



# UROOP Newsletter

Official Newsletter of the Undergraduate Research Opportunities Program at the University of Hawai'i at Mānoa

## Office Information

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- Office hours: 10:00 am - 3:00 pm, M-F
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# Congratulations!

**Yet another academic year** at the University of Hawai'i at Mānoa (UHM) has gone by so quickly! Though the Spring 2020 Semester brought with it a period of great uncertainty, our faculty, staff and students have persevered and reached major milestones. So we at UROP want to say congratulations! While these great achievements deserve as much attention, pomp, and bragging rights as those afforded at a physical ceremony, we are proud to help document your accomplishments in this newsletter and are applauding you wherever you are.

This Summer 2020 issue of UROP's newsletter highlights the achievements of members of the UROP community. Our faculty mentors are winning awards for research (p. 6) and mentorship (p. 8). Our alumni are being accepted into highly competitive fellowship programs (p. 3). And of course, congratulations to the recent graduates who are moving onto the next chapter in their lives (p. 4). UROP is happy to have been part of your journey at UHM and we hope you are successful in your future endeavors! Read on and celebrate with us!



**Above:** Students from the Department of Social Work in the Myron B. Thompson School of Social Work close out their virtual convocation event over Zoom

**Photo credit:** UH News

## DOUGLAS S. YAMAMURA SCHOLARSHIP



### Sarah Igarashi

*"By exploring ways in which these societal actors define and disrupt barriers and categories in visual representations of the body, I hope to bring to light an emerging conversation about the productivity and limitations of representational strategies of gender and identity fluidity in contemporary painting."*  
– Sarah Igarashi

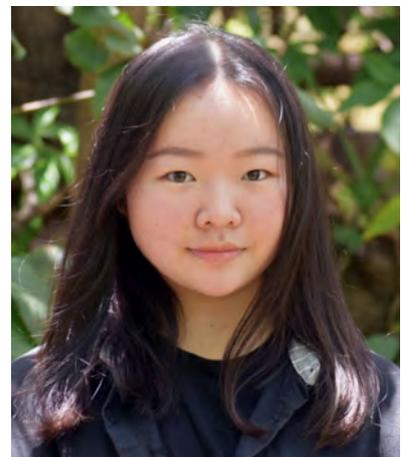
**UROP is honored** to present the Douglas S. Yamamura Scholarship each year to up to two outstanding undergraduate students enrolled in any field of study who are engaged in UROP-funded research and creative work projects. The scholarship was established with a generous endowment from the estate of Paul T. Yamamura to support scholarly research at UHM.

**Each academic year**, UROP considers all project funding applicants for the prestigious Douglas S. Yamamura Scholarship and selects the best STEM and the best non-STEM student or student group to receive the scholarship. In an effort to support continued education of local students, preference is shown to undergraduate students who have graduated from a high school in Hawai'i.

**The AY20-21** Douglas S. Yamamura Scholarship recipient for a non-STEM project is Sarah Igarashi. Sarah's project entitled "Queering the Abstract Figure: Ambiguous Bodies in the Art Work of Christina Quarles" examines Quarles' work, which uses biomorphic abstraction to explore themes of identity, through both queer theory and art historical lenses. In order to fully research this work, Sarah plans to travel to the Museum of Contemporary Art, Chicago to view the upcoming exhibition entitled "Christina Quarles" (pending the lifting of restrictions on travel). Sarah graduated from Mililani High School and is now a student of Art History at UHM mentored by Dr. Jaimey Hamilton Faris in the Department of Art and Art History.

## WELCOME, DEBORAH

**We are very excited** to welcome Deborah Yuan as the new UROP Communications Assistant! Deborah is a UH Regents Scholar and just finished her freshman year in the Shidler College of Business where she is double majoring in Marketing and International Business. In her spare time she enjoys drawing, listening to music, playing video games, and reading. She brings to this position considerable background and knowledge in newswriting and graphic design. She looks forward to gaining experience in the field of marketing and helping UROP reach even more students. Welcome, Deborah!



Deborah Yuan

## UROP FACULTY MENTOR, CHRIS MUIR, WINS BOTANICAL SOCIETY OF AMERICA'S EMERGING LEADER AWARD

**Congratulations** to Professor Chris Muir (School of Life Sciences, formerly Department of Botany) for receiving the Botanical Society of America's (BSA) Emerging Leader Award! This high honor recognizes early career scientists who have demonstrated great scholarship in the field of Botany and who show strong potential for future accomplishment. As part of this award, Professor Muir is invited to present a special lecture at next year's BSA meeting with all expenses paid where he will be recognized at BSA's annual banquet.

UROP also recognizes and thanks Professor Muir in his role as a faculty mentor for undergraduate students at UHM. As a researcher, Dr. Muir studies the evolutionary physiology of leaves to better understand how plants evolved to work under the physical and chemical laws of nature. He utilizes this expertise to mentor multiple undergraduate student projects examining gas exchange in leaves, and was also a recipient of a 2020 Faculty Mentoring Grant for Summer Undergraduate Research and Creative Work (p. 10). Thank you, Professor Muir for your contributions to the field of botany and to your students. We look forward to following your bright future, as well as those of your student mentees!

## CONGRATULATIONS TO AMANDA WONG ON GRF

**Congratulations** to UROP alumnus Amanda Wong (B.S. Global Environmental Science, 2019) on being awarded a prestigious National Science Foundation Graduate Research Fellowship (NSF GRF)! The NSF GRF program supports outstanding graduate students in NSF-supported science, technology, engineering, and mathematics disciplines seeking M.S. or Ph.D. degrees. The competitive program allows fellows to conduct their own research at any accredited U.S. institution of their choice, and the fellowship provides a 3-year annual stipend of \$34,000 and a \$12,000 cost of education allowance for tuition and fees.

During her undergraduate studies at UHM, Amanda received funding from UROP to conduct research on the effect of the interaction between two key plants in Hawai'i, the endemic 'ōhi'a and the invasive strawberry guava, on plant survival and growth. She conducted her work under the faculty mentorship of Dr. Kasey Barton (School of Life Sciences, formerly Department of Botany). Learn more about Amanda and Dr. Barton in the UROP Fall 2019 Volume 2 Issue 1 Newsletter: [go.hawaii.edu/KHA](http://go.hawaii.edu/KHA)

Learn more about the NSF GRF program: [www.nsfgrfp.org](http://www.nsfgrfp.org)

## A message from the UROP Director

Dr. Creighton M. Litton



Aloha mai kākou! For all of the students, staff, faculty and administrators at UH Mānoa, congratulations for successfully navigating what was undoubtedly the most convoluted, confusing and difficult semester in our collective lives. Everyone that I know is exhausted from that effort, so I hope that you will all take the time to sit back, relax, and celebrate the stories and accomplishments presented in the Summer 2020 edition of the UROP Newsletter. While it seems like a decade, it was only ~3-4 months ago that the coronavirus pandemic turned the world, state and our campus upside down, throwing us all into new and largely unexplored roles in online education, at-home schooling, and working from home, all while trying to maintain the bonds that tie us together as an 'ohana on and off our campus. I learned a lot through this process about myself, the students in my classes and lab, my colleagues, and my on-campus support networks. One theme that runs through all of these interactions is that of resiliency. For example, UROP received record numbers of applications from students (p. 12) and faculty mentors (p. 10) for UROP funding in Spring 2020, all of which were submitted prior to the pandemic. So when these awards were made, we required every recipient to submit a COVID-19 contingency plan outlining if they would be able to proceed with their projects, and what changes they would need to make in order to do so (p. 9). I fully anticipated that half or more of these projects would respond that they were unable to proceed and were returning the funds. However, not a single student or faculty member elected that option, and all recipients were able to outline compelling plans to move forward with their research and creative work projects. This is truly impressive, and highlights how resilient we are as a campus. He 'a'ali'i ku makani mai au; 'a'oha makani nana e kula'i ('Ōlelo No'eau #507; I am a wind resisting 'a'ali'i, no gale can push me over (Pukui, 1983)). We will continue to face challenges in the months and years ahead, and are best positioned to confront and overcome these challenges as a campus 'ohana with open minds and hearts.

# Congratulations, UROP Class of 2020



**Congratulations** to the UROP Class of 2020! Though the in-person Spring 2020 Commencement ceremony was cancelled, the hard work and achievements of UROP-funded students deserve to be celebrated. We would like to recognize all of the students who have successfully completed research and creative work projects and presentations with UROP support and graduated in Spring 2020, or will be graduating in Summer 2020.

While all UROP students and projects are exceptional, the Class of 2020 has excelled under the most extreme of circumstances. Never before have students faced the difficulties of finishing research and creative work projects while also navigating their academic and personal lives during a pandemic. Justin Menina and Kim Yen Nguyen are two of many students who persevered through the pandemic and completed their projects in Spring 2020. Justin and Kim reflect on their work as they move onto the next great chapter in their lives. Thank you for letting UROP be part of your academic journey. We wish you the best of luck in your future endeavors!

## Justin Menina

Major: Political Science, Economics

Mentor: Dr. Sarah Wiebe, Department of Political Science

### **Placemaking and the Gentrification of Kaka'ako: Exploring Alternative Pathways for Sustainable Futures**

- *"Conducting my capstone research project on gentrification in Kaka'ako with support from UROP, in parallel with supportive faculty, helped me to develop both professionally and personally in refining my skills in qualitative research. Moreover, applying for UROP funding gave me insight into the grant writing process, which will become invaluable when applying for graduate school. All of these experiences in undergraduate research have positioned me to excel in continuing my research in community development and sustainability."* – Justin Menina
- *"My research experience with UROP was an illuminating and empowering experience which not only extended future avenues into research into challenging gentrification but also in shaping me as a budding academic."* - Justin Menina

## Kim Yen Nguyen

Major: Biology

Mentor: Dr. Scott Miller, Department of Mechanical Engineering

### **Non-Occluding Surgical Suction Device: Makani**

- *"I am very grateful that UROP has given me and my teammate, Kelly Huang, an opportunity to work on our project and creative ideas. Through this experience, I learned the importance of collaborative work with my partner as well as my mentor. Although we have encountered a lot of challenges, I am happy that I was able to overcome them together with my teammate and form a strong bond between us."* – Kim Yen Nguyen
- *"Know what sparks the light in you. Then use that light to illuminate the world."* - Oprah Winfrey



# UROP THANKS THE FAB, UROC, AND AD HOC FACULTY REVIEWERS DEDICATED TO OUR PROGRAM

## CURRENT FACULTY ADVISING MEMBERS:

### Faculty Advisory Board

**Kasey Barton**, Associate Professor, School of Life Sciences (formerly Department of Botany)

**Vernadette Gonzalez**, Associate Professor, Department of American Studies; Director, Honors Program

**Michael Guidry**, Faculty & Undergraduate Chair, Global Environmental Science, Department of Oceanography

**Willy Kauai**, Director, Native Hawaiian Student Services

**Brian Powell**, Professor, Department of Oceanography

**Scott Sinnett**, Professor & Undergraduate Chair, Department of Psychology

### Undergraduate Research Opportunities Council

**Kasey Barton**, Associate Professor, School of Life Sciences (formerly Department of Botany)

**Sandra von Doetinchem**, Junior Specialist & Program Specialist, Professional Program, Outreach College

**Stuart Donachie**, Professor, School of Life Sciences (formerly Department of Microbiology)

**Scott Groeniger**, Associate Professor, Department of Art & Art History

**Michael Guidry**, Faculty & Undergraduate Chair, Global Environmental Science, Department of Oceanography

**Zhenhua Huang**, Associate Professor, Department of Ocean & Resources Engineering

**C. Harrison Kim**, Assistant Professor, Department of History

**Qing Li**, Professor, Department of Molecular Biosciences & Bioengineering

**Deborah Mattheus**, Assistant Professor, Department of Nursing

**Craig Nelson**, Faculty, Department of Oceanography

**Pratibha Nerurkar**, Associate Professor & Graduate Chair, Department of Molecular Biosciences & Bioengineering

**Aaron Ohta**, Professor, Department of Electrical Engineering

**David J. Royer**, Assistant Professor, Department of Special Education

**Lorey Takahashi**, Professor, Department of Psychology

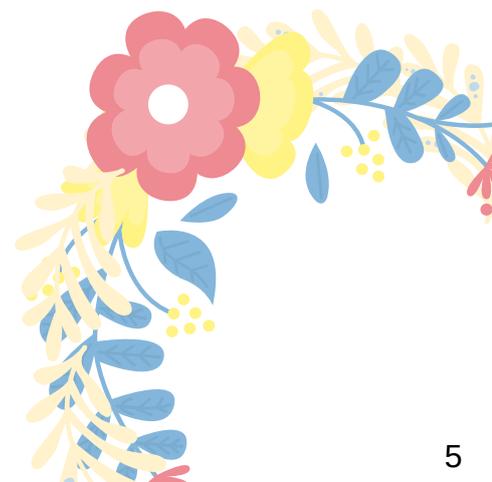
**Michelle Tallquist**, Professor, Center for Cardiovascular Research

**A. Zachary Trimble**, Associate Professor, Department of Mechanical Engineering

**Rakan (Zak) Zahawi**, Director, Lyon Arboretum

We at UROP would like to thank and recognize the members of our Faculty Advisory Board (FAB) and Undergraduate Research Opportunities Council (UROC) for their dedication to our program and the greater University of Hawai'i at Mānoa undergraduate community. We also thank the individual ad hoc faculty on campus who graciously assist in reviewing student and faculty funding proposals. FAB, UROC, and ad hoc faculty reviewers have volunteered countless hours of service and offered important insight to UROP throughout this and prior years.

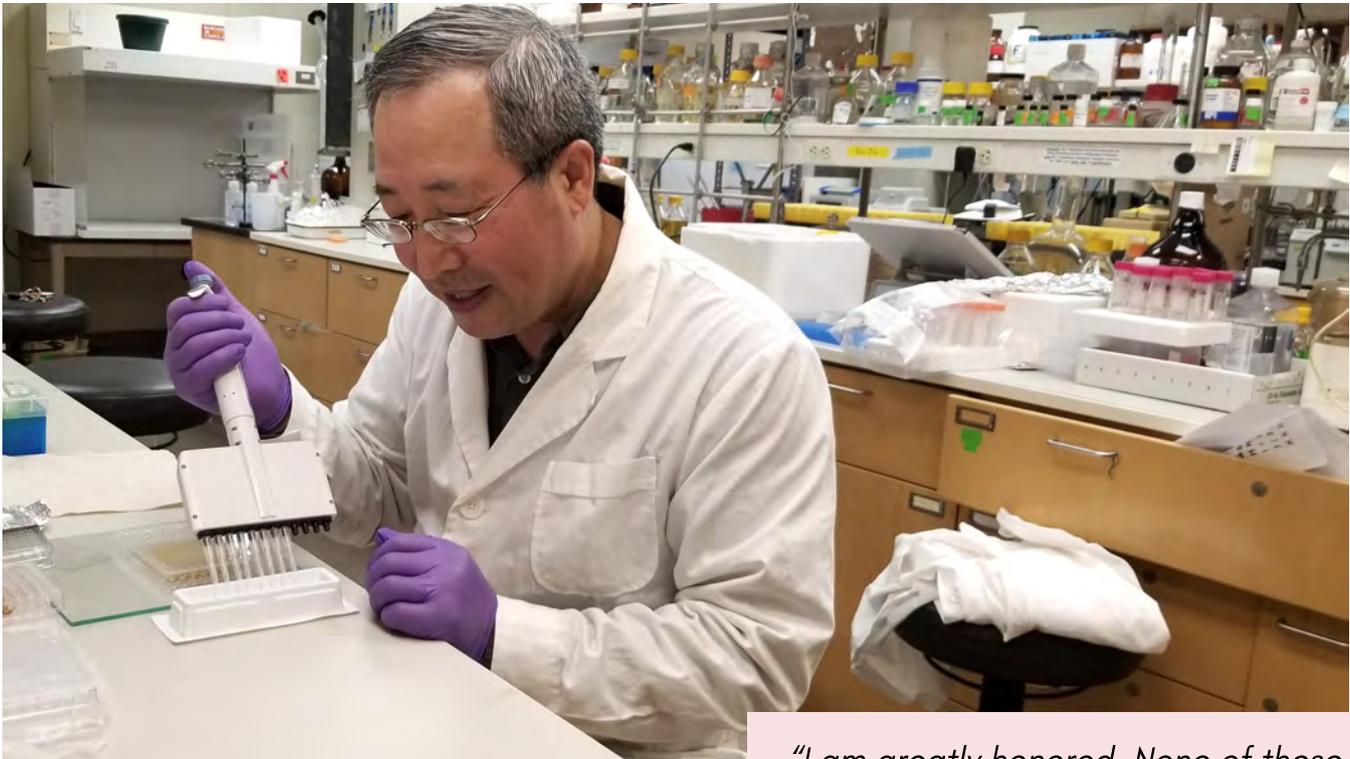
Staffed with only 2 full-time program coordinators, 2 part-time student employees, and a half-time director, the regular guidance that the FAB, UROC, and ad hoc members provide is vital to UROP's success. Their discipline-specific and programmatic expertise has been critical in reviewing the hundreds of student funding applications received each year since 2011. In the last two years these individuals have also reviewed dozens of Faculty Mentoring Grant applications. As faculty representatives from a broad array of departments across campus, the UROC and FAB also provide a well-rounded voice in advising program development and future initiatives. Additionally, they serve as critical points of contact connecting and promoting UROP to the broader campus and individual units at UHM. Mahalo to our past and present members!



# FACULTY AND STUDENT SPOTLIGHT

## WITH PROFESSOR QING LI AND STUDENT ADRIEL ROBIDOUX

Celebrating past and current achievements in the Department of Molecular Biosciences and Bioengineering, College of Tropical Agriculture and Human Resources



**Photo:** Dr. Qing Li is reloads pipette tips while working in his research laboratory.

**Congratulations** to Dr. Qing Li, a member of UROP's Undergraduate Research Opportunities Council (UROC) and a UROP faculty mentor, who was recently awarded the 2020 UH Board of Regents' Excellence in Research Award! The Regents' Medal for Excellence in Research, the highest research award one can receive in the UH system, is awarded annually by the Board of Regents to a select few faculty members to recognize their impactful scholarly contributions.

From when he first joined CTAHR's Department of Molecular Biosciences and Bioengineering in 1995 until now, Dr. Li has contributed scholarly work in the fields of phytopharmaceuticals, pesticides, and the environment. He has also co-authored hundreds of peer-reviewed scientific publications which have collectively been cited thousands of times.

Dr. Li's research contributions extend to his service to UROP as well, where he has participated in the

*"I am greatly honored. None of these research accomplishments would have been possible without my students and postdocs. This award is a recognition of their contributions to science, Hawai'i and the global community."*

*- Qing Li*

UROC since Spring 2017. As a member of this faculty advisory council, Dr. Li provides expertise in evaluating student research funding applications, and utilizes his breadth of research experience to inform policy and strategic direction for UROP to better address the needs of students, faculty and the broader UHM campus.

Dr. Li has also mentored three UROP-funded undergraduate students on research projects, including Adriel Roubidoux (p. 7). Overall, Dr. Li has served the scientific community at large, UROP as a program, and numerous undergraduate and graduate students on a personal level. The UH Board of Regents' Excellence in Research Award is well-deserved. Bravo, Qing!

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**Adriel Roubidoux** began working under Dr. Li's supervision in January 2019 as part of a larger project headed by a postdoctoral researcher in his lab, Dr. Margaret Baker. Adriel, Dr. Li and Dr. Baker are investigating the process of using CRISPR/Cas9 technology to disrupt a glycoprotein signaling pathway, or chemical process in which molecules work to execute a cell function, in the model grass *Brachypodium distachyon*. Adriel was able to apply his education using molecular biology techniques while being trained in new protocols for genetic transformation. Under Dr. Li's mentorship, he successfully received UROP project funding to investigate the interactions between *B. distachyon* and its inherited bacterial communities. The ongoing project compares the growth of gnotobiotic plants, plants grown in environments where all microorganisms are removed, co-cultured with a simplified, representative, endophytic consortium of microbes. With Dr. Li's guidance he was able to apply his previous research experience to a related field of study.

Previously, Adriel was part of a cohort funded through an NIH grant program (INBRE) led by Dr. Sally Irwin that studied the impact of sulfite preservative exposure over time on beneficial gut microbiota. Adriel was ranked among the top 5 undergraduate research students statewide after presenting at the annual INBRE event, and was invited to the national symposium in Washington DC. He was also selected as one of four student speakers at the NMBIST Symposium before co-authoring a publication in the prestigious peer-reviewed, open-access, online journal *PLoSOne*.

**Photo:** Adriel Roubidoux presents a poster at the New Mexico Bioinformatics, Science and Technology (NMBIST) Symposium in March 2017.



*"A good mentor is like a good parent; patient enough to teach new skills, encourage an inquisitive mind, and cultivate a diverse educational experience that's actually representative of students' future goals. Participating in mentored research has nurtured my interpersonal and technical skills and introduced me to topics and interests I would never have known I was interested in."*  
- Adriel Roubidoux

## Congratulations to Marley Aiu

### ON STUDENT EXCELLENCE IN RESEARCH AWARD

**Congratulations** to Marley Aiu, a Spring 2020 UROP project funding recipient, on receiving the Student Excellence in Research Award! The Office of the Vice Chancellor for Research bestows the award to students who demonstrate outstanding scholarly research endeavors at the doctoral, master's or bachelor's level. Marley is the only undergraduate student to receive this honor in 2020. Her UROP-supported research examines the ways queerness and dance coexist within the same body and how they shape and relate to each other. Her work is influenced by previous observations of how political atmospheres and ideologies shape not only the queer dancer but the viewer. We look forward to all that she will accomplish! Learn more about Marley's Student Excellence in Research Award on the 2020 UHM Awards page: [manoa.hawaii.edu/president/awards](https://manoa.hawaii.edu/president/awards)

# FACULTY MENTORING AWARD RECAP AND RECIPIENTS

**Congratulations** to Dr. Brittany Biggs and Dr. Pratibha Nerurkar, the 2020 recipients of the Office of the Vice Chancellor for Research (OVCR) inaugural Faculty Award for Excellence in Mentoring Undergraduate Research and Creative Work! This award was newly established by UROP in Spring 2020 and recognizes up to two outstanding UHM faculty mentors, one each from a STEM and a non-STEM discipline. The Faculty Award for Excellence in Mentoring Undergraduate Research and Creative Work is currently the only campus-wide award that recognizes faculty for outstanding mentorship of undergraduate students. This new award complements existing awards that recognize excellence in undergraduate student, graduate student and faculty research, and excellence in graduate student mentoring.

Candidates for this award were first nominated by current or former undergraduate student mentees. After initial review by the review board, a subset of nominees were asked to submit application materials to be reviewed based on several criteria, including their record of mentoring undergraduate research or creative work, the impact of their mentorship on students' academic and professional achievements, and letters of support. Recipients receive a \$500 monetary award from the OVCR/UROP. UROP would like to thank and congratulate Professor Nerurkar and Professor Biggs for their achievements and thank them for their impactful contributions to students, their department, their college and the University of Hawai'i at Mānoa.

**Pratibha Nerurkar** is an Associate Professor in the Department of Molecular Biosciences and Bioengineering, College of Tropical Agriculture and Human Resources. She regards undergraduate research and mentoring as a “high impact practice in higher education” and considers it as one of the most rewarding activities of her teaching career. Her teaching philosophy is inspired by Dr. Martin Luther King, Jr. *“Intelligence plus character, that is the goal of true education”*. She recognizes that her role as a mentor is not only to transfer knowledge, but to empower her students to think logically, scientifically, and critically. The foundation of her mentoring principles are built upon trust, mutual respect, compassion and above all her love for teaching. She believes that being a perpetual student of life enables her to become a better teacher.



Dr. Pratibha Nerurkar

**Brittany Biggs** is an Assistant Professor of Animation in the Academy for Creative Media (ACM), College of Arts and Sciences. Her feature film credits include ‘DreamWorks Trolls,’ ‘Kung Fu Panda 3,’ ‘Kung Fu Panda 2,’ and ‘Turbo.’ She is dedicated to creating hands-on, practical mentorship projects not only to help students excel in their current academic studies but also to prepare them for their future careers. Students apply and hone their animation, filmmaking, and storytelling skills by creating films and/or researching new applications for animation that are beyond the scope of the curriculum. The resulting work from their mentorship projects is critical material for their demo reels, portfolios, and resumes for graduate school admission and/or professional work. Their work has been recognized in the local media, film festivals, the prestigious SIGGRAPH conference, and it has also been used to support scientific and medical research within the UH community. Brittany also serves as the advisor to the nearly 90 undergraduate students in the Animation track of ACM.



Dr. Brittany Biggs

# UROP continues to support students during COVID-19 pandemic

The COVID-19 pandemic has impacted UROP's usual operations as it has most programs at UHM. Though social distancing guidelines have prompted temporary closure of our physical office and UROP-sponsored events such as the Spring Undergraduate Showcase have been canceled, UROP remains committed to supporting undergraduate student research and creative work. As we adapt, we are finding new ways to offer both well-established and brand new resources and opportunities to UHM undergraduate students and faculty mentors.

Since 2011 UROP has provided funding and programmatic support to undergraduate students pursuing faculty-mentored projects at UHM. COVID-19 restrictions caused, for the first time in our history, the sudden restriction of previously approved project activities like out-of-state data collection. New regulations affected not only those projects in progress, but also all of the 65 new student proposals that were submitted several weeks before COVID-19 drastically altered life on campus. Similarly, the 2020 Faculty Mentoring Grant project proposals were submitted prior to restrictions associated with COVID-19. How would UROP continue to support existing and new projects while adhering to new restrictions and safety guidelines? UROP's

response was to do whatever we could to allow these projects to continue, either in their original or modified forms. Ultimately, all funding recipients and faculty mentors, both from the new application cycle and those awarded in previous cycles, were asked to submit COVID-19 contingency plans to either justify how they could move forward as originally proposed, or how they could modify their project activities, timelines, and budgets where changes were necessary. This included, for example, allowing students with travel awards to reallocate travel funds to hourly stipends. Though incorporating so many new changes at once has been demanding on UROP staff, to date every single funded student and faculty mentor has been able to readjust on the fly and move forward with their projects. One student is willingly foregoing a trip to Europe to look for architectural sites in favor of using GoogleEarth to conduct an aerial image search. Another student is collecting archival dance footage instead of documenting in-person dance shows. These examples demonstrate how dedicated our students and their faculty mentors are to completing their work. We applaud our students, faculty mentors, and partners for their perseverance in this difficult time.

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## Student Opportunity Center provides online and remote opportunities

The Student Opportunity Center (SOC), a resource available to all UHM undergraduate students and faculty via UROP, has made changes to accommodate many new virtual opportunities. This online platform houses a national database of research and creative work positions, internships, co-ops, conferences and more, as well as on-campus opportunities at UHM. The SOC has responded to the pandemic by not only adding thousands of virtual and remote research and creative work listings to the database, but also by providing options for educators to move conferences online. The platform has proven itself to be adaptable and increasingly useful during this time of social distancing.

Learn more about how you as a student or faculty mentor at UHM can engage the Student Opportunity Center (SOC): [go.hawaii.edu/GCg](https://go.hawaii.edu/GCg)





# SUMMER FACULTY MENTORING GRANT

## RECAP AND RECIPIENTS

We are happy to announce the recipients of the 2020 Faculty Mentoring Grants for Summer Undergraduate Research and Creative Work. The grant was established in 2019 to increase undergraduate student participation in research and creative work during the summer. UROP awarded \$75,000 total in Faculty Mentoring Grants to UHM faculty who will mentor UHM undergraduate students in Summer 2020, with 100% of funds used to support undergraduate student projects.

Figures 1 and 2 (right) show how interest in summer funding continues to grow, in particular among more diverse discipline groups. UROP received funding requests totaling \$326,676 in 2020! This is a 24% increase in requested funds compared to 2019 (\$263,736). We thank all the faculty who applied for funding, and for mentoring undergraduate student projects in the summer.

After careful deliberation by our review board, we ultimately awarded a total of \$75,000 to 15 proposals to support 19 undergraduate students in diverse topics and fields.

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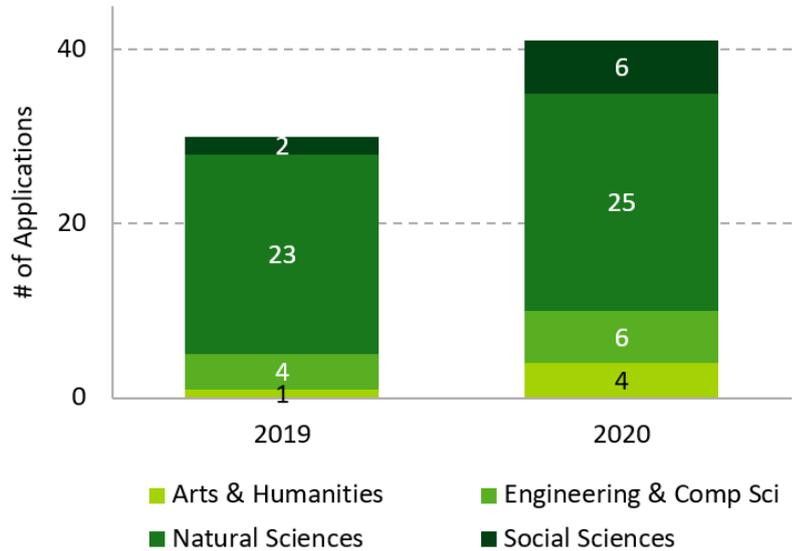


Figure 1: Faculty Mentoring Grant applications by discipline in 2019 and 2020

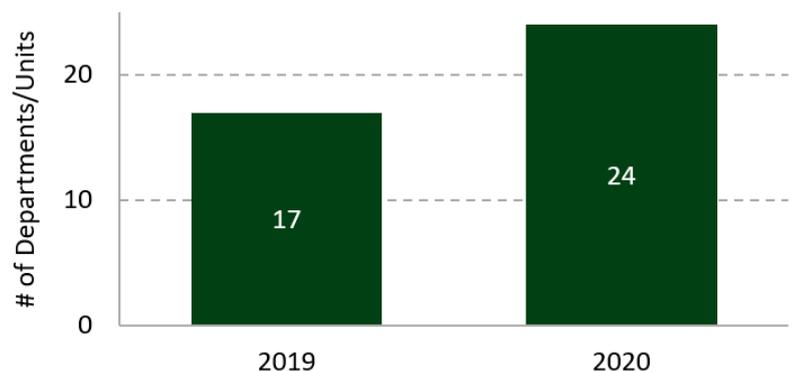


Figure 2: Number of departments/units represented in Faculty Mentoring Grant applications in 2019 and 2020

### Summary of applications:

- \$326,676 requested
- 41 proposals submitted by 39 faculty in diverse disciplines (Figure 1)
- 24 departments/units represented (Figure 2)
- 15 proposals awarded to 14 faculty (p. 11)
- 19 undergraduate students supported

(continued from page 10)

## Congratulations to the 2020 recipients of the Faculty Mentoring Grants for Summer Undergraduate Research and Creative Work!

**Matthew Pitts**, Assistant Researcher, School of Life Sciences (formerly Department of Cell & Molecular Biology)

**Marcus Tius**, Professor, Department of Chemistry; Professor & Director, Cancer Biology & UH Mānoa Natural Science Liaison, University of Hawai'i Cancer Center

**Jakub Hyvl**, Assistant Professor, Department of Chemistry

**Ningjun Jiang**, Assistant Professor, Department of Civil & Environmental Engineering

**Shana Brown**, Associate Professor & Department Chair, Department of History

**Wei-Wen Su**, Professor, Department of Molecular Biosciences & Bioengineering

**Jon-Paul Bingham**, Associate Professor, Department of Molecular Biosciences & Bioengineering

**Pratibha Nerurkar**, Associate Professor & Graduate Chair, Department of Molecular Biosciences & Bioengineering

**Woochul Lee**, Assistant Professor, Department of Mechanical Engineering

**Ikkei Shikano**, Assistant Professor, Department of Plant and Environmental Protection Sciences

**Caroline (Karolina) Heyduk**, Assistant Professor, School of Life Sciences (formerly Department of Botany)

**Megan Porter**, Associate Professor, School of Life Sciences (formerly Department of Biology)

**Christopher Muir**, Assistant Professor, School of Life Sciences (formerly Department of Botany)

**Kristi Govella**, Assistant Professor, Asian Studies Program

## First Ever Virtual Undergraduate Showcase

The annual on-campus Spring Undergraduate Showcase event is an opportunity for UHM undergraduate students to present the results of their faculty-mentored research and creative work to their peers, faculty, and the general public. Building off of record numbers of presentations in Spring 2019, the Spring 2020 Undergraduate Showcase scheduled for April 24 anticipated over 100 student presenters and hundreds of attendees. Unfortunately, COVID-19 prompted the cancellation of the physical event, leaving the Undergraduate Showcase team the challenge of delivering an alternative online option. This led to the creation of the first-ever Virtual Undergraduate Showcase event. Showcase registrants were invited to record their presentations either as an oral talk or a narrated poster slide for viewing on the Virtual Undergraduate Showcase website. The event ran from May 8-22, during which time viewers were encouraged to provide feedback to presenters via an online form. Watch and learn about fascinating undergraduate student work at UHM. Videos will remain online for viewing on the Virtual Showcase website at: [go.hawaii.edu/A45](https://go.hawaii.edu/A45)

**Photo:** Undergraduate theatre and dance students Amanda Allen (pictured), Alexis Chong Tim and Emma Torgrimson-Lee present their project "Devising Theatre in the Mountain Villages of Western China" at the Virtual Undergraduate Showcase in May 2020.



# SPRING 2020 PROJECT FUNDING

## Application cycle breaks record

UROP has broken another record thanks to ambitious undergraduate students and their faculty mentors at UHM! During the Spring 2020 project funding application cycle, UROP received a total of 65 project funding applications from 102 students (51 individual and 14 group projects), both all-time highs for the Spring Project Cycle. The total funding request was \$366,159. UROP will distribute ~\$169,000 to 40 successful applicants during this Summer and the following Fall semester. Congratulations to our successful applicants and their faculty mentors!

## 2020 SURE REGISTRATION

There is still time to register for the 2020 Summer Undergraduate Research Experience (SURE) program! The SURE is a free 9-week program that provides supplementary infrastructure to undergraduate students conducting research and creative work at UHM (virtually or in-person) during the summer. SURE provides professional development modules once every two weeks on topics like writing resumes and cover letters, exploring and applying to graduate school, and more. It also provides students with a cohort of peers with whom they can interact and confer on the challenges, solutions, and rewards they experience when working on their project.

**Register now** to attend the next scheduled module, "Panel on identifying and exploring graduate schools" on June 18. Learn more and register on the SURE webpage: [go.hawaii.edu/AOn](https://go.hawaii.edu/AOn)

## 2020 SURE SYMPOSIUM

### Accepting abstracts now to July 6th!

UROP is calling for abstracts **now to July 6** to register for the 2020 SURE Symposium which will be held on July 31, 2020. The SURE Symposium is an end-of-summer event where undergraduate students can showcase their faculty-mentored research and creative work in a professional, yet relaxed environment. It provides students the opportunity to receive feedback from fellow students, faculty, and community members without formal judging.

### CALL FOR ABSTRACTS

We are currently accepting abstracts for poster and oral presentations by undergraduate students from all disciplines for the July 31 event.

Students eligible to participate include:

- All UHM undergraduate students
- All non-UHM undergraduate students under the mentorship of UHM faculty

Students can be:

- Funded or not funded by UROP
- Presenting in-progress or completed projects
- Participating or not participating in the all-summer SURE program (though it is encouraged)

This is the 3rd annual SURE Symposium and the first to be held live and virtually over Zoom! All students, faculty, and community members are also welcome to attend the free event. Registration for attendees will open as a separate form available at a date later this summer.

Please visit the SURE Symposium webpage at the following link to register and for regular updates: [go.hawaii.edu/uNG](https://go.hawaii.edu/uNG)



# Highlighted Opportunities

## UNIVERSITY OF HAWAII RESEARCHER AND PROGRAM EVALUATION ASSISTANT - SUMMER UNDERGRADUATE RESEARCH PROGRAM

[go.hawaii.edu/pwA](http://go.hawaii.edu/pwA)

- Learn and apply foundational research and program evaluation skills
- Use skills to document and determine program processes and outcomes of a virtual summer undergraduate research program in Astronomy
- Develop and administer online surveys and interviews, assist with data analysis and more
- Contact Dr. Nicole Lewis at [nicole88@hawaii.edu](mailto:nicole88@hawaii.edu)

## THE FUTURE OF SPACE FOOD

[go.hawaii.edu/ANk](http://go.hawaii.edu/ANk) (LED lighting)

[go.hawaii.edu/XNA](http://go.hawaii.edu/XNA) (simulated Martian soils)

- Undergraduate research opportunities focused on growing crops in space
- Choice of working in several research areas:
  - comparing effectiveness of different kinds of LED lighting
  - comparing effects of different simulated Martian soils
  - growing different kinds of crops
- Gain research experience relating to space biology, controlled environment agriculture, and horticulture
- Applications accepted on rolling basis
- Supervisor: Dr. Kent Kobayashi

## COMPUTATIONAL PLANT BIOLOGY SUMMER RESEARCH INTERNSHIP

[go.hawaii.edu/A4U](http://go.hawaii.edu/A4U)

- Develop new software tools using R programming language to model CO<sub>2</sub> and H<sub>2</sub>O exchange in leaves
- Meet potential graduate school advisors and employers
- 40 hours/week for 8 weeks
- \$11.65/hour
- Rolling deadline until position is filled
- Supervisor: Dr. Chris Muir (School of Life Sciences, formerly Department of Botany)

## OUR PROJECT IN HAWAII'S INTERTIDAL (OPIHI) UNDERGRADUATE INTERNSHIP

[opihi.crdg.hawaii.edu/](http://opihi.crdg.hawaii.edu/)

- Citizen science program where undergraduate students design projects to monitor rocky intertidal areas in Hawai'i
- Work collaboratively with marine science leaders and the local community
- Focus can be on a variety of areas including algae, water quality, aquaculture, and more
- Timeline: Fall 2020 - Spring 2021
- Rolling deadline until positions are filled

## SUMMER UNDERGRADUATE RESEARCH EXPERIENCE (SURE)

[go.hawaii.edu/AOn](http://go.hawaii.edu/AOn)

- Free 9-week program designed for undergraduate students involved in faculty-mentored research or creative work at UHM during summer
- Cohort-based infrastructure
- Professional development modules once every 2 weeks to build "soft skills" and supplement your research/creative work project; topics include resume writing, exploring graduate school and more
- End-of-summer Symposium on July 31, 2020
- Does not provide research or creative work project or match with mentor
- June 4 - July 31, 2020

## TO VIEW THESE OPPORTUNITIES AND MORE:

[studentopportunitycenter.com](http://studentopportunitycenter.com)

1. Visit the Student Opportunity Center website
2. Create an account with your valid @hawaii.edu email address
3. Search for opportunities, or click the links in the previous listings to navigate directly to an opportunity page

## LEARN MORE ABOUT THE STUDENT OPPORTUNITY CENTER

[go.hawaii.edu/GCg](http://go.hawaii.edu/GCg)