	\$23,838	1	0.01%
John A. Burns School of Medicine	\$14,738,054	19	4.03%
Lyon Arboretum	\$39,022	2	0.01%
Lyon Arboretum	\$39,022	2	0.01%
Nancy Atmospera-Walch School of Nursing	\$1,784,653	19	0.49%
Department of Nursing	\$527,808	6	0.14%
Nancy Atmospera-Walch School of Nursing	\$1,256,845	13	0.34%
Office of the Provost	\$297,592	5	0.08%
Office of Global Engagement	\$59,048	1	0.02%
Office of the Provost	\$238,544	4	0.07%
Outreach College	\$165,000	6	0.05%
Community Programs	\$117,500	5	0.03%
Outreach College	\$47,500	1	0.01%
School of Architecture	\$179,585	1	0.05%
School of Architecture	\$179,585	1	0.05%
School of Ocean and Earth Science and Technology	\$94,061,035	371	25.70%
Center for Microbial Oceanography, Research and Edu (C-			
MORE)	\$1,572,443	5	0.43%
Cooperative Institute for Marine and Atmospheric Research	\$16,148,027	46	4.41%
Department of Atmospheric Sciences	\$888,848	12	0.24%
Department of Ocean and Resources Engineering	\$10,119,294	14	2.76%
Department of Oceanography	\$8,147,260	36	2.23%
Earth Sciences	\$4,163,809	24	1.14%
Hawai'i Institute of Geophysics and Planetology (HIGP)	\$9,688,535	59	2.65%
Hawai'i Institute of Marine Biology (HIMB)	\$9,649,341	58	2.64%
Hawai'i Natural Energy Institute (HNEI)	\$8,441,661	17	2.31%
International Pacific Research Center (IPRC)	\$607,188	5	0.17%
Pacific Biosciences Research Center	\$6,804,293	38	1.86%
School of Ocean and Earth Science and Technology	\$7,539,323	6	2.06%
Sea Grant College Program	\$8,939,219	46	2.44%
University Marine Center/Ship Operations	\$1,351,794	5	0.37%
Shidler College of Business	\$71,382	2	0.02%
School of Travel Industry Management	\$35,382	1	0.01%
Shidler College of Business	\$36,000	1	0.01%
Thompson School of Social Work & Public Health	\$16,464,844	54	4.50%

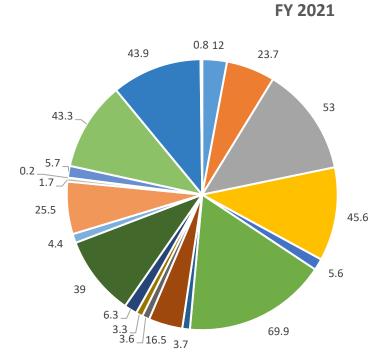
Center on Aging	\$8,371,064	12	2.29%
Department of Social Work	\$466,200	2	0.13%
Dept of Public Health Sciences and Epidemiology	\$2,443	1	0.00%
Office of Public Health Studies	\$6,034,987	26	1.65%
Thompson School of Social Work & Public Health	\$1,590,150	13	0.43%
University of Hawai'i Cancer Center	\$21,397,333	80	5.85%
Cancer Etiology (Epidemiology)	\$14,720,074	40	4.02%
Natural Products (Cancer Biology)	\$1,986,191	18	0.54%
Social and Behavioral Sciences (Prevention in the Pacific)	\$1,130,773	6	0.31%
Translational and Clinical Research	\$1,343,274	3	0.37%
University of Hawai'i Cancer Center	\$2,217,021	13	0.61%
Vice Provost, Academic Excellence	\$2,023,494	23	0.55%
Graduate Education	\$1,165,706	4	0.32%
Library (UH Mānoa)	\$190,864	12	0.05%
Undergraduate Education	\$581,342	2	0.16%
Vice Provost, Academic Excellence	\$85,582	5	0.02%
Vice Provost, Research and Scholarship	\$2,444	1	0.00%
Vice Provost, Research and Scholarship	\$2,444	1	0.00%
Vice Provost, Student Success	\$4,837,427	13	1.32%
Health & Wellness to University Health Services	\$10,000	1	0.00%
Student Equity Excel & Diversity	\$3,986,609	10	1.09%
Women's Center	\$840,818	2	0.23%
Waikīkī Aquarium	\$1,991,626	2	0.54%
Waikīkī Aquarium	\$1,991,626	2	0.54%
Water Resources Research Center	\$3,499,813	17	0.96%
Water Resources Research Center	\$3,499,813	17	0.96%
William S. Richardson School of Law	\$1,995,519	26	0.55%
William S. Richardson School of Law	\$1,995,519	26	0.55%
Gran	d Total \$366,017,776	1,558	100.00%

# Figure 10b: UH Hilo - Contract and Grant Awards Summary by College/Department

	•		
UH Hilo College/Department	Award Amount	Award Count	% of Total
Chancellor, UH Hilo	\$3,684,592	7	20.43%
Chancellor, UH Hilo	\$3,684,592	7	20.43%
College of Agriculture, Forestry and Natural Resource Mgt	\$718,193	11	3.98%
College of Agriculture, Forestry and Natural Resource Mgt	\$371,696	6	2.06%
Pacific Aquaculture and Coastal Resources Ctr	\$346,497	5	1.92%
College of Arts and Sciences	\$1,262,881	16	7.00%
College of Arts and Sciences	\$369,255	4	2.05%
English (UH Hilo)	\$40,000	1	0.22%
Geography (UH Hilo)	\$463,958	7	2.57%
Political Science and Administration of Justice (UH Hilo)	\$-2,332	0	-0.01%
Psychology (UH Hilo)	\$5,000	1	0.03%
Social Sciences Division	\$387,000	3	2.15%
College of Continuing Education and Community Svc	\$149,000	1	0.83%
College of Continuing Education and Community Svc	\$149,000	1	0.83%
College of Natural and Health Sciences	\$2,887,345	26	16.01%
Biology (UH Hilo)	\$108,016	1	0.60%
College of Natural and Health Sciences	\$1,522,252	11	8.44%
Computer Science (UH Hilo)	\$115,117	1	0.64%
Geology	\$106,399	1	0.59%
Hawai'i Cooperative Fishery Research Unit	\$70,754	1	0.39%
Kinesiology and Exercise Sciences	\$217,975	3	1.21%
Marine Science	\$297,835	5	1.65%
Physics and Astronomy	\$90,000	1	0.50%
Tropical Conservation Biology and Environmental Science	\$358,997	2	1.99%
College of Pharmacy	\$669,878	7	3.71%
College of Pharmacy	\$360,908	3	2.00%
Pharmaceutical Sciences	\$124,011	1	0.69%
Pharmacy Practice	\$60,000	1	0.33%
Research	\$124,959	2	0.69%
Hawai'i Small Business Development Center	\$506,011	5	2.81%
Hawai'i Small Business Development Center	\$506,011	5	2.81%
'Imiloa Astronomy Center of Hawai'i	\$1,810,006	4	10.04%
'Imiloa Astronomy Center of Hawai'i	\$1,810,006	4	10.04%
Ka Haka 'Ula O Ke'Elikolani-UHH	\$1,983,383	8	11.00%
Hale Kuamo'o Center	\$1,085,424	2	6.02%
Ka Haka 'Ula O Ke'Elikolani-UHH	\$897,959	6	4.98%
Vice Chancellor for Administrative Affairs	\$134,630	3	0.75%
Vice Chancellor for Administrative Affairs	\$134,630	3	0.75%
Vice Chancellor for Research	\$1,159,985	12	6.43%
Vice Chancellor for Research	\$1,159,985	12	6.43%
Vice Chancellor for Student Affairs	\$3,066,426	11	17.01%
Upward Bound	\$1,464,821	5	8.12%
Vice Chancellor for Student Affairs	\$1,601,605	6	8.88%
Grand Total	\$18,032,330	111	100.00%

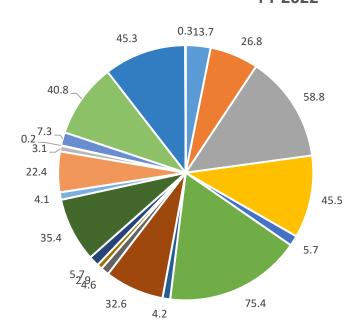
## Chart 11: Total Contract and Grant Expenditures by Source of Funds Prior Year Comparison

(in millions)



- Department of Agriculture
- Department of Commerce
- Department of Defense
- Department of Education
- Department of Energy
- Department of Health and Human Services
- Department of Homeland Security
- Department of the Treasury
- Foreign
- Hawai'i Business and Other
- Hawai'i Dept of Education
- Hawai'i Government Agencies
- Hawai'i Health Organizations
- Hawai'i Non-Profit Organizations
- Mainland Business and Other
- Mainland Health Organizations
- Mainland Non-Profit Organizations
- National Science Foundation
- Other Federal
- U.S. Colleges and Universities

#### FY 2022



- Department of Agriculture
- Department of Commerce
- Department of Defense
- Department of Education
- Department of Energy
- Department of Health and Human Services
- Department of Homeland Security
- Department of the Treasury
- Foreign
- Hawai'i Business and Other
- Hawai'i Dept of Education
- Hawai'i Government Agencies
- Hawai'i Health Organizations
- Hawai'i Non-Profit Organizations
- Mainland Business and Other
- Mainland Health Organizations
- Mainland Non-Profit Organizations
- National Science Foundation
- Other Federal
- U.S. Colleges and Universities

Figure 11: Total Contract and Grant Expenditures by Source of Funds

Prior Year Comparison

Source of Funds	FY 2021	% of Total	FY 2022	% of Total
Department of Agriculture	\$12,007,380.26	3%	\$13,732,388.99	3%
Department of Commerce	\$23,717,767.77	6%	\$26,843,958.20	6%
Department of Defense	\$52,986,579.54	13%	\$58,840,360.19	14%
Department of Education	\$45,623,786.65	11%	\$45,489,740.73	10%
Department of Energy	\$5,643,656.49	1%	\$5,743,726.38	1%
Department of Health and Human Services	\$69,922,552.81	17%	\$75,367,061.45	17%
Department of Homeland Security	\$3,668,742.59	1%	\$4,231,088.95	1%
Department of the Treasury	\$16,473,618.90	4%	\$32,555,983.74	7%
National Science Foundation	\$43,266,160.11	11%	\$40,819,487.35	9%
Other Federal	\$43,863,303.07	11%	\$45,251,636.00	10%
Foreign	\$3,619,689.20	1%	\$4,645,626.22	1%
Hawai'i - Business and Other	\$3,270,485.89	1%	\$2,862,932.13	1%
Hawai'i - Dept of Education	\$6,273,653.82	2%	\$5,707,358.04	1%
Hawai'i - Government Agencies	\$39,008,797.95	10%	\$35,351,725.81	8%
Hawaiʻi - Health Organizations	\$4,353,712.07	1%	\$4,058,817.22	1%
Hawai'i - Non-Profit Organizations	\$25,504,277.39	6%	\$22,411,688.17	5%
Mainland - Business and Other	\$1,728,929.43	0%	\$3,125,393.05	1%
Mainland - Health Organizations	\$208,747.06	0%	\$239,586.89	0%
Mainland - Non-Profit Organizations	\$5,664,622.32	1%	\$7,257,691.40	2%
U.S. Colleges and Universities	\$826,999.35	0%	\$283,141.42	0%
GRAND TOTAL	\$407,633,462.67	100%	\$434,819,392.33	100%

#### Summary:

- The largest source is the Department of Health and Human Services (17% of the total), followed by Department of Defense (14% of the total).
- UH Foundation award expenditures totaling \$16.8 million in FY 21 and \$13.9 million in FY 22 are included in Hawai'i Non-Profit Organizations respectively.

Figure 11a COVID-19 Related Award Expenditures by Source of Funds

Source of Funds	FY 2021	% of Total	FY 2022	% of Total
Department of Agriculture	\$-	0%	\$351,604.90	1%
Department of Commerce	\$2,822,286.49	16%	\$107,998.60	0%
Department of Defense	\$-	0%	\$161,166.00	1%
Department of Education	\$-	0%	\$5,250,148.51	21%
Department of Health and Human Services	\$9,676,055.77	54%	\$7,519,639.20	30%
Department of the Treasury	\$4,024,219.70	22%	\$336,286.59	1%
National Science Foundation	\$163,680.41	1%	\$9,048,971.63	37%
Other Federal	\$55,000.00	0%	\$796,750.78	3%
Foreign	\$8,631.86	0%	\$-	0%
Hawai'i - Business and Other	\$4,252.97	0%	\$(0.01)	0%
Hawai'i - Government Agencies	\$934,605.16	5%	\$1,109,660.28	5%
Hawai'i - Health Organizations	\$-	0%	\$34,631.49	0%
Hawaiʻi - Non-Profit Organizations	\$323,716.97	2%	\$-	0%
Mainland - Non-Profit Organizations	\$4,567.97	0%	\$-	0%
GRAND TOTAL	\$18,017,017.30	100%	\$24,716,857.97	100%

Chart 12: Total Federal CARES Act Expenditures by Campus

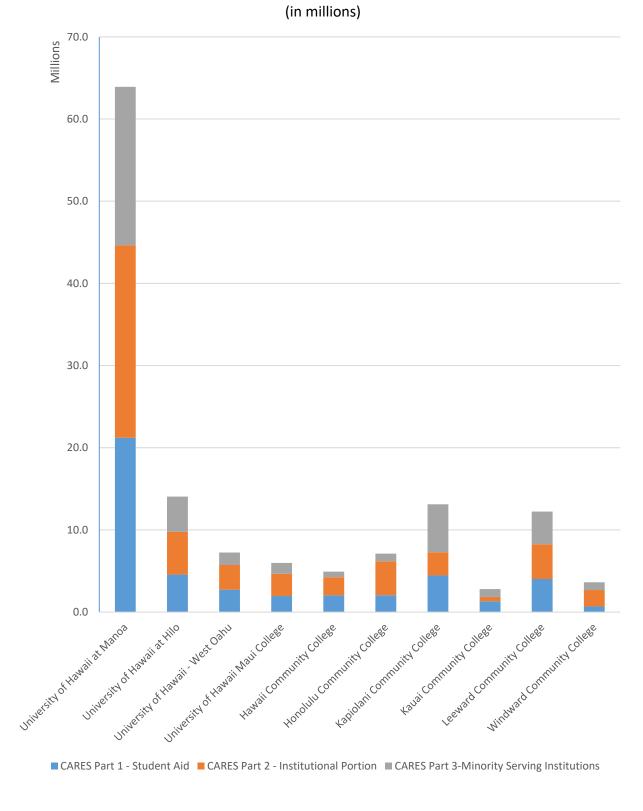


Figure 12: Summary of Federal CARES Act Expenditures

Campus	CARES Part 1 Student Aid	CARES Part 2 Institutional Portion	CARES Part 3 Minority Serving Institutions	Total Expenditures
- Campao			motitutiono	
University of Hawai'i at Mānoa	\$21,210,251	\$23,405,216	\$19,301,676	\$63,917,144
University of Hawai'i at Hilo	\$4,559,704	\$5,196,046	\$4,293,014	\$14,048,765
University of Hawai'i at West Oahu	\$2,732,015	\$2,994,695	\$1,521,567	\$7,248,276
University of Hawai'i Maui College	\$1,949,249	\$2,704,146	\$1,323,861	\$5,977,255
Hawai'i Community College	\$2,037,839	\$2,201,717	\$677,347	\$4,916,902
Honolulu Community College	\$2,050,027	\$4,120,218	\$942,293	\$7,112,537
Kapiʻolani Community College	\$4,452,384	\$2,822,141	\$5,842,694	\$13,117,218
Kaua'i Community College	\$1,302,837	\$540,453	\$951,230	\$2,794,519
Leeward Community College	\$4,023,375	\$4,220,370	\$3,990,532	\$12,234,276
Windward Community College	\$682,530	\$1,996,509	\$943,922	\$3,622,961
Grand Total	\$45,000,211	\$50,201,509	\$39,788,135	\$134,989,855

Chart 13: Total Contract and Grant Expenditures by Program Type and Source of Funds (in millions)

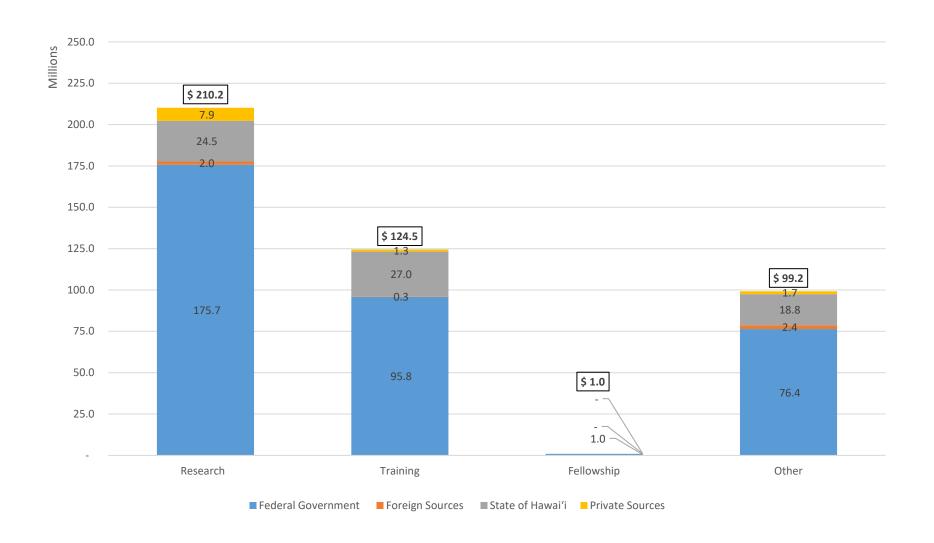


Figure 13: Total Contract and Grant Expenditures by Program Type and Source of Funds

	Source of Funding	Research	Training	Fellowship	Other	Total	% of total
Federal							
Government	Department of Agriculture	\$8,805,078.80	\$3,728,774.49		\$1,198,535.70	\$13,732,388.99	3%
	Department of Commerce	\$17,903,315.68	\$341,288.02	\$82,536.16	\$8,516,818.34	\$26,843,958.20	6%
	Department of Defense - Air Force	\$8,360,030.37				\$8,360,030.37	2%
	Department of Defense - Army	\$2,144,485.29	\$950,870.42		\$5,736,508.20	\$8,831,863.91	2%
	Department of Defense - Navy	\$23,429,316.74	\$25,715.57		\$1,785,810.21	\$25,240,842.52	6%
	Department of Education	\$598,317.05	\$34,259,648.91		\$10,631,774.77	\$45,489,740.73	10%
	Department of Energy	\$5,590,537.65			\$153,188.73	\$5,743,726.38	1%
	Department of Health and Human						
	Services	\$50,182,824.10	\$10,830,454.13		\$14,353,783.22	\$75,367,061.45	17%
	Department of Homeland Security	\$484,380.31	\$3,686,249.33		\$60,459.31	\$4,231,088.95	1%
	Department of Interior	\$9,334,190.69	\$119,738.00		\$1,805,429.28	\$11,259,357.97	3%
	Department of State	\$548,358.81	\$280,915.89		\$145,492.90	\$974,767.60	0%
	Department of the Treasury	\$556,988.38	\$31,666,867.73		\$332,127.63	\$32,555,983.74	7%
	Department of Transportation	\$1,807,532.54	\$78,615.97		\$662,727.07	\$2,548,875.58	1%
	Department of Veterans Affairs	\$6,885.46	\$103,150.15		\$32,584.38	\$142,619.99	0%
	Environmental Protection Agency	\$84,212.58	. ,		\$297,424.83	\$381,637.41	0%
	National Aeronautics and Space	, ,			, ,	, ,	
	Administration	\$11,303,434.68	\$2,002,216.14		\$10,454,494.28	\$23,760,145.10	5%
	National Science Foundation	\$20,265,705.96	\$5,384,858.07	\$874,751.64	\$14,294,171.68	\$40,819,487.35	9%
	Other Department of Defense	\$14,063,564.37	\$2,057,301.11	, ,	\$286.757.91	\$16,407,623.39	4%
	Other Federal	\$256,370.10	\$321,235.08		\$5,606,627.17	\$6,184,232.35	1%
	ernment Total	\$175,725,529.56	\$95,837,899.01	\$957,287.80	\$76,354,715.61	\$348,875,431.98	80%
Foreign Sources	Foreign Sources	\$1,976,984.98	\$306,786.27		\$2,361,854.97	\$4,645,626.22	1%
Foreign Sou	rces Total	\$1,976,984.98	\$306,786.27	-	\$2,361,854.97	\$4,645,626.22	1%
State of	Harris Branch and Other	<b>#450.070.04</b>	<b>#0.004.000.00</b>	(04 440 00)	<b>#070 400 07</b>	<b>#0.057.045.57</b>	40/
Hawaiʻi	Hawai'i - Business and Other	\$456,872.04	\$2,031,632.86	(\$1,442.00)	\$370,182.67	\$2,857,245.57	1%
	Hawaiii - Department of Education	<b>#40.000.440.74</b>	\$5,058,812.64		\$648,545.40	\$5,707,358.04	1%
	Hawai'i - Government Agencies	\$18,336,418.74	\$5,542,365.57		\$11,472,941.50	\$35,351,725.81	8%
	Hawai'i - Health Organizations	\$132,951.23	\$2,861,833.12		\$1,064,032.87	\$4,058,817.22	1%
	Hawaiʻi - Non- Profit Organizations	\$5,619,781.35	\$11,542,094.09		\$5,255,499.29	\$22,417,374.73	5%
State of Haw	ai'i Total	\$24,546,023.36	\$27,036,738.28	(\$1,442.00)	\$18,811,201.73	\$70,392,521.37	16%
Private	Mainland Pusiness and Other	¢1 710 160 00	¢176 654 20		¢4 220 575 97	¢2 125 202 05	10/
Sources	Mainland - Business and Other	\$1,719,162.80	\$176,654.38		\$1,229,575.87	\$3,125,393.05	1%
	Mainland - Health Organizations	\$169,352.39	\$65,608.15		\$4,626.35	\$239,586.89	0%
	Mainland - Non-Profit Organizations	\$5,796,710.06	\$1,056,751.59		\$404,229.75	\$7,257,691.40	2%
	U.S. Colleges and Universities	\$244,096.76	\$4,145.86		\$34,898.80	\$283,141.42	0%
Private Sour	ces Total	\$7,929,322.01	\$1,303,159.98	-	\$1,673,330.77	\$10,905,812.76	3%
<b>Grand Total</b>		\$210,177,859.91	\$124,484,583.54	\$955,845.80	\$99,201,103.08	\$434,819,392.33	100%

**Chart 14: Total FTE Paid from Contract and Grant Funds**Prior Year Comparison

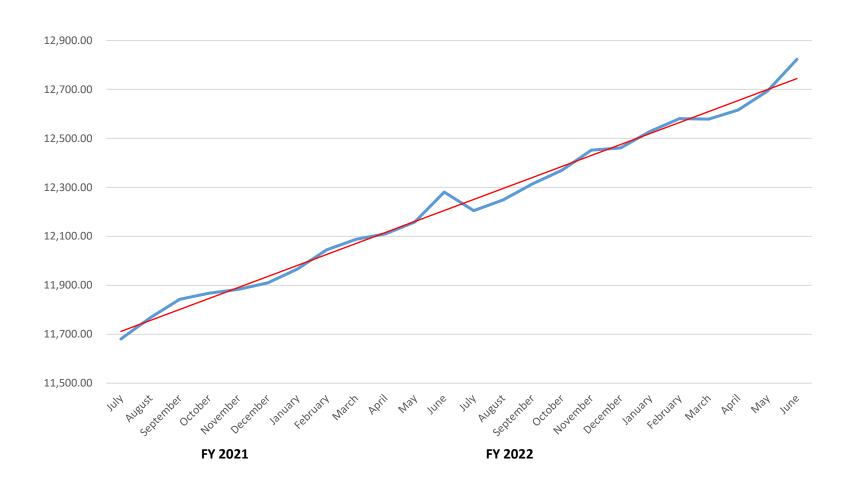
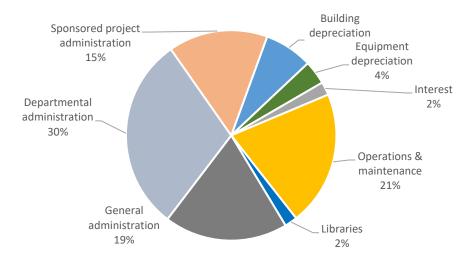


Figure 14: Total FTE Paid from Contract and Grant Funds
Prior Year Comparison

Month	Year to Date FY21	Year to Date FY22
July	11,680.65	12,205.01
August	11,768.01	12,248.45
September	11,842.75	12,314.23
Monthly Average Q1	11,763.80	12,255.90
October	11,867.78	12,369.34
November	11,883.26	12,451.86
December	11,910.06	12,461.17
Monthly Average Q2	11,887.03	12,427.46
January	11,966.16	12,528.71
February	12,044.83	12,580.88
March	12,088.00	12,578.46
Monthly Average Q3	12,033.00	12,562.68
April	12,110.12	12,616.05
May	12,158.29	12,693.78
June	12,280.61	12,823.15
Monthly Average Q4	12,183.01	12,710.99
Monthly Average EV	11,966.71	12 490 26
Monthly Average FY Change (Number)	11,300./1	12,489.26 522.55
Change (Percent)		4.37%

Note: FTE includes University of Hawai'i and Research Corporation of the University of Hawai'i

Chart 15: Breakdown of Facilities and Administrative Costs by Major Category FY 2016 Base Year



In a typical year, roughly a third of the University of Hawai'i's overhead for sponsored projects maintains its facilities for supporting sponsored activity and roughly two-thirds supports central and departmental sponsored activity administration. About 30% of the total F&A represents administration of sponsored activity with schools, colleges, and research units. These funds are used by deans and directors to support fiscal administrators and other staff who assist faculty with sponsored activity – including grant proposal preparation and budget management.

The pie chart represents the proportion of actual overhead costs during the UH's last F&A base year (FY 2016). Thirty-four percent of the F&A funds represented costs of providing centralized research administration and compliance services, such as research accounting and analysis, human resources, payroll, purchasing, Office of Research Services, Human Studies, Institutional Animal Care, and Research Corporation of the University of Hawai'i. Of the 36% spent on facilities, about 58% was spent on operations and maintenance of existing sponsored activity space, including paying for such costs as utilities, hazardous materials disposal, and janitorial services. The remainder paid for repairs and renovations of buildings, 'debt service' (interest), major equipment replacement, and support for the libraries.

The University of Hawai'i received approximately \$63.0 million in F&A cost reimbursements in FY 2022. Each campus received 75% of the recovered F&A generated by its faculty through the Research and Training Revolving Fund (RTRF) allocation. The PI's college or research unit at the University of Hawai'i at Mānoa generally receives 50% of the recovered F&A costs. These funds are used at the discretion of the chancellors, deans and directors to support research and training in their units.

F&A cost reimbursements are related to UH expenditures. When the UH develops its biennial budget, it starts with an estimate of the total revenues available for that biennium, including state funding, tuition, F&A cost reimbursement, and interest and investment income. All these funding sources are combined to pay for the UH's operating expenses, including F&A costs related to research and other sponsored agreements.

<sup>&</sup>lt;sup>1</sup>The amount includes \$7.0 million from HEERF awards, which will end on 6/30/23.

Chart 16: Total Royalties Received from University Patents
Five Year Comparison

(in thousands)

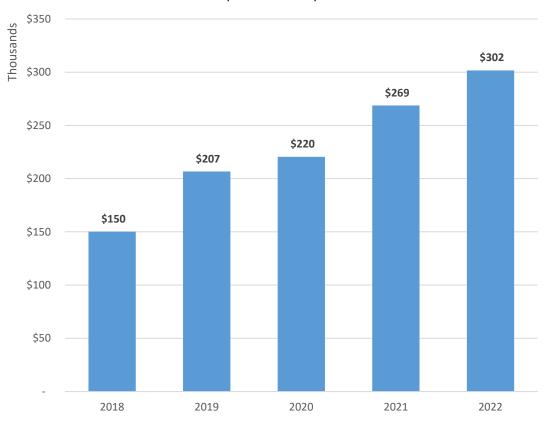


Figure 15: Total Royalties Received from University Patents
Five Year Comparison

Fiscal Year	Royalties
2017	\$288,752
2018	\$150,172
2019	\$206,687
2020	\$220,427
2021	\$268,694
2022	\$301,658
Total Royalties	\$1,436,390

### **Appendix 1: Extramural Award Sponsors**

#### **FEDERAL**

#### **DA-DEPT OF AGRICULTURE**

AGRICULTURE, DEPT - ANIMAL AND PLANT HEALTH INSPECTION SERVICE AGRICULTURE, DEPT- NATURAL RESOURCES CONSERVATION SERVICE

AGRICULTURE, DEPT, FOREST SVC-FED AGRICULTURE, DEPT-AGRI RSCH SVC-FED AGRICULTURE, DEPT-NATL INST FOOD AND AGRICULTURE

AGRICULTURE, DEPT-NATRL RES SVC-FED

#### **DHHS-DEPT OF HEALTH AND HUMAN SERVICES**

HEALTH & HUMAN SVC, DEPT- HRSA-FED BUREAU OF HEALTH WORKFORCE (BHW)

HEALTH & HUMAN SVC, DEPT-ADMIN FOR COMM LIVING

HEALTH & HUMAN SVC, DEPT-ADMIN ON AGING HEALTH & HUMAN SVC, DEPT-CDC-NATL INST FOR OCCUPATIONAL SAFETY & HEALTH

HEALTH & HUMAN SVC, DEPT-CTR DIS CTRL-FED HEALTH & HUMAN SVC, DEPT-HLTH CARE RES & QUALITY

HEALTH & HUMAN SVC, DEPT-HRSA-FED HEALTH & HUMAN SVC, DEPT-HRSA-FED MATERNAL & CHILD HLTH

HEALTH & HUMAN SVC, DEPT-HRSA-FED OFC RURAL HEALTH POL

HEALTH & HUMAN SVC, DEPT-NIH-FED HEALTH & HUMAN SVC, DEPT-NIH-FED NATL CANCER INST

HEALTH & HUMAN SVC, DEPT-NIH-FED NATL HEART LUNG & BLD INST

HEALTH & HUMAN SVC, DEPT-NIH-FED NATL INST MIN HLTH & DISP

HEALTH & HUMAN SVC, DEPT-NIH-FED NTL INST ALLERGY/INF DIS

HEALTH & HUMAN SVC, DEPT-NIH-FED NTL INST DIAB DIG KIDN DIS

HEALTH & HUMAN SVC, DEPT-NIH-FED NTL INST DRUG ABUSE

HEALTH & HUMAN SVC, DEPT-NIH-FED NTL INST ENV HLTH SCI

HEALTH & HUMAN SVC, DEPT-NIH-FED NTL INST GEN MED SCI

HEALTH & HUMAN SVC, DEPT-NIH-FED NTL INST ON AGING

HEALTH & HUMAN SVC, DEPT-NIH-FED OFFICE OF DIRECTOR

HEALTH & HUMAN SVC, DEPT-OFC OF ASST SECRETARY FOR HEALTH

HEALTH & HUMAN SVC, DEPT-SUB ABUSE/MNTL HLTH SVC-FED

HEALTH & HUMAN SVC, DEPT-NIH-FED NTL INST CHLD HLTH&HUM DEV

HEALTH&HUMAN SVC, DEPT-NIH-FED NTL INST BIOMED IMG& BIOENGRG

#### **DOC-DEPT OF COMMERCE**

COMMERCE, DEPT-ECONOMIC DEV ADM-FED COMMERCE, DEPT-MINORITY BUSN DEV AGENGY-FED

COMMERCE, DEPT-NATL NOAA-FED

COMMERCE, DEPT-NATL NOAA-FED NATL OCEAN SVC

COMMERCE, DEPT-NATL NOAA-FED SEA GRANT COLL PGM

COMMERCE, DEPT-NOAA/NATL MARINE

FISHERIES SVC

WESTERN PACIFIC REGIONAL FISHERY MGT COUNCIL

#### **DOD-DEPARTMENT OF DEFENSE**

DEFENSE, DEPT- US ARMY CORPS OF ENGINEERS DEFENSE, DEPT. - NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION

DEFENSE, DEPT-ADVANCED RSCH PRJ AGCY DEFENSE, DEPT-AIR FORCE OFC OF SCI RSCH DEFENSE, DEPT-AIR FORCE RESEARCH LABORATORY

DEFENSE, DEPT-ARMY

DEFENSE, DEPT-ARMY MED RSCH ACQSTN (USAMRAA)

DEFENSE, DEPT-ARMY RESEARCH LABORATORY
DEFENSE, DEPT-DEFENSE LOGISTICS AGENCY
DEFENSE, DEPT-DEFENSE POW/MIA ACCOUNTING
AGENCY

DEFENSE, DEPT-NATIONAL SECURITY AGY

**DEFENSE, DEPT-NAVSEA PMS 340** 

DEFENSE, DEPT-NAVY NAVAL FAC ENGRG

**COMMAND** 

DEFENSE, DEPT-NAVY OFC OF NAVAL RSCH DEFENSE, DEPT-NAVY SPACE & NAVAL WARFARE SYS CTR PACIFIC DEFENSE, DEPT-NAVY US NAVAL OBSERVATORY DEFENSE, DEPT-NAVY-OFFICE OF CHIEF LEARNING OFFICER

DEFENSE, DEPT-THREAT REDUCTION AGCY DEFENSE, DEPT-UNITED STATES INDO-PACIFIC COMMAND

DEFENSE, DEPT-WASHINGTON HEADQUARTERS SVCS

#### **DOE-DEPT OF ENERGY**

ENERGY, DEPT

ENERGY, DEPT. OF - BASIC ENERGY SCIENCES ENERGY, DEPT. OF-LAWRENCE BERKELEY NATL LAB

#### **DOI-DEPT OF INTERIOR**

INTERIOR, DEPT-BUREAU LAND MGMT-FED INTERIOR, DEPT-FISH & WILDLIFE SVC INTERIOR, DEPT-NATIONAL PARK SVC INTERIOR, DEPT-UNITED STATES GEO SURVEY

#### **DOT-DEPT OF TRANSPORTATION**

TRANSPORTATION, DEPT-FED HWY AD-FED TRANSPORTATION, DEPT-FED-FED AVIATION ADMIN

#### **ED-DEPT OF EDUCATION**

EDUCATION, DEPT-FED

EDUCATION, DEPT-FED FULBRIGHT HAYS PGM
EDUCATION, DEPT-FED INTL & FOREIGN LANG ED
EDUCATION, DEPT-FED OFC OF ELEM & SEC EDU
EDUCATION, DEPT-FED OFC OF POSTSEC ED
EDUCATION, DEPT-FED OFC OF SPECIAL ED &
REHAB SVCS

EDUCATION, DEPT-FED REHAB SVCS ADMIN
EDUCATION, DEPT-FED STUDENT SUPP SVCS PGM
EDUCATION, DEPT-FED TALENT SEARCH PGM
EDUCATION, DEPT-FED TITLE 1 PERKINS
NATIONAL AERONAUTICS AND SPACE
ADMINISTRATION

NATIONAL AERONAUT & SPACE ADM
NATL AERONAUTICS & SPACE ADM-GODDARD

SPACE FLIGHT CTR

#### NATIONAL SCIENCE FOUNDATION

NATIONAL SCIENCE FOUNDATION

#### **OTHER FEDERAL AGENCIES**

AGRICULTURE, DEPT-FOOD & NUTRITION CORPORATION FOR NATIONAL AND COMMUNITY SERVICE

HOMELAND SECURITY, DEPT-FEMA

INSTITUTE OF MUSEUM AND LIBRARY SERVICES

JUSTICE, DEPT-OFFICE JUSTICE PROG

MARINE MAMMAL COMMISSION

NATIONAL ENDOWMENT FOR THE HUMANITIES NATIONAL FOUNDATION ART & HUMAN-INST MUS & LIBR SVCS

NATL ENDOWMENT FOR THE ARTS

NATL ENDOWMENT FOR THE HUMANITIES

PEACE CORPS

SMALL BUSINESS ADMINISTRATION
SOCIAL SECURITY ADMINISTRATION
VETERANS AFFAIRS, DEPT-VA PACIFIC ISLAND
HEALTH CARE SYSTEM

#### **NON-FEDERAL**

#### **FOREIGN**

AB VISTA FEED INGREDIENTS, UK
ACCURE BATTERY INTELLIGENCE GMBH
AMERICAN SAMOA POWER AUTHORITY
AMERICAN SAMOA, GOVERNMENT

**CHUO UNIVERSITY** 

COMMONWEALTH OF NO MARIANA ISLANDS

DUBAI CARES ENGSOFT CO. LTD

EURASIA FOUNDATION (FROM ASIA)
FEDERATED STATES MICRONESIA
FREEDIVE PICTURES LIMITED

FUKADA SALVAGE AND MARINE WORKS COMPANY. LTD.

**GEOSCIENCE AUSTRALIA** 

GUAM, GOVERNMENT - PUBLIC HEALTH AND

**SOCIAL SERVICES** 

GUAM, GOVERNMENT-GUAM HOMELAND

**SECURITY** 

**GUAM, UNIVERSITY OF** 

JAPAN AGENCY MARINE-EARTH SCIENCE AND

**TECHNOLOGY** 

**KOREA FOUNDATION** 

MANDA FERMENTATION CO. LTD.

MARINE AND ENVIRONMENTAL RESEARCH

INSTITUTE OF POHNPEI

MEIJI UNIVERSITY

MELBOURNE, THE UNIVERSITY OF

NATIONAL CENTRAL UNIVERSITY TAIWAN

NAURU OCEAN RESOURCES INC. OGIVE TECHNOLOGY, INC.

OKINAWA PREFECTURE GOVERNMENT PACIFIC RIM RESEARCH LIBRARY ALLIANCE

QUEEN'S UNIVERSITY BELFAST REPUBLIC MARSHALL ISLANDS

REPUBLIC PALAU

RESEARCH CORPORATION OF THE UNIVERSITY OF

**GUAM** 

RYUKYUS, UNIVERSITY OF SENDAI UNIVERSITY

SINTEF

TAIPEI ECONOMIC AND CULTURAL OFFICE IN

HONOLULU

TOHOKU UNIVERSITY

UNITED NATIONS ENVIRONMENT PROGRAMME

UNIVERSITY OF COPENHAGEN, DARK

COSMOLOGY CENTRE (DARK)

WASEDA UNIVERSITY

**HAWAI'I- BUSINESS AND OTHER** 

AGRIPELAGO CORPORATION
AHA PUNANA LEO INC

ALU LIKE INC

AMERICAN SAVINGS BANK, F.S.B. DELPHOS INTERNATIONAL, LTD.

EAST WEST CENTER DBA OF CCTI B/W EAST AND

WEST, INC.

HANAHAUOLI SCHOOL

HAWAI'I COUNCIL FOR THE HUMANITIES

HUI NO KE OLA PONO, INC. INTERSTEL TECHNOLOGIES INC.

IOLANI SCHOOL
JUN INNOVATIONS
KAMEHAMEHA SCHOOLS
KAUPO RANCH, LTD.

KE KULA 'O NAWAHIOKALANI'OPU'U IKI PUBLIC

CHARTER SCHOOL

MAKAI OCEAN ENGINEERING INC

MALAMA KAHALAWAI INC MARTIN DEFENSE GROUP MERRIE MONARCH FESTIVAL

NALU SCIENTIFIC, LLC

OCEANIT LABORATORIES INC 'OHU 'OHU KO'OLAU INC

PACIFIC RADIATION ONCOLOGY INC
PACIFIC SHIPYARDS INTERNATIONAL, LLC

PAPA OLA LOKAHI

RESEARCH CORPORATION UNIV HI (RCUH)

SEA ENGINEERING, INC.
SPECTRUM PHOTONICS, INC

SYMBROSIA INC.

THE KAHALA HOTEL & RESORT TOWILL, R.M. CORPORATION HAWAI'I- DEPT OF EDUCATION

EDUCATION, DEPT-HI

EDUCATION, DEPT-HI-WASHINGTON MIDDLE

SCHOOL

**HAWAI'I- GOVERNMENT AGENCIES** ACCOUNTING & GEN SVC, DEPT (DAGS) - HI AGRICULTURE, DEPT-

ΗΙ

BUSINESS, ECON DEV & TOUR, DPT

BUSINESS, ECONOMIC DEV & TOUR-HAWAI'I TECHNOLOGY DEVELOPMENT CORPORATION

**CITY & COUNTY HONOLULU** 

CITY & COUNTY HONOLULU DEPT OF PARKS & REC CITY AND COUNTY HONOLULU DEPARTMENT OF

**ENVIRONMENTAL SERVICES** 

COUNTY KAUAI
COUNTY MAUI

COUNTY MAUI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT COUNTY MAUI DEPT OF WATER SUPPLY COUNTY MAUI OFC OF ECON DEVEL COUNTY MAUI PLANNING DEPT

COUNTY OF HAWAI'I DEPT OF RESEARCH AND

DEVELOPMENT
DEFENSE, DEPT-HI

DEFENSE, DEPT-HI - HI ARMY NATL GUARD

DEFENSE, DEPT-HI-HAWAI'I EMERGENCY MGMT

**AGENCY** 

GOVERNOR, OFFICE OF-HI-EXEC OFFICE ON EARLY

**LEARNING** 

HAWAI'I COUNTY PLANNING DEPARTMENT HAWAI'I STATE FOUNDATION ON CULTURE AND

THE ARTS

HAWAIIAN AFFAIRS, OFFICE OF HAWAIIAN HOME LANDS, DEPT-HI

HEALTH DEPT-HI MATERNAL AND CHILD HEALTH

BRANCH

HEALTH, DEPT-ADULT MENTAL HTH DV-HI

HEALTH, DEPT-ALCOHOL & DRUG ABUSE DIV-HI

HEALTH, DEPT-EXEC OFF AGING-HI

HEALTH, DEPT-FAMILY HLTH SVC DIV-HI HEALTH, DEPT-HAZARD EVAL & EMERGENCY

**RESPONSE** 

HEALTH, DEPT-HI

HEALTH, DEPT-HI CLEAN WATER BRANCH HEALTH, DEPT-HI HARM REDUCTION SERVICES BRANCH

HEALTH, DEPT-HI-BEHAVIORAL HEALTH ADMIN HEALTH, DEPT-HI-CHILD/ADOLESC MENTAL HLTH DIV

HEALTH, DEPT-HI-CHRONIC DISEASE PREVENTION

& HEALTH PROMOTION DIV

HEALTH, DEPT-HI-DEVELOPMENTAL DISABILITIES DIVISION

HEALTH, DEPT-HI-OFFICE OF LANGUAGE ACCESS
HEALTH, DEPT-HI-STATE LABORATORIES DIVISION

HUMAN SERVICES, DEPT-HI

HUMAN SERVICES, DEPT-HI BENEFITS, EMPLOYMENT & SUPPORT SERVICES

**HUMAN SERVICES, DEPT-HI-MED-QUEST DIV** 

HUMAN SERVICES, DEPT-OYS-HI

JUDICIARY-HI

LABOR & INDUSTRIAL RELATION, DEPT-HI (DLIR) LAND & NATURAL RES, DPT (DLNR)-COMMISSION

ON WATER RESOURCE MANAGEMENT
LAND & NATURAL RES, DPT-AQUAT (DLNR)
LAND & NATURAL RES, DPT-BOATING & OCEAN
REC (DLNR)

LAND & NATURAL RES, DPT-FORST (DLNR)
LAND & NATURAL RES, DPT-STATE HISTORIC

PRESERVATION DIV

LAND & NATURAL RESOURCES, DEPT (DLNR) LAND & NATURAL RESOURCES, DEPT (DLNR)

**ENGINEERING DIV** 

NATURAL ENERGY LABORATORY OF HAWAI'I

AUTHORITY

OFFICE OF PLANNING - HAWAI'I COASTAL ZONE

MGMT PROGRAM
PUBLIC SAFETY, DEPT-HI

STATE OF HAWAI'I DEPARTMENT OF TAXATION

TRANSPORTATION, DEPT-HI WATER SUPPLY, BOARD OF

HAWAI'I- HEALTH ORGANIZATIONS

HAWAI'I HEALTH SYSTEMS CORPORATION-HILO

MED CTR

HAWAI'I PACIFIC HEALTH MEDICAL GROUP

KALIHI-PALAMA HEALTH CENTER

KAPIOLANI MED CTR FOR WOMEN & CHILDREN

KAPIOLANI MEDICAL SPECIALIST

**KUAKINI MEDICAL CENTER** 

PACIFIC IN VITRO FERTILIZATION INSTITUTE

QUEENS HEALTH SYSTEMS QUEEN'S MEDICAL CENTER STRAUB CLINIC & HOSPITAL

UNIVERSITY CLINICAL EDUCATIONAL & RSCH

ASSOC (UCERA)

HAWAI'I- NON-PROFIT ORGANIZATIONS

BIG ISLAND RESOURCE CONSERVATION & DEV

COUNCIL INC.
CEEDS OF PEACE

CENTER FOR GETTING THINGS STARTED

**CHUN FOUNDATION** 

COLLABORATIVE SUPPORT SERVICES, INC. CONSUELO ZOBEL ALGER FOUNDATION

**CYBERHAWAII** 

EARTHSHOT CLIMATE CO.

EPSTEIN (JEAN ESTES) CHARITABLE FOUNDATION
GENERAL CONTRACTORS ASSOC HI EDUCATIONAL

**FOUNDATION** 

GREGORY HOUSE PROGRAMS
HALE MAKUA HEALTH SERVICES
HAUOLI MAU LOA FOUNDATION

HAWAI'I VISITORS AND CONVENTION BUREAU

HAWAI'I 4-H FOUNDATION

HAWAI'I CHILDREN'S ACTION NETWORK HAWAI'I COMMUNITY FOUNDATION (HCF)

HAWAI'I COMMUNITY FOUNDATION GEIST FDTN HAWAI'I COMMUNITY FOUNDATION INGEBORG

VF MCKEE FUND

HAWAI'I COMMUNITY FOUNDATION ROBERT C

PERRY FUND

HAWAI'I COMMUNITY FOUNDATION STRAUB

TRUST ESTATE

HAWAI'I COMMUNITY FOUNDATION-HAWAI'I

TOURISM AUTHORITY FUND

HAWAI'I HEALTH AND HARM REDUCTION CENTER (FORMERLY KNOWN AS THE CHOW PROJECT)

HAWAI'I HOMELESS HEALTHCARE HUI

HAWAI'I JUSTICE FOUNDATION
HAWAI'I PUBLIC HEALTH INSTITUTE

HAWAI'I STATE RURAL HEALTH ASSOCIATION

HAWAIIKIDSCAN I OLA LAHUI

**INSTITUTE FOR HUMAN SERVICES** 

JACK HALL HAWAI'I HOUSING CORPORATION

**KE OLA MAMO** 

KOKUA KALIHI VALLEY KULA NO NA PO'E HAWAI'I

LANAI CHANGES COMMUNITY ECONOMIC DEVELOPMENT AND NONPROFIT HUI

LANAKILA PACIFIC MALAMA O MANOA

MAUI ECONOMIC DEVELOPMENT BOARD INC

MENTAL HEALTH KOKUA

NA MAMO ALOHA 'AINA O HONOKOHAU NATIVE HAWAIIAN EDUCATION ASSOCIATION NATIVE HAWAIIAN HOSPITALITY ASSOCIATION NATURE

CONSERVANCY, THE-HAWAI'I

OLELO

PACIFIC AMERICAN FOUNDATION

PACIFIC ISLANDS PRIMARY CARE ASSOCIATION

PARENTS & CHILDREN TOGETHER (PACT)

PARTNERS IN CARE - OAHU CONTINUUM OF CARE

PARTNERS IN DEVELOPMENT FOUNDATION

POLYNESIAN VOYAGING SOCIETY

RESIDENTIAL YOUTH SERVICES & EMPOWERMENT SAMUEL N. AND MARY CASTLE FOUNDATION SYNERGISTIC HAWAI'I AGRICULTURE COUNCIL

THE FOOD BASKET INC.
THE LEARNING COALITION
THE OUTDOOR CIRCLE

THREE MOUNTAIN ALLIANCE FOUNDATION

UNIVERSITY HAWAI'I FOUNDATION UNIVERSITY HEALTH PARTNERS

WAIKIKI BEACH SPECIAL IMPROVEMENT DISTRICT

ASSN

MAINLAND- BUSINESS AND OTHER

50BREAKTHROUGHS FOUNDATION

ABT ASSOCIATES INC

ACADEMY OF NUTRITION AND DIETETICS

AMERICA VIEW

**AMERICAN SYSTEMS** 

ASSOCIATION OF AMERICAN COLLEGES AND

**UNIVERSITIES** 

AXIENT LLC (FORMERLY KNOWN AS QUANTITECH

LLC)

BATTELLE ENERGY ALLIANCE, LLC BIOMASS ENERGY SYSTEMS INC.

**BROOKHAVEN NATIONAL LABORATORY** 

**CLARK UNIVERSITY** 

CORTEVA AGRISCIENCE LLC (FORMERLY DOW

AGROSCIENCES)

ELI LILLY & COMPANY EXTENSION FOUNDATION

FAR WEST ATHLETIC TRAINERS' ASSOCIATION

FERMI NATIONAL ACCELERATOR LAB GOODMAN TECHNOLOGIES, LLC GYNUITY HEALTH PROJECTS, INC.

ICF INCORPORATED, LLC
JACOBS ENGINEERING
JET PROPULSION LAB-JPL
KBR WYLE SERVICES, LLC

LAWRENCE LIVERMORE NATL LAB

**LEIDOS** 

MERCK SHARP & DOHME CORP

**PSILOSTERICS LLC** 

PUEBLO OF JEMEZ DEPARTMENT OF EDUCATION

SALIOGEN THERAPEUTICS, INC. SANDIA NATIONAL LABORATORIES

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

SOLIGENIX, INC.

SPACE TELESCOPE SCIENCE INSTITUTE

TERRAFORM POWER, LLC

TETRA TECH, INC.

US ACUTE CARE SOLUTIONS

UT-BATTELLE, LLC

WOODS HOLE OCEANOGRAPHIC INSTITUTION

WSP USA SOLUTIONS, INC

**MAINLAND- HEALTH ORGANIZATIONS** 

AMERICAN HEART ASSOCIATION

BETH ISRAEL DEACONESS MEDICAL CENTER BRIGHAM AND WOMEN'S HOSPITAL, INC. CHILDREN'S HOSPITAL OF PHILADELPHIA HUTCHINSON (FRED) CANCER RESRCH CTR **MAINLAND- NON-PROFIT ORGANIZATIONS** 

ALLIANCE FOR SUSTAINABLE ENERGY, LLC

AMERICAN ASSN FOR CANCER RSCH

AMERICAN ASSN OF UNIVERSITY WOMEN

AMERICAN ASSOCIATION OF IMMUNOLOGISTS,

INC.

AMERICAN CHEMICAL SOCIETY - GREEN

**CHEMISTRY INSTITUTE** 

AMERICAN CHEMICAL SOCIETY-PETROLEUM RSCH

**FUND** 

AMERICAN COUNCIL EDUCATION

AMERICAN COUNCIL OF LEARNED SOCIETIES

AMERICAN EDUCATIONAL RESEARCH

**ASSOCIATION** 

AMERICAN INSTITUTE OF MATHEMATICS

AMERICAN LIBRARY ASSOCIATION

ANHEUSER-BUSCH COMPANIES- AH BUSCH FDTN

ANN & ROBERT H. LURIE CHILDREN'S HOSPITAL

OF CHICAGO APIA SCHOLARS ARTS MIDWEST

ASSOCIATION FOR ASIAN STUDIES

ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN

ASTRONOMY, INC.

ASSOCIATION UNIVERSITY CENTER DISABILITIES

**BATTELLE MEMORIAL INSTITUTE** 

BIOMADE

BOSTON MEDICAL CENTER CORPORATION CALIFORNIA ASSOCIATION RESEARCH IN

ASTRONOMY (KECK)

COMMONWEALTH OF NORTHERN MARIANAS ISLANDS-COMMONWEALTH HEALTHCARE

**CORPORATION** 

COMPUTING RESEARCH ASSOCIATION

CONCORD CONSORTIUM, INC.

DONALD DANFORTH PLANT SCIENCE CENTER

DUCKS UNLIMITED, INC.

DUKE UNIVERSITY FACE FOUNDATION

H. LEE MOFFITT CANCER CENTER AND RESEARCH

INSTITUTE, INC.

HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE INSTITUTE INTERNATIONAL EDUCATION JOHNSON (ROBERT WOOD) FOUNDATION

KELLOGG (WK) FOUNDATION

MATHEMATICAL ASSOCIATION OF AMERICA

MERCY CORPS

MOORE (GORDON & BETTY) FOUNDATION
MOTT (CHARLES STEWART) FOUNDATION
MOUNT CUBA ASTRONOMICAL FOUNDATION
NATIONAL FISH & WILDLIFE FOUNDATION

NATIONAL FOUR-H COUNCIL (4-H)

NATIONAL JEWISH HEALTH

NATIONAL MARINE SANCTUARY FOUNDATION

NATURE CONSERVANCY, THE

OCEAN FOUNDATION
PEW CHARITABLE TRUSTS

RTI INTERNATIONAL

RUSSELL SAGE FOUNDATION
SAN DIEGO BLOOD BANK

SEATTLE INSTITUTE FOR BIOMEDICAL & CLINICAL

RESEARCH

SETI INSTITUTE

SIMONS FOUNDATION

SOUTHEAST COASTAL OCEAN OBSERVING

**REGIONAL ASSOCIATION** 

STEM NEXT OPPORTUNITY FUND

SURFRIDER FOUNDATION
THE TRUST FOR PUBLIC LAND

THE V FOUNDATION

UNIVERSITIES SPACE RESEARCH ASSN

WESTERN STATES ART FEDERATION (WESTAF)

**US COLLEGES AND UNIVERSITIES** 

ALASKA FAIRBANKS, UNIVERSITY OF ALBERT EINSTEIN COLLEGE OF MEDICINE

ARIZONA STATE UNIVERSITY ARIZONA, UNIVERSITY OF ARKANSAS, UNIVERSITY OF

AUBURN UNIVERSITY

BAYLOR COLLEGE OF MEDICINE

BD OF REGENTS OF UNIVERSITY SYS OF GA-GEORGIA INSTITUTE OF TECHNOLOGY

**BOISE STATE UNIVERSITY** 

CALIFORNIA BERKELEY, UNIVERSITY OF CALIFORNIA DAVIS, UNIVERSITY OF CALIFORNIA INST OF TECHNOLOGY CALIFORNIA LOS ANGELES, UNIV CALIFORNIA MERCED, UNIVERSITY OF CALIFORNIA RIVERSIDE, UNIVERSITY OF

CALIFORNIA SAN DIEGO, UNIV

CALIFORNIA SAN DIEGO, UNIV-SCRIPPS INST OF

**OCEAN** 

CALIFORNIA SAN FRANCISCO, UNIV CALIFORNIA SANTA BARBARA, UNIV

CALIFORNIA SANTA CRUZ, UNIV CHAMINADE UNIVERSITY

CLEMSON UNIVERSITY
COLORADO DENVER, UNIVERSITY OF

CONNECTICUT, UNIVERSITY OF

**EMORY UNIVERSITY** 

FLORIDA STATE UNIVERSITY
FLORIDA, UNIVERSITY OF
GEORGE MASON UNIVERSITY

GEORGE WASHINGTON UNIVERSITY

ILLINOIS, UNIVERSITY OF JOHNS HOPKINS UNIVERSITY KANSAS STATE UNIVERSITY

LANGUAGE LEARNING PGM-UNIV MICHIGAN LOUISIANA STATE UNIVERSITY-HEALTH SCIENCES

CENTER

MARYLAND, UNIVERSITY OF MICHIGAN, UNIVERSITY OF MINNESOTA, UNIVERSITY OF

MISSOURI-ST. LOUIS, UNIVERSITY OF

MONTANA STATE UNIVERSITY

MOREHOUSE SCHOOL OF MEDICINE
NAVAL POSTGRADUATE SCHOOL
NEVADA LAS VEGAS, UNIVERSITY OF
NEW MEXICO, UNIVERSITY OF - BOARD OF

**REGENTS** 

NEW YORK MEDICAL COLLEGE

**NEW YORK UNIVERSITY** 

NORTHEASTERN UNIVERSITY NORTHERN ARIZONA UNIVERSITY NORTHWESTERN UNIVERSITY NOTRE DAME, UNIVERSITY OF OKLAHOMA, UNIVERSITY OF OREGON STATE UNIVERSITY

PENNSYLVANIA STATE UNIVERSITY PITTSBURGH, UNIVERSITY OF

**PURDUE UNIVERSITY** 

RUTGERS, STATE UNIVERSITY OF NEW JERSEY

SOUTH CAROLINA, UNIVERSITY OF

SOUTHERN CALIFORNIA, UNIVERSITY OF

STANFORD UNIVERSITY TEXAS A&M UNIVERSITY

TEXAS AUSTIN, UNIVERSITY OF

THE BOARD OF SUPERVISORS OF LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE AS REPRESENTED BY PENNINGTON BIOMEDICAL RESEARCH CENTER THE REGENTS OF THE UNIVERSITY OF CALIFORNIA THE REGENTS OF THE UNIVERSITY OF COLORADO THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE

CITY OF NEW YORK

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE

**CENTER** 

UNIVERSITY OF CHICAGO
UNIVERSITY OF DELAWARE
UNIVERSITY OF IOWA

UNIVERSITY OF MASSACHUSETTS LOWELL

UNIVERSITY OF TEXAS ARLINGTON

**UTAH, UNIVERSITY OF** 

VANDERBILT UNIVERSITY MEDICAL CENTER WASC SENIOR COLLEGE AND UNIVERSITY

COMMISSION

WASHINGTON STATE UNIVERSITY

WASHINGTON UNIVERSITY (ST LOUIS, MO)

WASHINGTON, UNIVERSITY OF

WEILL MEDICAL COLLEGE OF CORNELL

UNIVERSITY

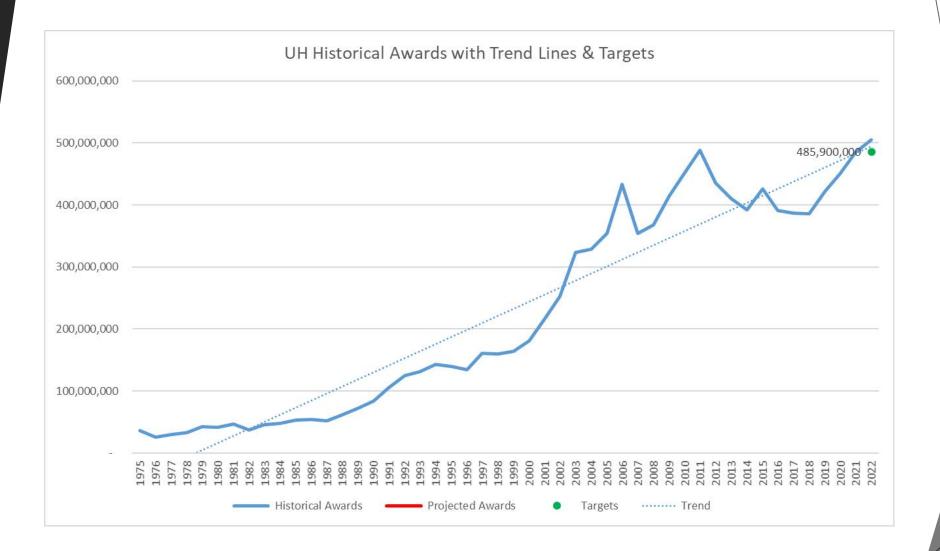
WEST VIRGINIA UNIVERSITY

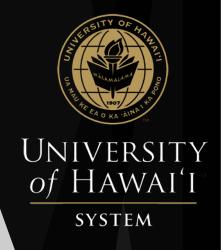


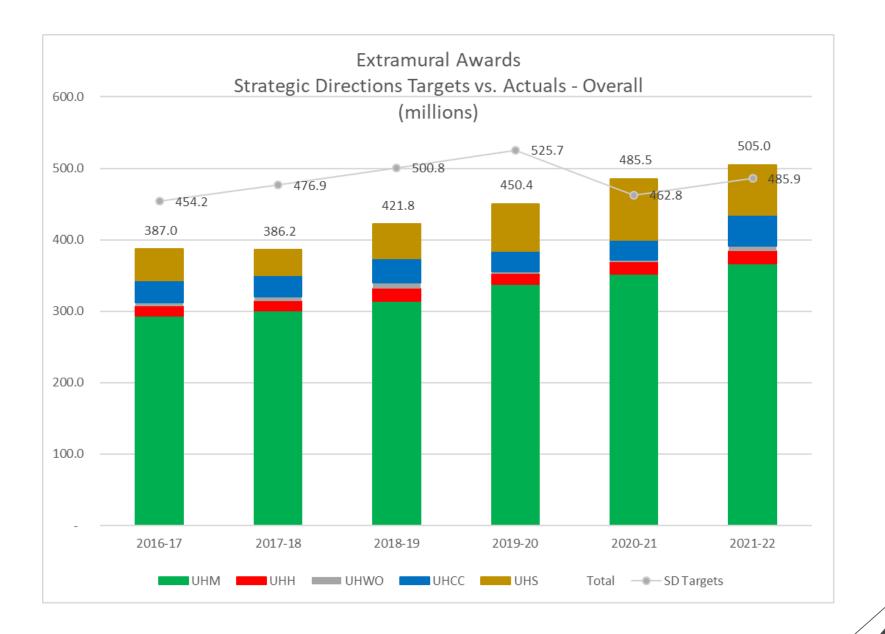
## FY22 Strategic Directions: Targets vs. Actuals

BOR Committee on Research & Innovation

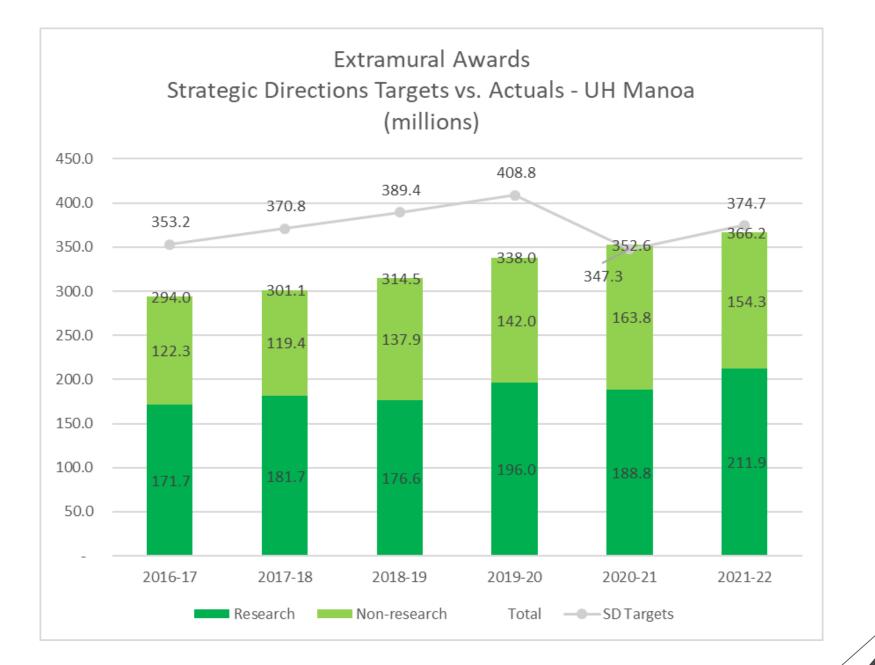
October 6, 2022



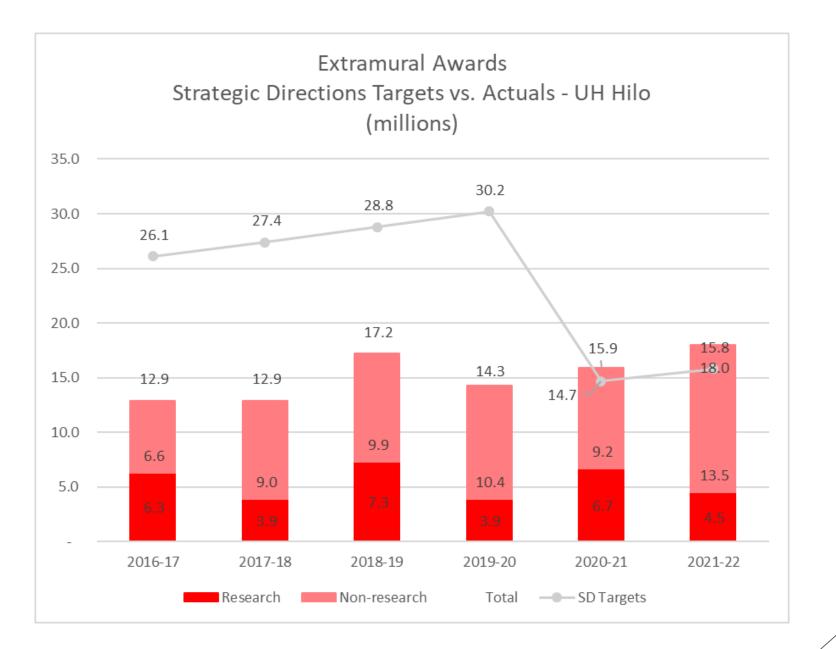


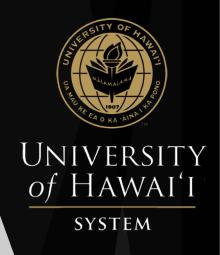


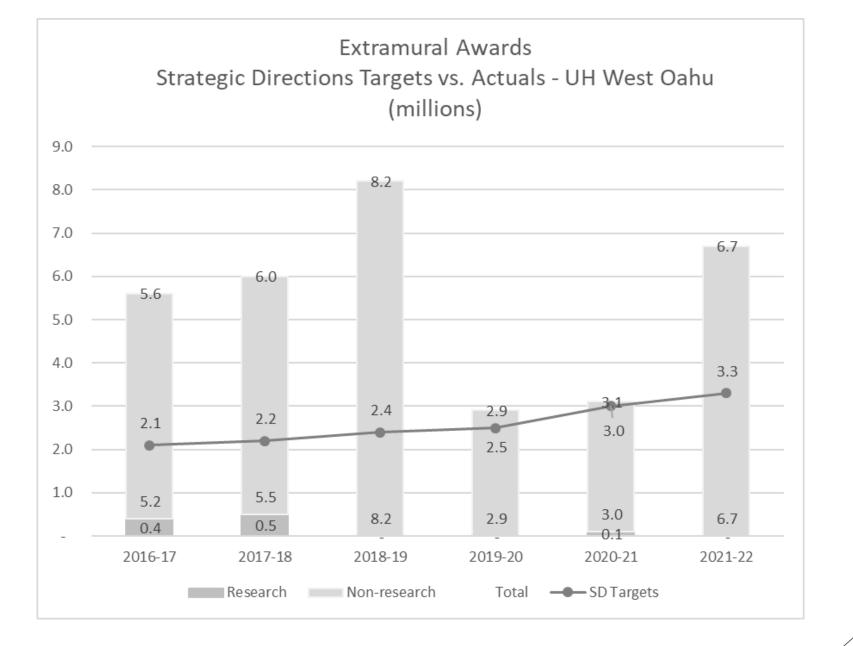






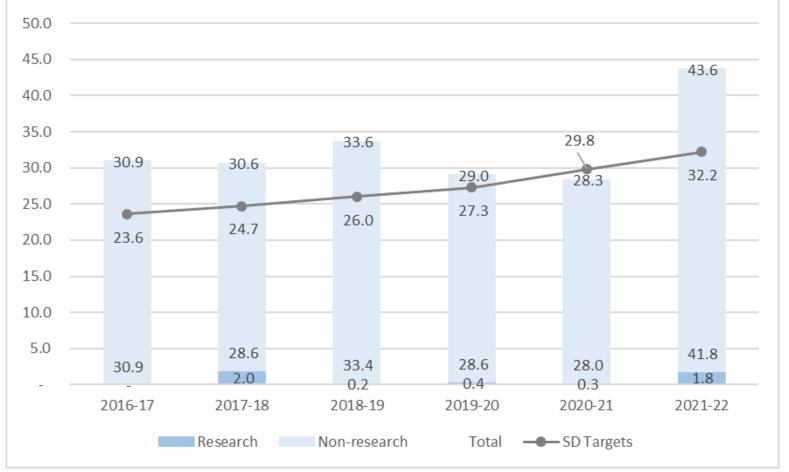


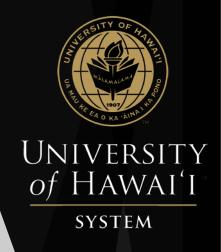


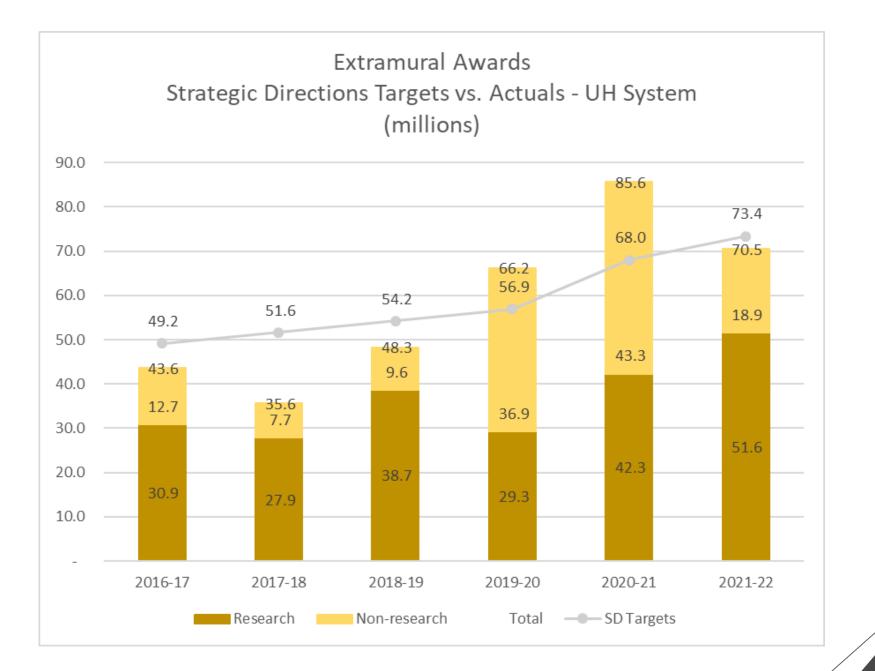


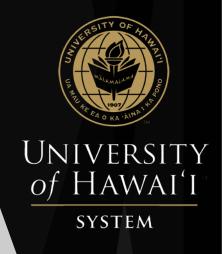


# Extramural Awards Strategic Directions Targets vs. Actuals UH Community Colleges & UH Maui College (millions)









## **Committee on Research and Innovation**

Work Plan for the 2022-2023 Academic Year

		2022-2023 Committee Goals and	Projected Timeline			
	Committee duties per bylaws	Objectives	1 <sup>st</sup> Q Jul-Sept	2 <sup>nd</sup> Q Oct-Dec	3 <sup>rd</sup> Q Jan-Mar	4 <sup>th</sup> Q Apr-Jun
1	Evaluate and approve long range plans that establish the strategic goals and	Research and Innovation Long-Range Plans and Goals				
	objectives for research, innovation, and technology transfer at the University.	Research/Innovation Project Presentation (10/6/22)		х	х	х
2	Review and make recommendations regarding investments, policies, and	FY22 Year-in-Review and FY23 Extramural Awards Outlook (10/6/22)		х		
	practices relating to University research, innovation and technology transfer programs.	Extramural Awards Semi-annual Report			х	х
3	Review and make recommendations on proposals to establish or to terminate Organized Research Units (ORU) and research centers.					
4	Work in concert with Administration to establish performance goals and metrics to evaluate progress against the strategic goals and objectives.	Strategic Directions: extramural awards targets v. actuals (10/6/22)		x		
5	Committee Governance	Review committee work plan (10/6/22)		Х		
		Review committee's work for the year				Х