

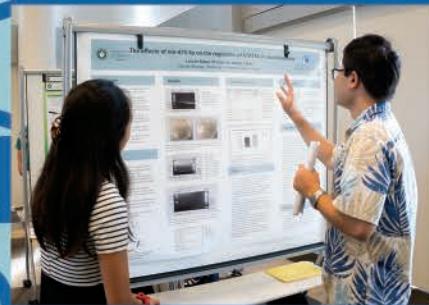


HO'ŌIA MANA'ANA

DIVERSITY



HEALTH



KNOWLEDGE

2020
ANNUAL REPORT



UNIVERSITY OF HAWAI'I
CANCER CENTER

NCI Cancer Center

A Cancer Center Designated by the
National Cancer Institute

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HO'ŌLA MANAMANA

The University of Hawai'i Cancer Center fosters diversity, health, and knowledge through our mission to reduce the burden of cancer through research, education, patient care, and community outreach with an emphasis on the unique ethnic, cultural, and environmental characteristics of Hawai'i and the Pacific.

UNIVERSITY OF HAWAI'I CANCER CENTER RANDALL F. HOLCOMBE, MD, MBA, DIRECTOR

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2020 has been a challenging year for all of us.

The COVID-19 pandemic has had a significant impact on the University of Hawai'i Cancer Center, on cancer patients, and individuals at risk for cancer across the State of Hawai'i. Despite the challenges, we have pushed forward with research aimed at reducing the burden of cancer for the people of Hawai'i and the Pacific.

As outlined in this report, UH Cancer Center researchers have continued to make seminal discoveries in the areas of cancer biology, epidemiology, and cancer prevention and treatment. Our work focuses on our unique populations, with outreach to rural neighbor islands and across the U.S. Affiliated Pacific Islands with renewal of the Pacific Island Partnership for Cancer Health Equity. The pandemic presented huge challenges for clinical and community-based research, and in response we have developed new methods in order to provide opportunities to participate in novel treatment, screening, prevention, and cancer care delivery trials sponsored by the Cancer Center. In addition, we initiated new areas of research to examine the impact of the pandemic

specifically on cancer patients. This report also highlights how we have dramatically increased opportunities for cancer education for undergraduates, graduate students, postdoctoral trainees, and aspiring clinical research professionals with funding for new initiatives derived from UH Mānoa and the National Institutes of Health.

All of the UH Cancer Center faculty and staff continue to strive to reach the highest summit, *kūlia i ka nu'u*, and we look forward to building on this year's achievements as we enter a new year. 2021 will mark the 50th anniversary of the establishment of the UH Cancer Center and the 25th anniversary of continuous recognition as one of only 71 National Cancer Institute-designated centers in the U.S. It is with great anticipation that I look forward to continued successes, discoveries, and profound community impact over this next year.

Mahalo!

Randall F. Holcombe, MD, MBA

RANDALL F. HOLCOMBE, MD, MBA
DIRECTOR





NEW RESEARCH CENTER EXPECTED TO DIVERSIFY HAWAII'S ECONOMY

In 2020, the UH Cancer Center began the final design process leading to the construction of the Early Phase Clinical Research Center in shell space contiguous with the Cancer Center building in Kaka'ako. The project, which received funding from the state Legislature and the National Institutes of Health, will provide access to novel, cutting-edge clinical trials, and allow cancer patients to receive these treatments in Hawai'i, avoiding the time and expense of traveling to the mainland. The new research center is being created in collaboration with clinical members of the Hawai'i Cancer Consortium (HCC).

The construction documents, which include renderings and building specifications, have been sent to the National Institutes of Health for review. Upon approval, a qualified general contractor will be hired to take charge of and begin construction.



"To make sure that we are developing a Center that is most in alignment with the needs of the people of Hawai'i, we have received input from our local stakeholders—including the HCC, the UH Cancer Center's Community Advisory Board and Native Hawaiian Community Advisory Board," said Clifford Martin, associate director for administration at the UH Cancer Center.

With the guidance of the Cancer Center's Patient Advocacy Committee, a clinical trials infusion suite mock-up was created by the University of Hawai'i Community Design Center. The mock-up received the 2020 American Institute of Architects Honolulu's Distinctive Detail Award recognizing the project's individual components and design features, and celebrating the designers' attention to detail, craftsmanship, and spirit of innovation.

The Early Phase Clinical Research Center is expected to provide a substantial economic impact of \$38.5 million over the next 10 years, with an ongoing annual contribution of nearly \$6 million thereafter. It will generate 30-40 short-term construction-related jobs over the next three to four years, and 67 long-term, stable, well-paying jobs once operational. The project will aid in diversifying Hawai'i's economy by creating an alternative to tourism. Construction is set to begin the summer of 2021.

OPPOSITE PAGE & TOP PHOTOS: EARLY PHASE CLINICAL RESEARCH CENTER ENTRANCE. BOTTOM LEFT: MEDITATION ROOM. BOTTOM RIGHT: RECEPTION AREA.

RIM ARCHITECTS, DESIGN AND RENDERINGS



ADVENTIST HEALTH CASTLE JOINS HAWAI'I CANCER CONSORTIUM

The Hawai'i Cancer Consortium welcomed its newest community organization member, Adventist Health Castle. The consortium supports the University of Hawai'i Cancer Center in achieving our mission to reduce the burden of cancer through research, education, patient care, and community outreach.

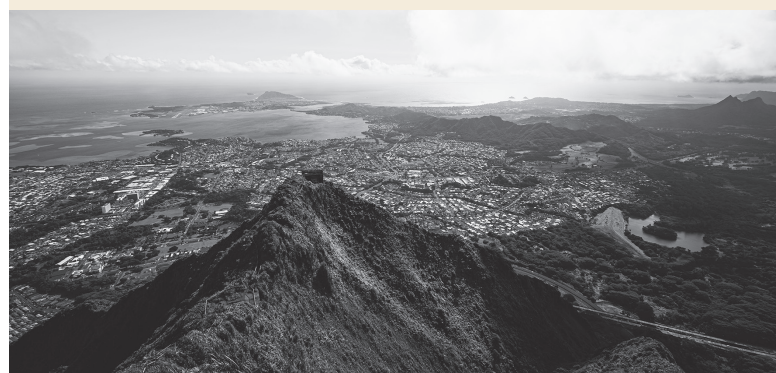
Adventist Health Castle is a full-service medical center located in Kailua, O'ahu that offers inpatient, outpatient, and home-based services. The partnership provides access to cutting-edge cancer therapies for all residents on the windward side of the island and allows the expansion of opportunities for patients to participate in cancer research.

The Hawai'i Cancer Consortium represents the unified basic translational and clinical cancer research effort benefiting all citizens of Hawai'i and the Pacific. Other members of the consortium include the Hawaii Medical Service Association, Hawai'i Pacific Health, Kuakini Medical Center, The Queen's Health Systems, and the John A. Burns School of Medicine.



IT IS A PRIVILEGE TO PARTNER WITH THE HAWAI'I CANCER CONSORTIUM. AS A STRONG ORGANIZATION WITH SIMILAR GOALS, WE ARE COMMITTED TO INCREASING ACCESS TO OUR WINDWARD COMMUNITY FOR GENERATIONS TO COME. WORKING TOGETHER, WE CAN DO MUCH MORE THAN WE EVER COULD ON OUR OWN."

ALAN CHEUNG, MD, MBA
VICE PRESIDENT OF MEDICAL AFFAIRS
ADVENTIST HEALTH CASTLE



WELCOME STEPHANIE SI LIM

We would like to introduce our newest faculty member and researcher, **Stephanie Si Lim, MD, MS**, who joined the UH Cancer Center in August. Dr. Lim received her Bachelor of Science in Biology from Pepperdine University, attended medical school at Georgetown University, and received her training in pediatric hematology/oncology at the Children's Hospital of Philadelphia.

As a practicing physician at Kapi'olani Medical Center for Women and Children, Dr. Lim loves interacting with and treating her patients, but says there are many unanswered questions in the field of pediatric hematology/oncology. Her goal is to have her research in the lab translate into the clinical setting so that there may be a positive impact on patients, and continue to advance the field of pediatric oncology.

Her research focuses on T cells, a type of white blood cell that protects the body against infection and may help fight cancer. She and her research team have discovered that one of the T cell markers, TIM-3, is expressed in biopsy samples of patients diagnosed with Ewing's sarcoma, a type of bone or soft tissue cancer most common in adolescents and young adults. This finding could potentially serve as a platform for clinical trials using anti-TIM-3 against pediatric solid tumors.

Dr. Lim also hopes to bring novel immunotherapies to our community, such as CAR T-cell therapy, a type of cancer immunotherapy that can find and fight cancer. She aims to build upon the UH Cancer Center's Early Phase Clinical Research program, provide insight on ways to overcome current barriers in immunotherapies, and continue to offer cutting-edge cancer treatments for children and young adults in Hawai'i.

Part of Dr. Lim's research is funded by the Bert and Vonnice Turner Cancer Research Fund. Philanthropic gifts of any size from our community are essential to support research like Dr. Lim's.



STEPHANIE SI LIM, MD, MS



WHEN I FEEL LIKE I'VE HIT
A WALL IN RESEARCH, I
ALWAYS FEEL REJUVENATED
AFTER I SEE MY PATIENTS IN
THE HOSPITAL. IT REMINDS
ME WHY I AM DOING THE
RESEARCH I AM DOING, AND
IT PLACES MEANING BEHIND
MY WORK."

STEPHANIE SI LIM, MD, MS

24 YEARS

of continued National Cancer Institute designation

62

Principal Investigators

140

Research Projects

\$44.2M

Total Grant Funds Awarded

276

Publications in Peer Reviewed Journals

NOTE: DATA UPDATED 12/9/20



GENETIC RISK VARIANTS ASSOCIATED WITH LIVER FAT

High levels of liver fat are associated with metabolic syndrome, insulin resistance, chronic liver diseases, and liver cancer. As part of a study on obesity and cancer, UH Cancer Center researchers and co-principal investigators S. Lani Park, PhD, MPH, and Iona Cheng, PhD, MPH, identified genetic risk variants associated with the amount of fat present in the liver. Investigators analyzed data from 1,709 participants of the Multiethnic Cohort Study and found an association between liver fat and a genetic variant on chromosome six. This variant is found in Japanese Americans and Native Hawaiians, but is absent in African Americans, European Americans, and Latinos. This discovery will allow researchers to better understand the biology of fatty liver and identify individuals at risk for this condition.

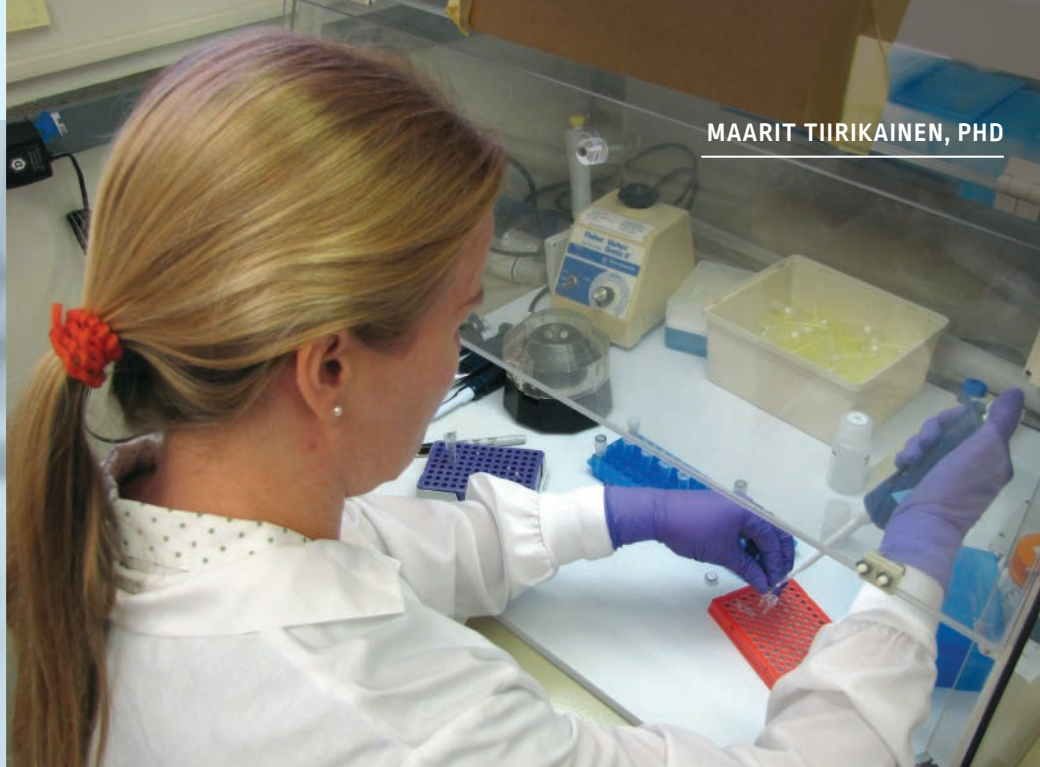
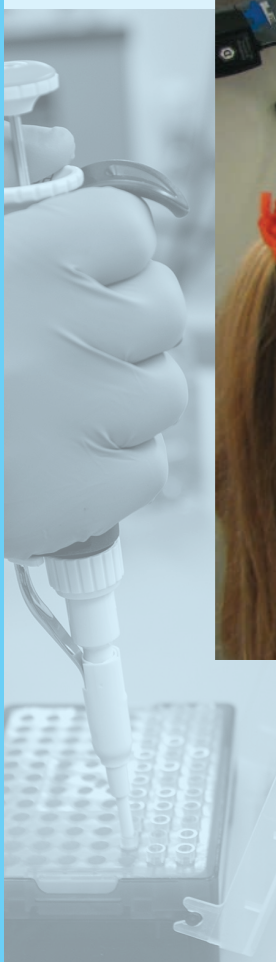
RACIAL/ETHNIC DIFFERENCES IN OVARIAN CANCER RISK

While investigating racial/ethnic differences in risk and risk factors for epithelial ovarian cancer, UH Cancer Center postdoctoral researcher Danja Sarink, PhD, found that compared to European American women,

Native Hawaiian women had a 36 percent higher risk for ovarian cancer. Risk was found to be lower in Japanese American women by 21 percent and 26 percent in Latinas. The study also identified differences in the impact of individual risk factors. Women who have given birth or have used oral contraceptives are at a lower risk for ovarian cancer. Study findings also show that Latinas, who reported a later age at natural menopause or postmenopausal hormone therapy use, had a higher risk of ovarian cancer.

INTERMITTENT FASTING SHEDS MUSCLE, NOT FAT

University of California San Francisco researchers in collaboration with UH Cancer Center researcher, John Shepherd, PhD, found that individuals who restrict their eating times are more likely to shed lean muscle mass than those with consistent meal times. Time-restricted eaters ate their meals during an eight-hour window, while participants with consistent meal times ate the typical three structured meals throughout the day. Sixty-five percent of the weight lost by the group of time-restricted eaters was lean mass, which is more than double of what is considered normal.



MAARIT TIIRIKAINEN, PHD

FACT: LOCALLY, PACIFIC ISLANDERS REPRESENT ONLY 4 PERCENT OF HAWAII'S POPULATION, BUT ACCOUNT FOR NEARLY 30 PERCENT OF HAWAII'S COVID-19 CASES AND 20 PERCENT OF ALL COVID-19 DEATHS.

IN RESPONSE TO THE COVID-19 PANDEMIC, THE UH CANCER CENTER IS COLLABORATING IN THE FOLLOWING RESEARCH STUDIES:

- Maarit Tiirikainen, PhD, UH Cancer Center associate professor, is working with LifeDNA to better understand why the virus hits certain populations harder than others. This study examines the role of genetics in susceptibility to infection and severity of response, focusing on Hawai'i's multiethnic population and genetic variants of the ACE2 gene.
- The UH Cancer Center and our clinical partners have joined a study, led by Vanderbilt University, that is looking into ways in which COVID-19 impacts cancer patients. Jared Acoba, MD, UH Cancer Center assistant professor, serves as the study's local principal investigator. As some patients with cancer may be at increased risk of severe complications or death due to COVID-19, there is an urgent need to understand the implications of COVID-19 for patients with cancer. Researchers collect information about cancer patients who contract COVID-19 and receive treatment at The Queen's Medical Center, Hawai'i Pacific Health hospitals, Hawai'i Cancer Care, and Hawai'i Oncology Inc.
- The University of Hawai'i received nearly \$1 million from the National Institutes of Health's Rapid Acceleration of Diagnosis initiative to develop and evaluate community engagement strategies meant to increase testing and to better understand the SARS-CoV-2 infection patterns. Kevin Cassel, DrPH, UH Cancer Center assistant researcher, is part of a transdisciplinary partnership to increase COVID-19 testing uptake among non-Hawaiian Pacific Islanders (PI) in Hawai'i and Guam. Across the United States, PI have among the highest rates of contracting and succumbing to COVID-19.



FRESH RESEARCH OPPORTUNITIES FOR STUDENTS

In 2020, the UH Cancer Center was awarded over \$2 million in funding to establish two new research training programs for undergraduate and graduate students. \$750,000 was awarded to Gertraud Maskarinec, MD, PhD, Cancer Center associate director for Research Education, and Joe W. Ramos, PhD, Cancer Center deputy director, for their winning internship program proposal. Another \$1.36 million was received from the National Cancer Institute to establish "Cancer Research Education, Advancement, Training and Empowerment" (CREATE).

Maskarinec and Ramos submitted one of 16 winning proposals to the University of Hawai'i at Mānoa Provost's Strategic Investment Competition. The researchers proposed a year-long internship program that would offer undergraduate students the opportunity to conduct research in an interdisciplinary environment under the mentorship of our faculty members. The first eight students to be supported

by this funding began interning virtually in June 2020, and in December, presented their projects that they worked on with their mentors from the Cancer Biology and Population Sciences in the Pacific programs. They will continue their research throughout the 2021 spring semester.

The CREATE program will utilize the knowledge and talents of UH Cancer Center faculty members, who will mentor undergraduate and graduate students living in the Pacific, by providing them with an intensive 10-week hands-on research experience. The program, led by Maskarinec, Ramos, and Joseph Keawe'aimoku Kaholokula, PhD, chair of the Department of Native Hawaiian Health, John A. Burns School of Medicine, is set to start in the summer of 2021.

PICTURED FROM LEFT TO RIGHT: HOPE DANG, ERICA MA, MELDRICK RAVIDA, NICHOLAS VAN, LAURYN LIAO, KIRRA BORRELLO, AND CELINE ARNOBIT. NOT PICTURED: NICOLE TAKAHASHI.

IN PURSUIT OF A DUAL MD/PHD DEGREE



JIAMING XUE, PHD



MY JOINT INTEREST IN CANCER BIOLOGY AND CLINICAL RESEARCH HAS DRIVEN ME TO THE FIELD OF ONCOLOGY. I HOPE TO USE MY EXPERIENCE AND TRAINING TO BRING BETTER CANCER TREATMENTS TO PATIENTS IN THE DECADES TO COME."

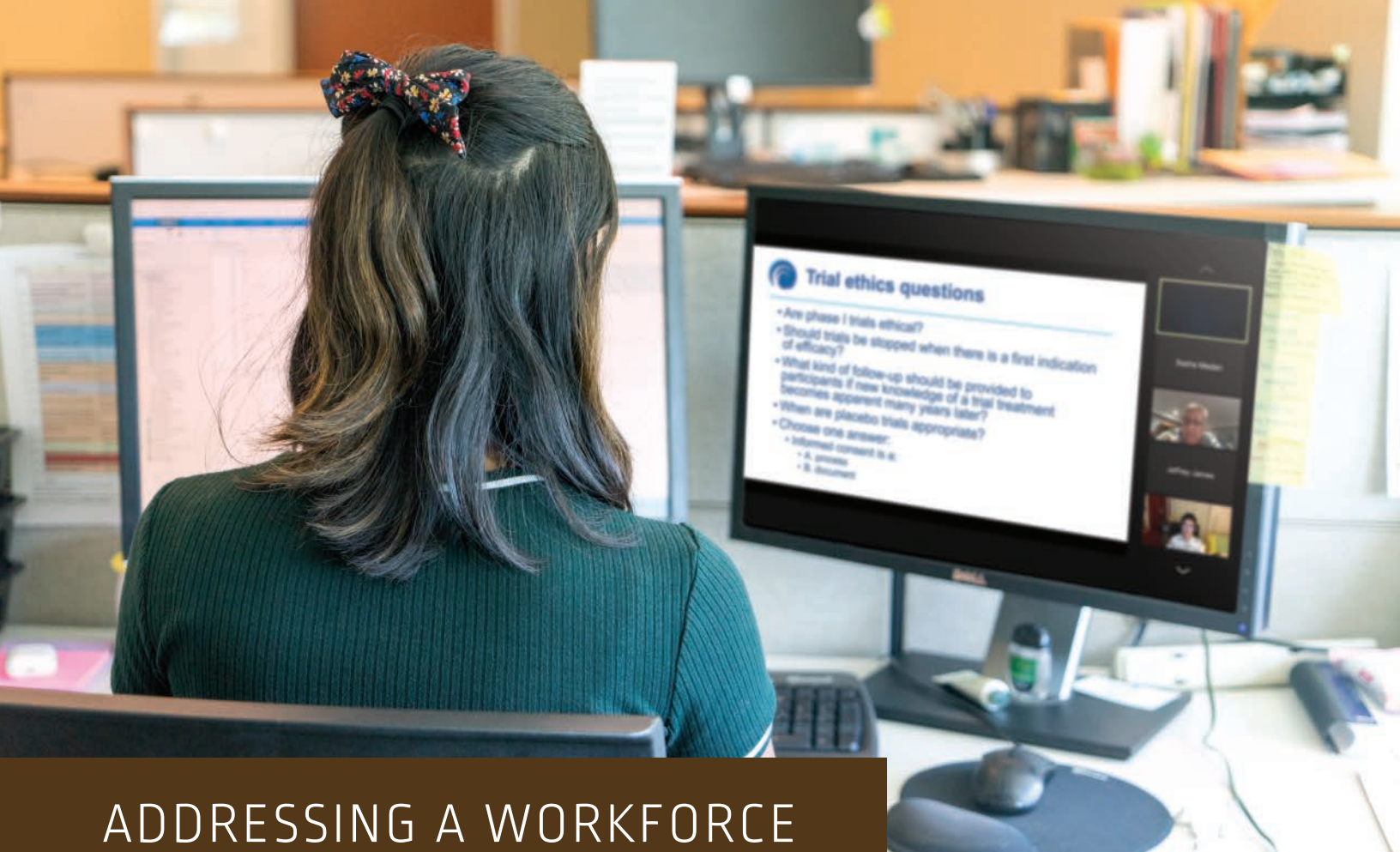
JIAMING XUE, PHD

Congratulations to **Jiaming Xue** for successfully attaining his PhD in cell and molecular biology! Xue conducted research on the mechanisms of how asbestos fibers cause cancer while working as a graduate student under the mentorship of UH Cancer Center researcher, Haining Yang, MD, PhD. The capstone of Xue's accomplishment was the publication of his research in the *Proceedings of the National Academy of Sciences*.

Xue, born in China, wanted to study medicine and was encouraged to attend the University of Hawai'i at Mānoa (UHM) by his father who had been an exchange scholar there. As a UHM biology major, Xue's interest in cancer was ignited by what he learned in a Biology of Cancer class that synthesized everything he had learned previously. Fueled by his passion, Xue volunteered in the organic chemistry lab of William Chain, PhD, where he helped to synthesize potential anti-cancer agents for UH Cancer Center researcher, Joe W. Ramos, PhD. This led Xue to volunteer at the Cancer Center in Yang's lab until he joined as a graduate student.

Xue envisions himself as a future physician/scientist, specifically as an oncologist. While in graduate school, Xue was accepted to the John A. Burns School of Medicine (JABSOM). During his first year as a medical student, Xue participated in the UH Cancer Center's Clinical Trials Shadowing Program. The program had a great impact on him as he observed the interactions between seasoned oncologists and their patients, as well as the detailed clinical trial recruitment and registration process. Now a second-year student at JABSOM, Xue is in the exceptional pursuit of a dual MD/PhD degree.






ADDRESSING A WORKFORCE GAP IN CLINICAL RESEARCH

The UH Cancer Center is committed to helping patients live longer, healthier lives by conducting clinical research that involves people who volunteer to participate in cancer clinical trials. It is through clinical trials that researchers can better understand how to diagnose, treat, and prevent cancer, as well as improve the lives of cancer survivors. The field of clinical research is thriving in Hawai'i, and jobs in this field are expected to grow 13 percent by 2026, yet there is a shortage of clinical research professionals.

The UH Cancer Center, as the central cancer research education hub within Hawai'i, provides innovative training and mentorship experiences for individuals at every age and stage of their career. In fall 2020, the Cancer Center, in collaboration with the UH Mānoa Outreach College, launched its inaugural Clinical Research Professional (CRP) Certificate Program.

The CRP Certificate Program is designed to train Clinical Research Associates (CRAs) to work at the UH Cancer Center, our affiliated hospitals, and other academic centers in support of clinical trials. The program provides scholars with knowledge in coordinating oncology clinical trials, basic statistical and epidemiologic methods, ethical and regulatory aspects of human subjects research, protocol development, and much more. The 14-week accelerated program employed a blended learning model. Foundational knowledge was provided via online materials that students completed before they attended synchronous Zoom-based training sessions. Thirty-one students completed the program in December.

CRAs play a vital role in improving the outcomes for cancer patients and other patients participating in clinical trials. The availability of personnel appropriately trained for the specific requirements of the role they will perform in clinical research is critical for capacity expansion of the clinical trials network in Hawai'i.



RICKY HAMASAKI

IMPROVING OUTCOMES THROUGH CLINICAL TRIALS

In the summer of 2013, Ricky Hamasaki was diagnosed with squamous non-small cell lung cancer. Immediately following his diagnosis, Hamasaki received three rounds of chemotherapy, surgery to remove the upper right lobe of his lung, as well as radiation therapy. His condition was stable for about a year, until he received another diagnosis—Stage IV lung cancer.



PATIENTS ENROLLED ON CLINICAL TRIALS

(1/1/2016-9/30/2020)

577

*Interventional
Therapeutic
Trials*

16,046

*Non-Interventional
Epidemiology, Observational,
and Outcomes Studies*

16,623

*Total Patients Enrolled
on Trials*

Hamasaki's oncologist, UH Cancer Center researcher, Jared Acoba, MD, suggested he participate in the Lung-MAP study, or the Lung Cancer Master Protocol, a precision medicine clinical trial for people with advanced non-small cell lung cancer that has continued to grow after treatment. Hamasaki received a MEDI4736 infusion every 14 days. After participating in the year-long clinical trial, Hamasaki returned to the standard immunotherapy treatment and his condition remained under control.

Through Hamasaki's strong will and guidance from Dr. Acoba, his condition improved, and he has been off immunotherapy for the past two years.



I BELIEVE THE CHANCE TO PARTICIPATE IN THIS CLINICAL TRIAL IS PART OF THE REASON I AM ALIVE TODAY. I WOULD RECOMMEND ENROLLING IN A CLINICAL TRIAL, AS IT IS YOUR CHANCE TO HELP AND IMPROVE THE TREATMENT OF CANCER."

RICKY HAMASAKI

"I believe the chance to participate in this clinical trial is part of the reason I am alive today. I would recommend enrolling in a clinical trial, as it is your chance to help and improve the treatment of cancer," said Hamasaki.

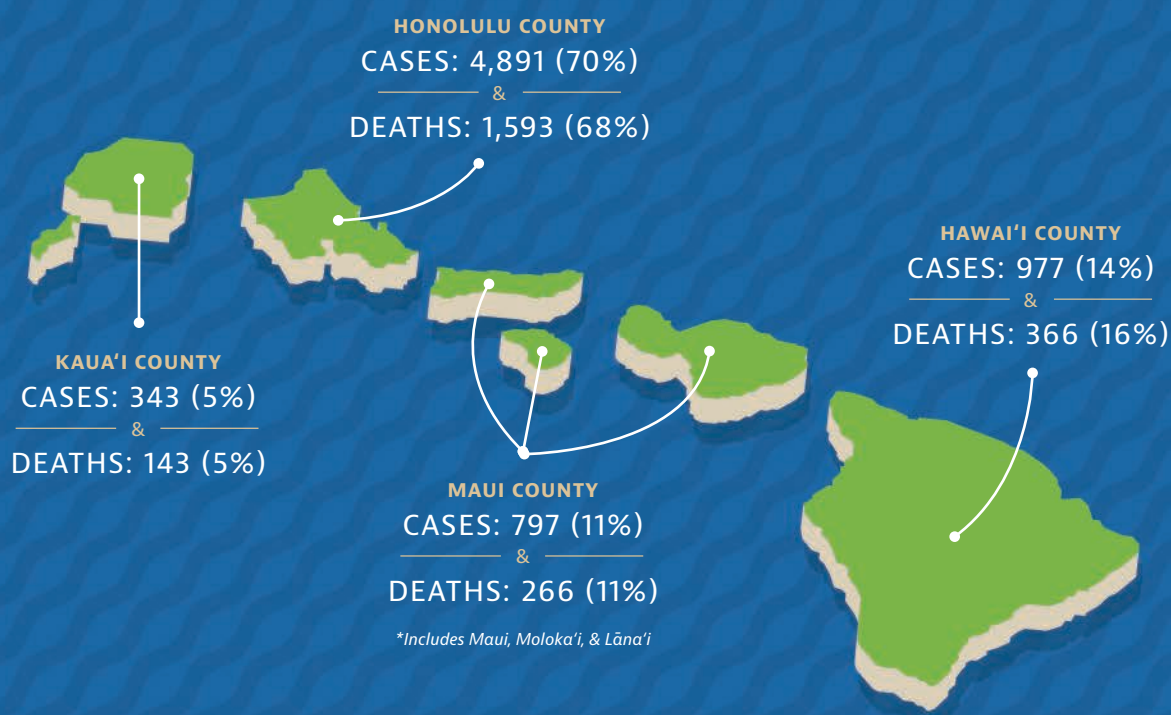
Clinical trials are research studies designed to test the safety and effectiveness of new treatments for cancer and are a key focus of the UH Cancer Center. Patients who enroll onto clinical trials play a significant role in the discovery of new and better ways to prevent, detect, and treat cancer.

The mortality rate of cancer is falling, in large part due to clinical trials. The UH Cancer Center's 20BY25 campaign seeks to increase awareness about the importance of cancer clinical trials through public education. The goal is to enroll 20 percent of all individuals with newly diagnosed and relapsed cancers onto clinical trials by the year 2025.

SNAPSHOT OF CANCER IN HAWAI'I

- Approximately **7,000** Hawai'i residents are diagnosed with cancer each year.
- In 2020, there were more than **62,000** Hawai'i residents living with cancer.
- More than **2,300** Hawai'i residents die of cancer each year.
- The average age of diagnoses for men is **66 years** and **64 years** for women.
- Cancer is the **second leading cause** of death (after heart disease) in Hawai'i.

AVERAGE ANNUAL NUMBER OF CANCER CASES AND DEATHS, BY COUNTY, HAWAI'I, 2012-2016



Hawai'i Cancer at a Glance 2012-2016
Hawai'i Tumor Registry 2020

UNDERSTANDING CANCER CARE COORDINATION ON HAWAI'I ISLAND

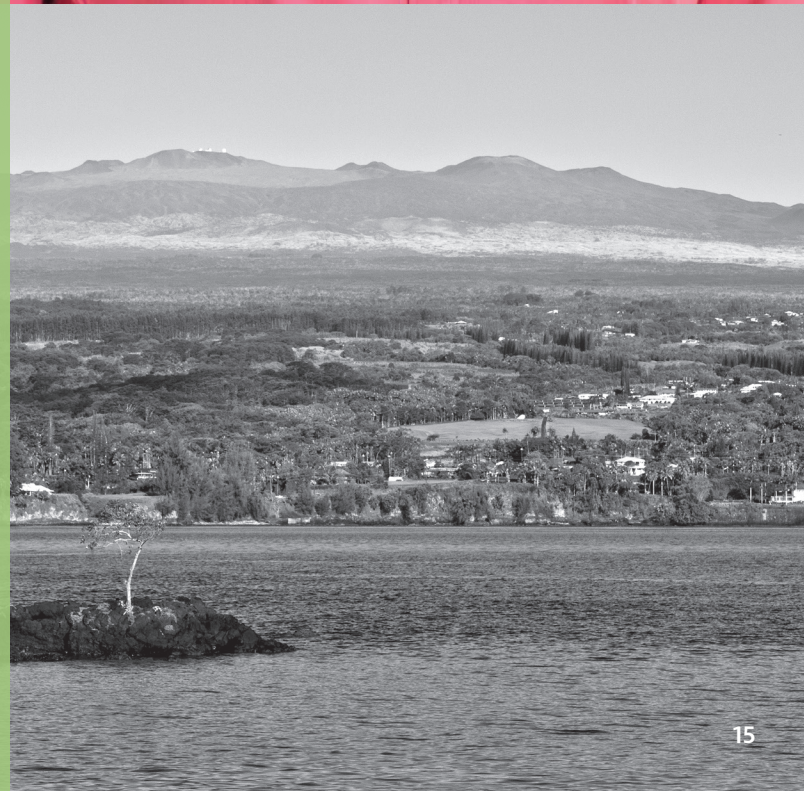
Care coordination is important for those who are being or have been treated for cancer and their loved ones. Aiming for high quality care that includes appropriate screening, timely follow-up, supportive care, and survivorship care requires well-coordinated approaches to care delivery. This can be especially challenging for those living on the neighbor islands, as many of these patients must travel by air to O'ahu for treatment.

Izumi Okado, PhD, UH Cancer Center postdoctoral researcher, received a grant from the Agency for Healthcare Research and Quality to conduct care coordination research on the island of Hawai'i. The funding provides Okado the opportunity to gain a better understanding of healthcare delivery for cancer patients in rural areas. This study builds on Okado's previous research of care coordination perceptions of patients and family caregivers on O'ahu. She will be able to compare these findings with cancer patients on Hawai'i Island. The results from this study may inform potential strategies to improve care coordination, and help to reduce delays in diagnoses and treatments for cancer patients in rural areas.

The COVID-19 pandemic has presented Okado with recruitment challenges and new opportunities. Travel restrictions and social distancing guidelines have made it difficult to identify and recruit participants. Okado continues to seek study participants, and is currently collaborating with UH Hilo nursing students, East Hawai'i Health Cancer Center, and Straub Outpatient Treatment Center for their assistance with recruitment.



IZUMI OKADO, PHD





STATE OF HAWAII DEPARTMENT OF
HEALTH, IMMUNIZATION BRANCH



IMPACTING PUBLIC HEALTH POLICY

The Centers for Disease Control and Prevention (CDC) recommends Human Papillomavirus (HPV) vaccination for all preteens at age 11 or 12. In fall 2020, new vaccination requirements were implemented for all Hawai'i students entering the 7th grade. In addition to an HPV vaccination, students must provide documentation that they have received Tdap (tetanus-diphtheria-pertussis) and MCV (meningococcal conjugate) vaccinations. The Hawai'i Comprehensive Cancer Coalition's (HCCC) Vaccine-Preventable Cancers (VPC) Workgroup, of which the UH Cancer Center is an active member, was instrumental in updating the statewide immunization requirements policy (Hawai'i Administrative Rules Title 11, Chapter 157).

"HPV vaccination is an important tool for cancer prevention. Widespread vaccination of school-age children will reduce their risk of cancer as adults," stated UH Cancer Center researcher Brenda Hernandez, PhD, MPH, VPC member and immediate-past chair, HCCC.

More than 13,200 7th grade students in Hawai'i public and charter schools are affected by this immunization policy. Schools are responsible for students meeting the 2020 immunization requirements, and COVID-19 has not eased these requirements. This policy change will help reduce the number of HPV-associated cancers that could be prevented, thus impacting public health outcomes in our state. Hawai'i is one of only three states, along with Washington, D.C., that require HPV vaccinations to attend school.



BRENDA HERNANDEZ, PHD, MPH



HPV VACCINATION IS AN IMPORTANT TOOL FOR
CANCER PREVENTION. WIDESPREAD VACCINATION
OF SCHOOL-AGE CHILDREN WILL REDUCE THEIR
RISK OF CANCER AS ADULTS."

BRENDA HERNANDEZ, PHD, MPH

A portrait of Srue Wakuk, a woman with dark hair pulled back, wearing a red top and a black shawl. She is smiling slightly and looking towards the camera. The background is a bright, out-of-focus indoor space with large windows.

SRUE WAKUK

EFFORTS TO INCREASE SCREENING AMONG MICRONESIAN WOMEN

In the Micronesian community, women put their family's needs before their own. Many women cannot afford health insurance or medical care, and do not get regular health screenings. This has resulted in the increasingly poor outcomes of breast cancer among Micronesian women.

Srue Wakuk, a community health educator at the UH Cancer Center, knew that she wanted to use her knowledge to help the local Micronesian community while pursuing her undergraduate degree at the University of Hawai'i at Mānoa. Now she is pursuing a master's degree in Public Health with a focus on indigenous health. Under the guidance of Kevin Cassel, DrPH, Wakuk has developed a program for Micronesian women to educate them about the importance of early detection of breast and cervical cancers.

Wakuk partnered with federally-funded clinics on O'ahu, that are Breast and Cervical Cancer Control Program sites, to provide breast and cervical cancer screening for low income women who are either uninsured or underinsured. She also recruits women to participate in the Tomosynthesis Mammographic Imaging Screening Trial (TMIST), which compares 2D and 3D mammography in the detection of advanced breast cancer and develops ways to personalize breast cancer screening.

Previously, Wakuk engaged Micronesian women at foodbank sites, public housing, and churches, but during the COVID-19 pandemic, she switched to Zoom and Facebook to schedule screening appointments. Wakuk has recruited over 50 women, some who have not had a mammogram in over 20 years. The pandemic has impacted recruitment, as many feared contracting COVID-19 at the clinics. Still, Wakuk continues to find new ways to encourage participation and work towards health equity for the Micronesian community.

ADDRESSING CANCER DISPARITIES ACROSS THE PACIFIC

The National Cancer Institute has awarded over \$14 million to support the collaborative efforts of the UH Cancer Center and the University of Guam (UOG) through the Pacific Island Partnership for Cancer Health Equity (PIPCHÉ). The PIPCHÉ seeks to mitigate the impact of cancer on Pacific Islanders in Hawai'i, Guam, and the United States Affiliated Pacific Islands of the Commonwealth of the Northern Mariana Islands, American Samoa, the Federated States of Micronesia, the Republic of the Marshall Islands, and the Republic of Palau, through research, career training, and community outreach. Funds from the grant will be used to develop and maintain the research infrastructure needed to address the significant cancer disparities across the Pacific, provide research training for students and early-career scientists, and engage communities in outreach activities to advance knowledge, awareness, behavior change, and public health policy.

Since 2003, when the first PIPCHÉ grant was awarded, its funds have supported 25 research projects, trained over 100 underrepresented students and scientists, contributed over 100 peer-reviewed publications and, in the last cycle alone, acquired over \$34 million in additional funding to explore research questions that are unique to the Pacific. The PIPCHÉ provides a platform to bring equity and resilience to the indigenous peoples of the Pacific, and allows the UH Cancer Center and UOG to do much more than either institution could accomplish alone.

“ PIPCHÉ HAS BEEN TRULY TRANSFORMATIONAL FOR RESEARCH HERE AT UOG. BEFORE PIPCHÉ, THERE WAS ZERO CANCER RESEARCH AND VERY LITTLE HEALTH-RELATED RESEARCH OCCURRING AT UOG. NOW WE HAVE MULTIPLE FEDERAL RESEARCH GRANTS STUDYING CANCER, CHILD OBESITY, CARDIOMETABOLIC HEALTH, AND DEMENTIA. ”

RACHAEL LEON GUERRERO, PHD, RD, PRINCIPAL INVESTIGATOR
AND PROFESSOR AT THE UNIVERSITY OF GUAM

UNIVERSITY OF GUAM CAMPUS



COUNTRIES

11

U.S. STATES &
TERRITORIES

24

UNIVERSITIES &
INSTITUTIONS

76



AWARDS & HONORS



SAMIR AMBRALE,
MD, MPH

Advocacy Champion, American Society of Clinical Oncology, Senator's Club



ERIN BANTUM, PHD

Member, Symptom Management and Quality of Life Steering Committee, National Cancer Institute



JEFFREY BERENBERG,
MD, MACP

Member, Infrastructure Working Group for the Cancer Moonshot 2021



CHRISTA BRAUN-INGLIS,
MS, APRN, FNP-BC, AOCN

Member, Advanced Practitioner Society for Hematology and Oncology Research and Quality Initiative Task Force

Member, Stakeholders Working Group for the Cancer Moonshot 2021



MICHAEL CARNEY, MD

Member, Gynecologic Cancers Steering Committee, National Cancer Institute



ANDREA FLEIG, PHD

Inaugural Editorial Board, American Physiological Society, new journal, *Function*

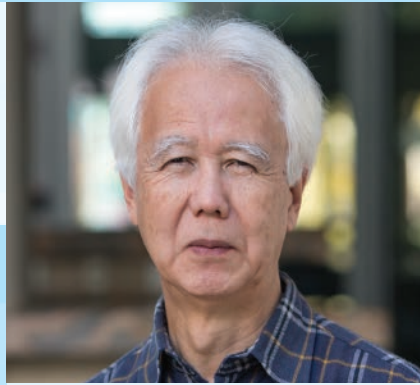


GERTRAUD MASKARINEC,
MD, PHD

Editorial Board, *British Journal of Nutrition*

Board, *Journal of Nutritional Sciences*

Board, *Journal of the National Cancer Institute*



MASAYOSHI YAMAGUCHI,
PHD

Marquis Who's Who in
the World 2020

Editorial Board Member,
Cancers



MELISSA MERRITT, PHD

Associate Members Committee
for the National Cancer
Institute Cohort Consortium

ONGOING APPOINTMENTS

JARED ACOBA, MD

Member, National Cancer Institute Gastrointestinal Steering Committee (2017-2023)

JEFFREY BERENBERG, MD, MACP

Board of directors, Alliance for Clinical Trials in Oncology (since 2019)

JAMI FUKUI, MD

Breast Immuno-oncology Task Force (2018-2021)

SWOG Cancer Research Network's Symptom Management and Quality of Life Committee
(since 2019)

RANDALL HOLCOMBE, MD, MBA

Board of directors, Association of American Cancer Institutes (since 2018)

Member, Association of American Cancer Institutes, Conflict of Interest Steering Committee
(2019-2020)

CARL-WILHELM VOGEL, MD, PHD

Fellow, National Academy of Inventors (since 2019)

————— *In Memoriam:* —————

TWO OUTSTANDING LIVES LEAVE RICH LEGACIES



DOROTHY ANN COLEMAN



CLARA SHIZUKO KAIMI RICHARDS

*The year of COVID-19 left us not prepared for the untimely passing (unrelated to COVID-19) of two most senior members of the UH Cancer Center 'ohana - **Dorothy Ann Coleman and Clara Shizuko Kaimi Richards.** Collectively, they served the Cancer Center for over 73 years! Both accomplished so much during their lifetimes, and we are fortunate to have many wonderful stories to celebrate their lives!*



Dorothy Coleman joined the Cancer Center in 1981 as a research nurse coordinator and retired in 2014 as the clinical trials office (CTO) manager. As CTO manager, her contributions were critical to the enrollment of cancer patients onto hundreds of national clinical trials in the absence of a centralized cancer treatment facility at the UH Cancer Center.

Dorothy loved and was involved in everything related to oncology, both locally and nationally. She was a founding member of the Oncology Nursing Society Hawai'i (O'ahu) chapter. After retiring in 2014, Dorothy returned to the Cancer Center the following year as a part-time clinical research associate, conducting long-term follow up of clinical trial participants and continuing to instruct and mentor new staff.

Dorothy was recognized for dedicating her career to improving cancer care. She served on the board of directors of the Hawai'i Society for Clinical Oncology that awarded her with their inaugural Nursing Lifetime Achievement Award in 2017. At the National Cancer Institute Community Oncology Research Program (NCORP) 2020 Virtual Annual Meeting in August, Dorothy was honored as "...an exemplary model of what it means to be an outstanding administrator..." with the annual NCORP Administrator Award that was renamed the 'Dorothy Coleman Outstanding Administrator Award'.

Dorothy passed away on May 22. She is remembered fondly as she fostered many friendships with colleagues, staff, and patients throughout her career at the UH Cancer Center.



Clara Richards began working at the UH Cancer Center in the Cancer Epidemiology Program in July 1985 as a research interviewer. Her role was to elicit community participation and obtain accurate information for the program's cancer research studies. This task was not meant for just anyone, and Clara's warm, sincere, and gentle nature made her an outstanding research interviewer. Her valuable efforts over the years contributed to international recognition of the Cancer Center's research. She leaves a lasting legacy of a better understanding of cancer in diverse populations that will continue to benefit future generations.

Fitness, music, and hula were a big part of Clara's life. Clara regularly joined the qi gong and hula classes held in the Cancer Center's Wellness Center. Music came naturally to Clara—she taught herself to sing and play the ukulele, and with only a few piano lessons, she could play by ear. As a dedicated member of the Windward Choral Society, she was excited that the choir was invited to perform at Carnegie Hall in 2020. Sadly, her dream never came true because the performance was canceled due to COVID-19. Clara passed away on August 25.

Clara, a respected colleague, a good friend, someone who was always cheerful and friendly, and always wore a smile on her face, is affectionately remembered. She exemplified the true aloha spirit and is dearly missed.

WEINMAN SYMPOSIUM ENSURES CONTINUED PARTNERSHIPS

"We've just made two or three new discoveries, coming out in the next few months, that will shake the world of science," says Michele Carbone, MD, PhD, UH Cancer Center director of thoracic oncology. "Really, this is top-notch science, totally new ideas proven as facts, and some of the scientists who attended the Weinman Symposium are our co-authors."

VIRGINIA & BARRY WEINMAN



In 2010, Barry and Virginia Weinman created the Weinman Foundation Fund for Innovation, gifting the University of Hawai'i Cancer Center with \$1.7 million. This generous gift helped establish the annual Barry & Virginia Weinman Symposium, an international conference on cancer cell metabolism that brings together international experts from different fields of science and medicine. Each year at least one exceptionally gifted and notable scientist is presented with the Weinman Award in recognition of his or her stellar scientific discovery or accomplishment.

"Collaborators at other institutions helped us prove our ideas," says Dr. Carbone. "The young researchers who did most of the experimental work to prove and disprove our ideas are postdocs and students in our lab who often work 36 hours straight and through the weekends. Sure, they love what they are doing, but they're also excited about having the best scientists in the world asking them about their experiments! And they met each other at the Weinman Symposium."

INSPIRING HAWAI'I'S STUDENTS

Barry and Virginia Weinman supported the establishment of the symposium after discussion with Dr. Carbone. "He wanted to focus the UH Cancer Center on meritocracy and excellence," says Barry Weinman.

"Providing world-class researchers, many of them Nobel laureates, a forum for collaboration with their peers, Dr. Carbone attracts scientists from around the world. Bringing them to Hawai'i, he exposes UH students, postdocs, and local people to the best in the field of cancer research."

Virginia Weinman says, "We are most pleased by the growing number of high school students who attend sessions and meet with the Nobel Prize winners and members of the National Academy



2020 WEINMAN SYMPOSIUM. PICTURED FROM LEFT TO RIGHT: BARRY WEINMAN, VIRGINIA WEINMAN, CRAIG B. THOMPSON, MD, LIEUTENANT GOVERNOR JOSH GREEN, LEWIS C. CANTLEY, PHD, TAK MAK, PHD, AND MICHELE CARBONE, MD, PHD.

of Science. Sharing a meal in the conference room, they ask questions and become inspired to consider careers in science."

LAUNCHING PARTNERSHIPS AND FORMING FRIENDSHIPS

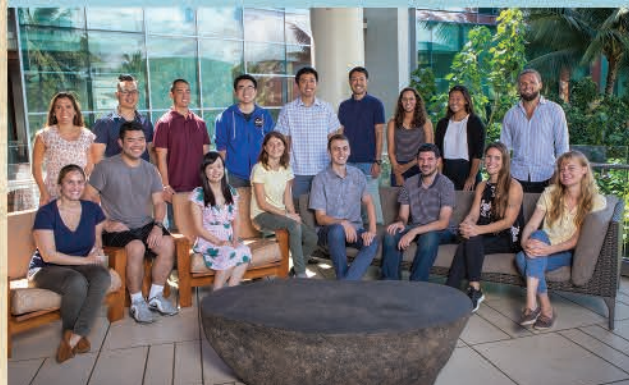
The Weinmans increased their financial support this year to enhance and maintain the legacy of the symposium.

"This is the premier scientific conference in Hawai'i, and we're very appreciative of the generous support Virginia and Barry provide, to ensure it continues launching partnerships and forming friendships for the advancement of science and medicine," says UH Cancer Center Director Randall Holcombe, MD, MBA.

"The Weinmans are wonderful people, highly respected by the scientists who've attended over the years, and their presence makes the symposium a special event," says Dr. Carbone. "Thanks to the Weinmans, we've created a team that is competing—and winning—with the best in the world."



UNIVERSITY OF HAWAI'I
CANCER CENTER



THE UNIVERSITY OF HAWAI'I CANCER CENTER is the only National Cancer Institute-designated cancer center in Hawai'i and the Pacific. The Center's mission is to reduce the burden of cancer through research, education, patient care, and community outreach with an emphasis on the unique ethnic, cultural, and environmental characteristics of Hawai'i and the Pacific. The UH Cancer Center is a research organization, affiliated with the University of Hawai'i at Mānoa, and located in Kaka'ako. The Cancer Center directly employs 300 faculty and staff, with another 200 affiliate members through the Hawai'i Cancer Consortium.



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