

One who mixes ingredients, drugs or medications: a pharmacist

Kāwili Lā'au

The Daniel K. Inouye College of Pharmacy at the University of Hawai'i at Hilo
Fall 2018 • Volume 11, Issue 1



Honoring the Culture of Ancient Hawai'i

also DKICP Welcomes Class of 2022



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Dean's Message



I want to take this opportunity to express my deep appreciation for everyone's concern and well wishes during the last few months. Between the volcanic eruptions and the busy hurricane season, there was nothing left to do but pause and be grateful for the kokua (help) that makes living on a tropical island a unique experience of working together. People in Hawai'i have known this simple fact for generations, and by teaching their children those same values of reliance on our 'ohana, whether through bloodlines or proximity, they have passed on a perseverance that is adopted by all who come to Hawai'i nei hoping to make a better life for themselves and their families.

In this issue we are eager to show our appreciation to our host culture by our willingness to help make health care a number one priority in the state. By our participation in the Hawaiian Cultural Festival at Ho'oku'ikahi Establishment Day, we hope to show not only how we can help the community, but also how we are part of the community. The individual markings on the kiheis, or robes we wear on the cover, reflect each individual's spiritual journey and our aspirations for our profession and our future. We interacted with our neighbors through health education booths and screening stations as a way to be 'helpful' with them to take control of a more 'healthful' destiny.

Through other interactions with the community, such as taking part in the Hawai'i Interprofessional Education and Collaborative Alliance, we pass on our expertise while teaming with many other University of Hawai'i health care educators, led by the School of Nursing and Dental Hygiene (SONDH). This important exchange at a public middle school on O'ahu solidifies our commitment not only to our youth but also to interprofessional collaborations.

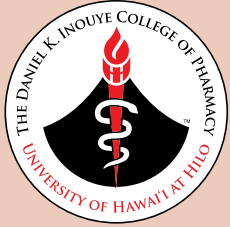
The UH Hilo was recently nationally ranked as #1 for diversity. A timely honor as we begin to move our curriculum to reflect the Native Hawaiian values depicted in Papa O Ke Ao. With this formal declaration, we propagate the traditions started by the ancestral force behind Hawaiian culture and make sure our students, faculty and staff understand not only the meaning behind the ceremonies, both informal and structured, but how culturally based values, can manifest in our approach to healthcare, research, and service for one another and for others. This unique approach trains our students to become valuable global healthcare providers.

Many of those ceremonies are shown here, through orientation week of new Pharm.D. and Ph.D. students, our students' visit to the historical leper colonies of Kalaupapa to workshops that educate the educators about a destructive disease, and through important work being done on targeting of diseases through genetics.

While we certainly take note of external threats of a kind that have influenced the growth of the islands for many years, we have pulled together and met them head on as one formidable entity. And it's business as usual.

A handwritten signature in black ink that reads "Carolyn Ma". The signature is fluid and cursive.

Carolyn Ma
Dean



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Fall, 2018

Volume 11, Issue 1

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**Published by the
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Kāwili Lā'au is the magazine for the only
College of Pharmacy in the Pacific region,
the University of Hawai'i at Hilo



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Contents

| | |
|--|-----------|
| Festival celebrates culture, healthcare | 2 |
| Welcome Class of 2022 | 4 |
| Two Ph.D. students begin program | 6 |
| On research: Introducing Dr. Youssef Roman | 6 |
| Trip to Kalaupapa enlightens, educates | 7 |
| Hawai'i teachers can learn about lungworm disease | 8 |
| Update on HIPEC interprofessional collaboration | 8 |
| Hawaiian values become part of curriculum | 10 |
| Prestigious journal highlights Pharm2Pharm | 13 |
| <u>Regular Features</u> | |
| Faculty Seminar Series | 13 |
| Faculty Briefs | 14 |
| Student Organizations | 16 |
| Rotation Report | 21 |
| Preceptor Highlights | 22 |
| Champions of Pharmacy | 28 |

On the Cover: Members of DKICP created their own "kihei," which is a rectangular cloak tied in a knot over one shoulder with personal, meaningful artwork, at the annual Ho'oku'ikahi Establishment Day Hawaiian Cultural Festival on August 18-19. From left: Dr. Bryce Fukunaga, Henry Quach, Alan Trinh, Ashley Gordon, Krishelle Kamakeeaina-Mendoza, Dean Carolyn Ma, Melody Keshavarz, Athena Borhauer, Faith Hicks, Ashley Maldonado, Destinee Ogas, Fumiko Steiger, Tiana E. Ramos, Theresa Nguyen, Dr. Dana Ko'omoa-Lang (Photo by Alan Trinh)

DKICP honors Hawaiian history at cultural festival

DKICP students and faculty members once again helped Pu'ukoholā Heiau National Historic Site celebrate its 46th anniversary with their annual Ho'oku'ikahi Establishment Day Hawaiian Cultural Festival on August 18-19.

The festival featured more than 20 community arts and crafts demonstrations and workshops. DKICP participated with five educational and informational booths designed to help participants improve their own individual health care.

The annual celebration was entitled "Ho'oku'ikahi I Pu'ukoholā Heiau." Each year the festival's theme is "Ke Kulana No'eau o Ka Wā Kahiko" (The Culture of Ancient Hawai'i). Nā Papa Kanaka o Pu'ukoholā Heiau performed the opening Ho'okupu ceremony in Waimea, located in the center of Hawai'i Island, with festivities continuing later Saturday and Sunday at Pelekane Bay on the south Kohala coast. Additional cultural and health screening activities take place before the cultural event is open to the public. During these times, the students had the opportunity to participate in cultural ceremonies and activities.

Friday morning before sunrise, DKICP participated in ceremonies to pray for those who have passed. Dean Carolyn Ma, Dana-Lynn Koomoa-Lange, associate professor in the Department of Pharmaceutical Sciences, and several female students attended the ceremony in 'āhū with printed kihei (cloke) at the lower heiau, sacred site, designated for women. Drs. Wes Sumida and Bryce Fukunaga, both from the Department of Pharmacy Practice, along with several male students attended the ceremony in malo (traditional Hawaiian loin cloth) and kihei at the heiau, at the top of Pu'ukoholā.

On Friday afternoon, Dean Ma, Drs. Fukunaga and Koomoa-Lange, and DKICP students attended the 'Aha 'Awa (Awa ceremony), where Dr. Sumida introduced them as new participants of Ho'okuikahi



PIMSC: The Pacific Islander Mobile Screening Clinic (PIMSC) was an integral part of the day. From left: Dr. Wes Sumida, Ashley Maldonado, Dr. Bryce Fukunaga, Nichole Chaffin, Noelle Lovesy, Fumiko Steiger, Adam Schronce, Anthony Peguese, Tiana E. Ramos, Joanna Bryant, Emmanuel Anozie II, Kimberly Lin, Stacie Waiamau, Alan Trinh, Henry Quach, Athena Borhauer

I Pu'ukoholā. During the 'Aha 'Awa, each new participant accepted the 'āpu (a cup fashioned out of a coconut shell) containing the 'Awa, which is a bitter drink. Several drops of 'Awa were flicked to the ground to pay respects to the 'āina or land in Hawaiian, several drops were flicked over the participant's shoulder(s) to honor their ancestors,



From left: Taylor Hori, Adam Schronce, Mr. George Karvas, Henry Quach, Nichole Chaffin, Noelle Lovesy, Fumiko Steiger, Ashley Maldonado, Dr. Wes Sumida, Athena Borhauer.

and then the participant declared their commitment to Pu'ukoholā by drinking the remaining 'Awa in the 'āpu.

"This is not a commitment to be taken lightly, but a solemn oath to keep the spirit and culture of Pu'ukoholā alive, and for DKICP this also included caring for and improving the health of the people," Koomoa-Lange said. "The participation in these ceremonies represented many Native Hawaiian values including, but not limited to, Aloha (love), Ho'omana (spirituality) and Kuleana (responsibility)."

Wes Sumida, associate professor in the Department of Pharmacy Practice, supervised the event and said he was proud of the students.

"Student pharmacists went the extra mile by coming back to volunteer at this event before the fall semester began. One fourth-year student even flew from Honolulu to attend this event for a second time," Sumida said. "They learn so much from these types of interactions with the community, and the community also gets a chance to learn more about them. It's truly a win/win situation."

The Pacific Islander Mobile Screening Clinic (PIMSC) organization contributed substantially to this event, he said. "Their leadership including Henry Quach, Tiana Ramos, and Kimberly Lin planned, coordinated, and organized many aspects of the health screening implementation. The organization provided much of the screening volunteers as well as screening equipment and supplies."

The leadership group wishes to acknowledge individuals who played key roles in helping them be successful, including Geri Kaleponi (Aunty Geri), Dean Ma, Dr. Dana Lynn Koomoa-Lange, Dr. Bryce Fukunaga, Mr. George Karvas, and Dr. Dee-Ann Carpenter.

"Dr. Carpenter continues to be a champion for DKICP and the pharmacy profession," Sumida said. "In partnership of her colleague, Dr. Kalani Brady, Dr. Carpenter helped to establish the healthcare and interprofessional involvement of JABSOM, Chaminade Nursing, and DKICP at this event. She has remained a great partner in facilitating DKICP involvement in medically underserved areas."

Drs. Carpenter and Brady, who are both Oahu-based physicians, now transition to a greater supportive role in this event. Hawai'i Island physician leadership has been established with the new Medical Director for this event, Dr. Kehau Kong. Dr. Kong is a Hawai'i Island physician. Future leadership and involvement will transition to Hawai'i Island-based healthcare professionals. (Photos by Alan Trinh)



Anthony Peguese (Class of 2021) explains tobacco addiction.



Kamran Sahba (Class of 2019) talks to visitors about what to do in a medication emergency.

Reflections of Ho'oku'ikahi from student pharmacists

Ashley Gordon (Class of 2019)

When I first signed up for Pu'u Kohola I was told it would be a memorable experience that I shouldn't pass up. I had heard from previous attendees that the health screenings were greatly appreciated. I wanted my last year in Hawai'i to be a memorable one. It was humbling to be able to participate in the cultural events and refreshing to help the community with health screenings.

What made this experience even more impressionable was the meaning behind the 'awa ceremony. This community trusted us as pharmacy students to provide their close community with health screenings and education. As we consumed the 'awa we signed a contract for 7 generations. This contract was a promise that each of us would pass our knowledge to the generations to come. This made me recall back to the oath of the pharmacist. As we left the ceremony, we all felt grounded. I am definitely grateful for the opportunity to take part in Pu'u Kohola.

Alan Trinh (Class of 2021)

During the two-day health screening event, we were able to interact with nursing students from Chaminade University and medical students from John A Burns School of Medicine where we developed the flow for the health screening events and educational boards. In between screenings and events, we talked about how different our curriculums are, job searching after graduation, and talk story. As one of many students, I was able to partake in the 'awa ceremonies and sunrise ceremony in heiau with people coming from the neighboring islands and with other interprofessional health students. It was a "breezy" experience that I can say that I will remember from my days in pharmacy school. I became immersed in a culture and ceremonies that have been conducted for many generations while wearing malo and a kihei that I designed. Pu'u Kohola was an overall fulfilling experience as a cultural and interprofessional health experience as a pharmacy student from the mainland.

Fumiko Steiger (Class of 2021)

Just before the Fall semester, we had an unforgettable and wonderful experience at Pu'u Kohola, a Hawaiian heiau on the Kona side. This Pu'u Kohola summer event is not well-known like some hula festivals, but the cultural value for Hawai'i seems irreplaceable. As student pharmacists, we also provided health screening and workshops in the Pu'u Kohola, even though Kanaka Maoli (Native Hawaiian people) taught us the most important things through the event, which could not be forgotten in our profession. Thank you so much for accepting us!



(From left): Anthony Peguese, Dr. Wes Sumida, Jhoana Gonzalez, Dean Carolyn Ma, Henry Quach, Faith Hicks, Stacy Huynh, Fumiko Steiger and Tiana E. Ramos



DKICP welcomes Class of 2022, new Ph.D. students

Incoming DKICP students gathered with faculty and staff on the UH Hilo campus on August 13 to participate in an orientation program developed by the Office of Student Services.

The new student pharmacists were registered and fitted for their white coats and treated to donuts and coffee donated by Safeway. The 82 PharmD students and two PhD students then filled the main DKICP classroom in the Long's Pavilion, where Daryl Masanda, director of student services, welcomed them to the DKICP `ohana.

Later that day, the students and their families were treated to a welcome reception at the 'Imiloa Astronomy Center, sponsored by CVS Health. Dean Ma introduced CVS Pharmacy Scheduler Tina Barao and District Leader Jaimelynn Kon, who welcomed the group to Hilo.

Throughout the week, students received program overviews, learned about organizations they could join, and participated in sessions about becoming part of the greater `ohana while getting to know their classmates, faculty and the UH Hilo community.

Campus events included the opportunity to attend the Kipaepae Welina (welcoming ceremony) in front of the Library lanai and the New Student Convocation at the UH Hilo Performing Arts Center.

The Class of 2022 is the 12th incoming class of pharmacy students at UH Hilo, the only College of Pharmacy in Hawai'i and the Pacific region. (Photos by Tracey Niimi)



The student panel at orientation included (from right) Joseph Joyce, Brittany Luna, Jhoana Gonzales, Kamala Lizama, Ethan Slusher



Helping with orientation were student ambassadors Henry Quach, Vincent Manalo, Johnson Tran, Karen Pae, Andrew Nguyen, Shaina Saiki, Mary Lui, Brandon Kozima, Josephine McDonald, Christian Macaspac



Jaimelynn Kon, CVS Health District Leader speaks to participants at orientation banquet while CVS Pharmacy Scheduler Tina Barao waits



Ph.D. in Pharmaceutical Sciences program adds two new students

Tifaine Crivello graduated with a bachelor's degree in Psychology from the Department of Psychology at UH Hilo. She will be working with Dr. Dana Koomoa-Lange.

In her words: "Born and raised on the Big Island, I strongly believe in the preservation of our multicultural community and want to see it thrive. One way is through the health and healing of our people. Imagining myself at DKICP gave me the image of being able to connect to this land and its



Tifaine Crivello

people, while also allowing me to gain the richest pursuit of education possible. My current intentions are to build off of the foundational experiences and skills I am gaining in this program to develop pharmaceuticals that are derived from native Hawaiian plants."

Natalie Gray earned a bachelor's degree in biology and a master's degree in



Natalie Gray

Applied Cognition and Neuroscience from the University of Texas at Dallas. She will be spending a year getting to know the labs before she decides on a major professor.

In her words: "My love of life science has been evident since high school. Since then I have completed degrees in biology and neuroscience. Simultaneously, my love for natural products, their healing properties and their development, led me to pursue a Doctorate at a university with a shared focus."

An introduction to Dr. Youssef Roman... and pharmacogenomics

Dr. Youssef Roman joined DKICP last October as an assistant professor with the Department of Pharmacy Practice, and is based on O'ahu.

He studied chemistry and physics at Helwan University in Cairo, Egypt before attending Mt. Hood Community College in Gresham, Oregon, where he went on to complete his bachelor's degree with a prepharmacy focus and a minor in psychology. He received his PharmD degree from Oregon State University in Corvallis, Oregon and completed a Ph.D. program in the Experimental and Clinical Pharmacology Department at the University of Minnesota College of Pharmacy in Minneapolis.

A licensed pharmacist in Hawai'i as well as in Minnesota, Dr. Roman is a certified immunizing pharmacist by the American Pharmacists Association (APhA). A prolific writer, he has been a coauthor on two book chapters and many abstracts and published manuscripts, and has been a speaker at many seminars and invited talks.

Dr. Roman's clinical and research interests include the pharmacotherapy of hypertension, hyperlipidemia, heart failure, hyperuricemia and gout with an emphasis on pharmacogenomics, the study of how genes affect a person's response to drugs.

In his own words:

Q: What is pharmacogenomics and how did you get involved?

Dr. Roman: Pharmacogenomics is an emerging approach that allows prescribers to select the most optimal drug taking the patient's genetic information into account. In other words, pharmacogenomics is a tool that can help clinicians to personalize treatment while taking into consideration a patient's unique characteristics. I developed interest in personalized medicine during my third year of pharmacy school because it made sense to me to not use an average dose approach but rather a personalized dose approach. After receiving my Pharm.D. I went on to pursue a research career centered on pharmacogenetics and its potential to help patients, especially in underserved populations. My current research is expanding on the principles I learned throughout my Ph.D. to help achieve two main goals. First, reduce the burden of the health disparities across different populations in Hawaii, using a pharmacogenetic-based approach. Second, increase the representation of unique populations in pharmacogenomics research, using community-based participatory research approach.

Q: Why is pharmacogenomics important?

Dr. Roman: Pharmacogenomics is very important in clinical practice because it al-



Dr. Youssef Roman (Photo by Tracey Niimi)

lows the patient to get the right medication. This match-making process has a substantial effect on the patient's health as well as the healthcare system at large. For example, pharmacogenomics can reduce the risk of drug side effects allowing the patient to adhere well to his/her medications and reduce the trials and errors to identify the right drug. What is more exciting is pharmacogenomics can also impact other aspects of the healthcare outside direct patient care such as drug discovery and development. It's expected that pharmacogenomics can greatly reduce the cost and time associated with clinical trials and potentially develop robust study design. More importantly, pharmacogenomics can revive some clinical

benefits of chemical compounds that were deemed failures during clinical trials.

Q: How do you plan to carry it out?

Dr. Roman: Pharmacogenomics can be the interface of clinical research and drug discovery and development. This allows for better drugs to reach the market, the patients and explain some of the variability in response to some currently approved medications. Similarly, we believe creating collaboration between faculties who are interested in drug development or even natural products and pharmacogenomics can help us identify new compounds, possible toxicity profiles, and optimal responders to these compounds. This collaboration will explore the expertise of the various departments and the skills that each faculty member has in his/her field.

Q: How will it involve another faculty?

Dr. Roman: This potential collaboration will be an example of team science, where we ask different faculty members with different skills to contribute to the overall research goal. Thus, we anticipate having multiple

individuals with expertise in animal studies, cell culture, analytical chemistry, and clinical trials design. This multidisciplinary team will come together to identify a research question that involves the discovery of a new compound, the effect of pharmacogenetics on the disposition of this compound, and how this can be clinically translated to bedside.

Q: Who will the results affect?

Dr. Roman: In general, the results of many clinical studies do not immediately translate into clinical applications for patients or change the clinical practice. However, these results may serve as preliminary data that can allow us to design the next robust clinical trial to address a pertinent health problem. The ultimate beneficiaries of these results will be the patients, the healthcare system, and the community at large

Q: What do you have planned for this research?

Dr. Roman: Currently, I'm interested in collaborating with other faculties on characterizing the natural and herbal remedies that are used to help and treat gout and gout symptoms (inflammation and pain). In collaboration with other experts in field of compound extraction and structural characterization, we can identify the product/compound responsible for its therapeutic effect. This work will be followed by some cell-culture work to identify some of the mechanism of action and possible toxicity associated with the product. Ultimately, we want to identify the optimal patient candidates for a specific treatment or therapy using a pharmacogenetic-based approach. We also want to provide evidence-based medicine for the usage of select herbal products that are commonly used to treat gout symptoms in patients with gout or high uric acid levels.

Kalaupapa 2018: Learning about Hansen's Disease at site where patients were exiled

*By Drs. Deborah Taira and Wes Sumida
Department of Pharmacy Practice*

During the weekend of August 4, we went to the Kalaupapa Settlement with two fourth-year pharmacy students, Athena Borhauer and Lauren Glover Alejado. The purpose was to learn more about the history of King Kamehameha V, who banished all people afflicted with Hansen's disease to the isolated Kalaupapa peninsula. More than 8000 people, mostly Native Hawaiians, have died there.

We visited the settlement with Dr. Kalani Brady, the personal physician to the remaining patients, and Associate Professor Dr. Amy Wasserman from UH Mānoa's Department of Native Hawaiian Health. Dr. Brady told stories about Saint Sister Marianne and Saint Father Damien, who cared for the people with Hansen's Disease.

"Being allowed to visit Kalaupapa was a humbling and inspiring trip. The hike down the rock cliff into the settlement made me appreciate the plight of the patients that were forced to live without proper medical

care. Seeing how isolated the settlement is even in modern times makes me realize how important it is to get pharmacy and other healthcare to reach out to those with limited access." - Athena Borhauer

An employee from the Hawai'i State Department of Health helped Dr. Brady with providing the group a tour of the settlement. Atop a ridge overlooking Kauhakō Crater, he talked about the Native Hawaiian warriors who would come train on Molokai and about the ha'uoi (or ōwī) growing on the ridge. This purple flowered plant is part of Native Hawaiian Lā'au Lapa'au and can be used to treat cuts and bruises the warriors received while training.

The weekend offered the opportunity to learn about an important aspect of the history of Native Hawaiian health. To be physically in Kalaupapa while learn-



ing about its history made it more tangible and memorable.

"Kalaupapa is heavy with history and emotion and I felt the weight of this wahi (place) once I stepped foot onto the settlement. Being a native Hawaiian, it was a once-in-a-lifetime experience and words cannot express how appreciative I am to have had this opportunity. It showed me how far we've come in healthcare, but also how essential our role is, as pharmacists, in the betterment of our patients' health." - Lauren Glover Alejado



Workshops show Hawai'i teachers how to spread the word about Rat Lungworm Disease

Hawai'i teachers have the opportunity to participate in the collection of data on Rat Lungworm Disease (RLW) as well as gain a better understanding of the potentially deadly disease at a series of workshops this fall, co-sponsored by DKICP.

Kay Howe, education specialist in Dr. Susan Jarvi's lab, and Franny Brewer, communication director for the Big Island Invasive Species Council, partner to teach this Professional Development Education (PDE) course for K-12 teachers offered through the Hawai'i Department of Education.

The course consists of a public presentation, and teachers are required to submit a portfolio documenting the class progress. Materials to be covered were

developed from the 2015-2016 pilot project on RLW, which includes the integrated pest management plan for non-native slugs and snails for school garden projects, and the accompanying lesson plans related to the rat lungworm, its hosts, disease and disease prevention, data collection, and reporting.

Teachers can choose among three PDE courses, which run from 8 a.m.-5 p.m. each day. Dates are: October 20-21 at Kalaniani'ole Elementary School in Hilo (registration required by October 19); October 27-28 at Kanu o ka 'Aina in Waimea (registration required by October 26); and November 3-4 in Waimea Middle School (registration required by November 2). Teachers must sign-up for course #SC184011 at <https://pde3.k12.hi.us>.

"Participants become educators for their communities as they will have a solid understanding of all aspects of the issue of rat lungworm and Rat Lungworm Disease," Howe said.

A one-day, not-for-credit workshop that provides an overview of the curriculum and materials was given on September 29 at Hawai'i Preparatory Academy in Waimea.

In addition to DKICP, the workshops are co-sponsored by the Hawai'i State Department of Health, 'Iolani Schools, the O'ahu Farm to School Network and the Hawai'i Farm to School HUI.

For more information, contact Howe at maryk8@hawaii.edu.

Update on the Hawai'i Interprofessional Education and Collaborative Alliance (HIPEC)

By Chad Kawakami, Assistant Professor, Department of Pharmacy Practice

August marked the start of the second year for the Hawai'i Interprofessional Education and Collaborative (HIPEC) Alliance practice at Dole Middle School (DMS). This project is led by the UHM School of Nursing and Dental Hygiene (SONDH) in partnership with the UH Hilo Daniel K. Inouye College of Pharmacy (DKICP), John A. Burns School of Medicine (JABSOM) Department of Psychiatry, the Department of Education and UHM SONDH Hawai'i Keiki Program, and the Hawai'i State Center for Nursing (HSCN) Action Coalition (a matching funder for the project).

The first year was a great year for the HIPEC Alliance practice team. The overarching goal of the project is to accelerate interprofes-



Pictured are Natasha Fong, Dawei Wang MD (Child and Adolescent Psychiatry Fellow), Maureen Shannon, April Kim (DNP Student), Brandi Okamoto (School Health Aid), Ashley Uehara (DKICP Class of 2019), Christen Coloma RDH, Malia Yamaguchi (RDH Student), Kevin Lei (DKICP Class of 2019), Kaiulani Graves-Borden (Medical Assistant), Reid Hamamoto, Melissa Owens.

sional education (IPEC) and collaborative practice in school-based health center (SBHC) primary care sites for students to integrate the IPE competencies into practice. The HIPEC Alliance practice has truly accelerated the IPC practice model forward as it is the first truly community-based (i.e., not affiliated with a medical center) interprofessional collaborative practice effort in the state.

During the HIPEC's first year, the team saw more than 250 DMS students. The most common conditions seen were wounds and ailments dealing with eyes, ears, nose, and throat (ENT) conditions. Representatives from Pharmacy were consulted in more than 80 cases throughout the year. Many of the pharmacy consults dealt with pediatric dosing of antibiotics, pain medications and education of DMS students about how to take prescribed medications properly. In addition, the team was present for and participated in numerous urgent events that occurred at DMS. In each of these events, the clinical pharmacy students who were part of the IPC practice team were able to contribute to the assessment and treatment plan.

The year culminated with a site visit with representatives from the National Center for Accelerating Interprofessional Practice and Education and the Robert Wood Johnson Foundation, who was one of the funders for the project. The site visit was also attended by representatives from the Department of Education, Hawai'i Pacific Health, Hawai'i Keiki, UH Foundation, Hawai'i State Center for Nursing's Action Coalition, DKICP, SONDH, JABSOM, and MBTSSW. The HIPEC Alliance project received a positive review support from all of the organizations in attendance.

The true success of HIPEC Alliance practice model is the decision to open additional SBHC sites that incorporate IPC practice approaches, as well as the expansion of current services at DMS. This year, the team has grown to include dental hygiene and community health nursing students.



Preston Ho (Class of 2019) and April Kim (DNP Student) completed the dye test. (Photo by Chad Kawakami)

For example, team members participated in an event designed to teach children how to effectively brush their teeth. The event was led by one of the first students to enroll in the Expanded Function Dental Hygiene post Baccalaureate certificate program, Gerraine Hignite. She, along with other UHM dental hygiene students, used a disclosing agent that turned volunteer HIPEC Alliance core team members purple. The dye disclosed areas that we need to focus on when we brush our teeth. We also had a discussion about fluoride and how it prevents tooth decay.



Dr. Reid Hamamoto (Child and Adolescent Psychiatry) and Dr. Chad Kawakami (DKICP) brush their teeth in the dental challenge.

"This was great to see how well we brush our teeth and a good introduction to having a conversation about how to properly care for our teeth. It was also interesting to learn about fluoride since it will help with recommending dental products. I also have a better understanding about fluoride vitamins and drops," said Preston Ho (Class of 2019).

The addition of new team members will allow for more comprehensive care for all Dole Middle School Students, as well as enhancing the interprofessional education experience.

The HIPEC Alliance project's overarching goal is to provide interprofessional care to children with complex health issues in SBHCs in order to allow students to remain in school and continue to learn. The approach provides an opportunity for the health professions students and faculty to engage in a practice model that:

- Emphasizes a compassionate, culturally sensitive, collaborative approach to SBHC services for the students, their families and the teachers and staff of the school.

- Addresses population health issues (i.e., the health issues of the students, the school staff, their families and community) and the social determinants that influence health outcomes, and,

- Is anticipated to reduce per capita cost of student health services (i.e., students will receive assessments and screenings on a regular basis that will help prevent diseases, allow early identification of problems, assist with access to services, help monitor and manage chronic conditions).

The Principal Investigator/Project Director is Maureen Shannon, CNM, FNP, PhD, a professor in the UHM Department of Nursing. The HIPEC Alliance practice core faculty are: Melissa Owens, MSN, APRN-Rx, NP-C, NCSN (Dole Middle School nurse practitioner); Chad Kamakami, PharmD (UHH Daniel K. Inouye College of Pharmacy); Reid Hamamoto, MD (UHM John A. Burns School of Medicine Department of Psychiatry); and Natasha Fong, RDH (UHM SONDH).

The project received funding from the National Center for Interprofessional Practice and Education, which is supported by a Health Resources and Services Administration Cooperative Agreement Award No. UE5HP25067. The National Center is also funded in part by the Robert Wood Johnson Foundation, the John A. Hartford Foundation, the Josiah Macy Jr. Foundation, the Gordon and Betty Moore Foundation and the University of Minnesota. Matching funds were provided by the Hawaii State Center for Nursing's Hawaii Action Coalition.

UH Hilo builds exchange program with Musashino University

Students and faculty at the Daniel K. Inouye College of Pharmacy (DKICP) at the University of Hawai'i at Hilo will begin educational and research projects in Japan thanks to an agreement with Musashino University (MU).

MU has two locations in Japan, where the original campus is located in Nishitōkyō, a city located in the western portion of Tokyo Metropolitan. The newer Ariake campus is located in the Odaiba area of Tokyo, where planning is underway for the 2020 Summer Olympics.

The University has a Department of Pharmacy as well as a Graduate Program in Pharmaceutical Sciences. DKICP Dean Carolyn Ma met with officials there in July to discuss the Memorandum of Agreement (MOU) so that UH Hilo can be a part of the beginning of MU's international student exchange program.

"In addition to providing a great international opportunity for our students to fulfill their experiential requirements, we envision them to be able to attend MU's annual international exchange program held every summer for two weeks," Ma said. "We would like to create a short course in Hilo for visiting professors and students as we have with a few other Japanese pharmacy schools."



From row from left: Dean Toshiaki Katada, Carolyn Ma, Naomi Yamashita. Top row: Shingo Ohata, Kiyoshi Mihara, Naomi Nagai, Yukari Ogawa

Looking ahead, administrators also are discussing the possibility of giving DKICP students the opportunity to help with the Olympics after the two weeks of international exchange in 2020.

The program, called "The U.S. Japan Student Pharmacists and Pharmacists Exchange Program," allows students and/or licensed pharmacists from either institution to complete prescribed coursework or develop new programs in higher education.

While meeting with MU Dean of Faculty of Pharmaceutical Science Toshiaki Katada and other pharmacy faculty, Ma provided a presentation about her own specialty in oncology clinical pharmacy. She also discussed DKICP's Pharm.D. program and the exchange of a DKICP faculty to teach clinical pharmacy for a week at MU.

"This exchange of international experiences sets the stage for a truly unique education that exposes our student pharmacists to other cultures and lifestyles that will carry them into their professional lives," Ma said.

Learning, working in New Zealand provides unique experience

By Rachel Paragas (Class of 2020)

This summer I had the opportunity to participate in the Student Exchange Program (SEP), which is the largest project of the International Pharmaceutical Students' Federation (IPSF). The program offers professional pharmacy internship with the goal to "strengthen interprofessional commitment to healthcare." Each year more than 900 students from around the world can experience the field of pharmacy in more than 60 different countries. I am fortunate for my experiences abroad that have developed me into a more culturally dynamic individual. I was beyond excited to be placed on the South Island of New Zealand for two weeks because I was eager to interact and learn more about the Maori culture. My host association was New Zealand Association of Pharmacy Students Otago (NZAPS-O), which is a national organization similar to APHA-ASP.

During my first week, I was placed in the oldest city in New Zealand called Dunedin. The University of Otago, which specializes in pharmaceutical sciences, is also located in the city. I stayed with a second-year pharmacy student during my time in Dunedin, which has allowed me to experience a glimpse in the everyday life of a pharmacy student in New Zealand. I was able to go to one of the



lectures, and it was interesting to see the differences in their curriculum. For example, the second-year students' spring semester has only one class that is worth 18 credits. This class is similar to our version of integrated therapeutics, and the students are required to receive a "mark" of fifty-percent to pass the class.

In New Zealand, classes are referred to as "papers," which was a little confusing for me at first. In addition, the duration of schooling to become a certified pharmacist is only four years after graduating high school. During the fourth year, the students are placed at one community or hospital pharmacy for an entire year.

I am fortunate that our schooling in the United States allows us to explore different fields of pharmacy, which enables us to pursue a branch of pharmacy that best suits our interests. After work, I would spend some quality time with some of the students. One of my favorite in Dunedin, I worked at a private community pharmacy called "Anderson's Exchange Pharmacy." The pharmacy dispensed around 200 to 250 prescription medications each day. Many of the medications in New Zealand are subsidized by the government, and the customer must pay a prescription charge of \$5. Patients

can receive prescription subsidy once they have paid for 20 new prescription medications, which means these individuals do not have to pay prescription charges for the rest of the year.

I also found it interesting that transferring prescriptions between pharmacies were not allowed in New Zealand. After a week in Dunedin, I was placed in the second busiest pharmacy in the country called “Life Pharmacy Wilkinsons” in Queenstown. Surprisingly, this pharmacy only dispensed at most eighty prescriptions medications a day. The pharmacy mainly focused on over-the-counter medications because the city was a popular destination for tourists during the winter. Some of the tourists were American, and requested medications that were only sold in the United States. The



pharmacists would often ask for my help to find a product that was similar to an over-the-counter medication sold in New Zealand. The experience was challenging at first, but it was a great opportunity for me to brush up on my knowledge on OTC medications. I learned that New Zealand has stricter

regulations on certain medications and supplements. For example, pseudoephedrine and melatonin require a prescription from a doctor.



During my time in Queenstown, I stayed with a pharmacist named Brian Wong, an IPSF chairperson for the Asia Pacific region in 2017. He took me some of the local favorites for food, which included the infamous “FergBurger” and “Pedro’s house of Lamb.” Queenstown is also known for adrenaline-rushing activities, and I was more than happy to participate in snowboarding and bungee jumping.

Overall, my experience abroad was culturally rewarding by teaching me to adapt to new environments and interact with different people from different cultural backgrounds. It has also broadened my perspective about the field of pharmacy in other parts of the world, and I am thankful for the opportunity. More importantly, I am grateful for the lifetime of memories and unforgettable new friends.

Curriculum retreat 2018



While taking a break from the serious work of fine-tuning the curriculum at a retreat on campus June 26 and 27, DKICP faculty and staff also worked off some tension with a pickleball session. (Group Photo by Christina Method)



Dr. Marilyn C. Roberts, professor with the Department of Environmental and Occupational Health Sciences at University of Washington in Seattle, Washington presented a seminar entitled “One Health Approach to MRSA Transmission” on September 5. Dr. Marilyn Roberts (in front with lei) is shown with her host (from left) Dr. Dianqing Sun, and Dr. Tracy Wiegner, Professor, Marine Science and her undergraduate student Tyler Gerken (front right).



Dr. Youssef Roman (right), Assistant Professor with the Department of Pharmacy Practice based on O’ahu, presented a seminar on the UH Hilo campus called “Beyond Personalized Medicine: The Role of Pharmacogenomics in Drug Discovery and Development” on July 5. Joining him in the photo is Dr. Leng Chee Chang, Associate Professor, Department of Pharmaceutical Sciences.



Dr. Marla Berry, professor and chair, Cell and Molecular Biology at JABSOM and also Director of the Investigator Development Core for the Ola Hawai’i program, visited DKICP campus in August to give a presentation on faculty development and pilot grant opportunities available through the Ola Hawai’i program. From left is Linda Connelly, associate professor and chair of the Department of Pharmaceutical Sciences, Dr. Berry, and Dean Carolyn Ma.

Pharm2Pharm one of eight successful home care programs in IHI/NPSF report

Hawai’i’s Pharm2Pharm (P2P) program was featured in a report released this summer by the prestigious Institute for Healthcare Improvement (IHI) and National Patient Safety Foundation (NPSF) about safety of care in the home setting.

P2P was highlighted among just eight other case studies from programs across the country that are showing results in reducing costs, improving safety, and providing more comprehensive care than is currently the norm. The resulting publication is entitled “No Place Like Home: Advancing the Safety of Care in the Home” and will be discussed during a session at the IHI National Forum on Quality Improvement in Health Care, December 9–12, in Orlando, Florida.

Developed from a \$14.3 million grant from the federal Center for Medicare and Medicaid Innovation within the Centers for Medicare & Medicaid Services (CMS), P2P was led by the University of Hawai’i at Hilo’s Daniel K. Inouye College of Pharmacy (DKICP).

P2P established teamwork between hospital and community pharmacists to improve medication safety when high-risk inpatients are discharged home. P2P Project Director Karen Pellegrin said it’s critical to have the Hawai’i program added to this report because it highlights the importance of incorporating medication experts on the medical team.

“Home health care organizations as well as hospice and palliative care providers have started to lay a foundation for promoting safety in home care,” said Tejal K. Gandhi, MD, MPH, CPPS, Chief Clinical and Safety Officer at IHI. “For example, hospice and palliative



care programs effectively coordinate care provided by multiple caregivers, such as nurses, social workers, bereavement counselors, and spiritual care. That kind of coordination is largely lacking when it comes to other kinds of care in the home. As the numbers of people receiving care at home continue to increase, we hope this report will serve as a useful reference for those committed to building on that foundation.”

This report describes the findings of an expert panel and considers the physical and emotional safety of the care recipient, the family caregiver, and the home

care worker, while recognizing the interconnected nature of the safety of all these individuals. It includes recommendations, strategies, and tools for realizing five guiding principles for advancing the safety of home care.

The other programs featured include two models developed at Johns Hopkins to improve safety for older adults living at home and a program that leverages community pharmacists in North Carolina to improve medication management.

The report is available on the Institute for Healthcare Improvement website at: <http://www.ihf.org/no-place-like-home>.

“We’re honored to have our work chosen to be highlighted by IHI and NPSF,” said Karen Pellegrin, who is DKICP Director of Continuing Education & Strategic Planning. “P2P represents a successful collaboration with multiple community organizations with far-sighted members, and we continue to look ahead on ways to improve the health care system in Hawai’i.”

Faculty Briefs

Julie Adrian,

D.V.M., associate professor in the Department of Pharmacy Practice, was featured in the Washington Post this summer in an interview about her manuscript entitled “Pet loss, complicated grief, and post-traumatic stress disorder in Hawai‘i” published in the journal *Anthrozoös*. Dr. Adrian also talked about her study in an interview by Angela McCormack on Australia Triple J, the government-funded, national Australian radio station. Triple J is a division of the Australian Broadcasting Corporation.



Shugeng Cao,

associate professor in the Department of Pharmaceutical Science, was an author on the following publications: “Two new polyketides from Hawaiian endophytic fungus *Pestalotiopsis* sp. FT172” published in *Tetrahedron Lett.* with coauthors Chun-Shun Li, Ariel M. Sarotti, and Wesley Yoshida. and 2) “A Novel Dual-Action Targeted Nanomedicine Effective in Mouse Models of Endocrine Cancers” *J Natl Cancer Inst.* 2018. Co-authors were Naris Nilubol, ZIQiang Yuan, Giulio F. Paciott, Lawrence Tamarkin, Carmen Sanchez, Kelli Gaskins, Esther M. Freedman, Jieli Zhao, David G.I. Kingston, Steven K. Libutti and Electron Kebebew.



Abhijit Date,

assistant professor, Department of Pharmaceutical Sciences, was an author in the following publications: 1) “Development of rectal enema as microbicide (DREAM): Preclinical progressive selection of a tenofovir prodrug enema” in *Eur. J. Pharm. Biopharm.* 2018, in press. Co-authors were T. Hoang, J. Ortiz, T.W. Young, S. Bensouda, P. Xiao, M.A. Marzinke, L. Rohan, E.J. Fuchs, C. Hendrix, S.



Gumber, F. Villinger, R.A. Cone, J. Hanes, L.M. Ensign. And 2) “Hypo-osmolar formulation of tenofovir (TFV) enema promotes uptake and metabolism of TFV in tissues, leading to prevention of SHIV/SIV Infection” in *Antimicrob Agents Chemother.* Co-authors were P. Xiao, S. Gumber, M.A. Marzinke, T. Hoang, J. Hanes, L.M. Ensign. L. Wang, L. Rohan, E.J. Fuchs, C. Hendrix and F. Villinger.

Tamara Kondratyuk,

laboratory director, and Dianqing Sun, associate professor, Department of Pharmaceutical Sciences, were authors in an article entitled “Synthesis and structure-activity relationships of tetrahydro- β -carboline derivatives as anticancer and cancer-chemopreventive agents” published in *Anticancer Research*. Co-authors were M. Zhang, E.J. Park and J. Pezzuto. Dr. Kondratyuk also was an author in an article entitled “Induction of NAD(P)H: quinone reductase 1 (QR1) and antioxidant activities in vitro of ‘Toranja Burarama’ (*Citrus maxima* [Burm.] Merr.)” in *Phytother. Res.* Co-authors were Silva, E.S., Oliveira, B.Gg, Pereira, A.C.H., Pimentel, E.F., Pezzuto, J.M., Lenz, D., Andrade, T.U., Fronza, M., Scherer, R., Maia, J.F., Romão, W., Alves, F.L, Ventura, J.A., Endringer, D.C.



Dana-Lynn Ko‘omoa-Lange,

associate professor, Department of Pharmaceutical Sciences, was an invited speaker at: 1) the 5th International Conference on Polyamines: Biochemical, Physiological and Clinical Perspectives Sept. 2-7 at National Taiwan Ocean University and at the Howard Civil Service International House Taipei (Taiwan). The title of her presentation was “Polyamines promotes Neuroblastoma Progression through a process



that involves novel calcium signaling pathways.” And 2) The Facilitating Indigenous Research, Science, and Technology (FIRST) workshop, funded by the National Science Foundation (NSF), focused on Mentoring Our Own Native Scientists (MOONS) at Haskell Indian Nations University in Lawrence, Kansas Sept. 19-21. She served on a panel with Gail Makuakane-Lundin and Heather Kaluna “Mentoring Our Own Native Students in STEM.” Dr. Koomoa-Lange also was an author on the following: 1) “Stress and the menopausal transition in Campeche, Mexico,” published in *Women’s Midlife Health*. Coauthors were Lynnette Leidy Sievert, Laura Huicochea-Gomez, Diana Cahulch-Campos and Daniel E. Brown, ; and 2) “Bioreducible Poly (amino ethers) based mTOR siRNA Delivery for Lung Cancer” published in *Pharmaceutical Research*. Coauthors were N.S. Gandhi, S. Godeshala, B. Miryala, K. Rege and M. B. Chougule.

Karen Pellegrin,

Director of Continuing Education & Strategic Planning, was corresponding author on a manuscript titled “Socioeconomic Variables Explain Rural Disparities in US Mortality Rates: Implications for Rural Health Research and Policy: published in the Elsevier journal *SSM - Population Health*, 2018. Co-authors were A. Long and A. Hanlon.



Jarred Prudencio,

assistant professor, and Michelle Kim, junior specialist, both from the Department of Pharmacy Practice, presented research entitled “Comprehensive Medication Management Provided by Clinical Pharmacists in a Family Medicine Clinic” at the American College of Clinical Pharmacy (ACCP) 2018 Global Conference Oct. 20-23 in Seattle, WA.



Judi Steinman,

instructor in the Department of Pharmacy Practice, was named Psychopharmacology Educator of the Year award for Division 55 from the American Psychology Association (APA). She participated in several panels at APA’s 126th Annual Convention August 9-12 in San Francisco addressing the transformational movement towards training clinical psychopharmacology (RxP) at the pre-doctoral level.



Dianqing Sun,

associate professor, Department of Pharmaceutical Sciences, was senior author of the following publications. 1). “Recent Reports of Solid-Phase Cyclohexapeptide Synthesis and Applications” in *Molecules*, with coauthors AM Prior, T Hori, and A Fishman. 2). “Synthesis and structure-activity relationships of tetrahydro- β -carboline derivatives as anticancer and cancer-chemopreventive agents” in *Anticancer Research*, with coauthors M Zhang, EJ Park, TP Kondratyuk, and JM Pezzuto. The latter paper



STUDENT ACHIEVEMENTS

Dallas Freitas, an under graduate researcher working in Dr. Dana-Lynn Koomoa Lange’s laboratory, was accepted into the Research Experience for Under graduates at Texas A&M. Funded by the National Science Foundation (NSF), the REU program is a grant-based summer platform hosted by universities across the nation to enhance undergraduate participation in science, technology, engineering and mathematics (STEM) research. For eight to 10 weeks, REU students participate in real-world scientific investigations under the guidance of a faculty mentor and receive both a stipend and housing for the duration of the program.

has been selected to receive "Exceptional Quality Paper" classification by the Journal, with complimentary online open access. In addition, Dr. Sun gave a talk at the 14th Sino-US Chemistry and Chemical Biology Professor Conference in Wuhan, China, June 20-23. He was also an invited speaker at 2018 Mini-Symposium on Frontier of Pharmaceutical Sciences hosted by School of Pharmaceutical Sciences, Wuhan University, China, June 20. Dr. Sun was also invited to visit and give seminars at School of Pharmaceutical Sciences, Southern Medical University, Guangzhou, China, June 29 and Department of Chemistry, City University of Hong Kong, Hong Kong, China, July 3.

External Funding

Abhijit Date to be part of NIH diabetes research project

Abhijit Date, assistant professor, Department of Pharmaceutical Sciences, was awarded part of the Diabetes Center for Biomedical Research Excellence (COBRE) grant at the John A. Burns School of Medicine (JABSOM). Dr. Date's project entitled "Development of nanoparticles to improve delivery of metformin" will explore the potential of nanotechnology to improve efficacy and reduce side-effects of metformin, an antidiabetic drug with what he calls "poor biopharmaceutical properties." The \$11.2 million Diabetes COBRE grant was awarded to UH Mānoa last year by the National Institute of Health (NIH).

Dana-Lynn Koomoa-Lange, Roy Goo work on federally funded project

Dana-Lynn Koomoa-Lange, associate professor in the Department of Pharmaceutical Sciences, and Dr. Roy Goo, associate professor and Chair of the Department of Pharmacy Practice, are members of the UH Mānoa Health Careers Opportunities Program (HCOP), which was recently awarded a five-year grant. This is a program in Health Resources and Services Administration (HRSA). The goal of the HCOP program is to diversify in the health professions workforce by providing students from economically and educationally disadvantaged backgrounds, who are interested in pursuing a health profession, to develop the skills needed to compete for, enter, and graduate from a health or allied health professions program, graduate program in behavioral and mental health, and/or programs for the training of physician assistants. Dr. Koomoa-Lange, with the assistance of UH Hilo Kipuka Native Hawaiian Student Center, will be organizing and leading a six-week residential summer program for a select group of students at the UH Hilo campus. The summer program will include Huaka'i to Wahi Pana on the island of Hawai'i, as well as cultural activities that introduce students to Native Hawaiian perspectives of Health and Well being, indigenous research, indigenous ethics, Native Hawaiian medicine, Rural Health. In addition, students will have the opportunity to visit Pharmacy sites and Medical centers. Dr. Goo will be organizing the Pharmacy site visits on the island of Hawai'i for the students in the summer program.



Student Organizations

APhA-ASP

Community, DKICP lauds Blue Zones effort

By Brandi Chun (Class of 2020) and Karen Pae (Class of 2021)

Members of American Pharmacist's Association - Academy of Student Pharmacists (APhA-ASP) joined Hilo County employees, community members, and students on September 17 at the Hilo County Building in celebration of the Blue Zones health initiative.

Among the first counties in the United States to receive Blue Zones recognition, Hawai'i County prides itself on lowering health care costs and promoting an environment conducive to healthy lifestyles. The Blue Zones health initiative launched in East and North Hawai'i in 2015, and has already gained a number of followers. This event alone attracted more than 100 participants eager to partake in a variety of activities used to promote healthier lifestyle choices.

APhA-ASP participated alongside Blue Zones-compliant vendors to help foster and promote optimal patient care. Students underwent a vigorous sign-off process in accordance with the college's curriculum prior to providing free health screenings. Health assessment services included blood pressure, BMI, cholesterol, and blood glucose measurements. Patients were also counseled on dietary modification and lifestyle changes based on patient-specific

measurements. A total of 44 patients, including Mayor Harry Kim, graciously allowed student pharmacists at DKICP to screen for various point-of-care measurements, followed by a brief counseling session.

In addition to free health screening services, several select students from Operation Immunization (a branch of APhA-ASP) also helped the administration of flu vaccines to a total of 58 eligible candidates at no charge. As a collaborative effort with KTA Pharmacies, student pharmacy interns also assisted KTA pharmacists with paperwork, restocking of supplies, and attending to any patient needs. Operation Immunization members weren't able to administer the vaccines, but were given the opportunity to experience the feel and flow of a high-volume, fast-paced flu clinic.

A big mahalo to Blue Zones for hosting such a successful event and inviting DKICP's APhA-ASP chapter to participate. It has allowed our student pharmacists to continue serving their community in providing and advancing healthcare.

IPhO

New organization on campus provides career alternatives

By C. Ethan Slusher, Class of 2020

Chapter President, Industry Pharmacists Organization

Student pharmacists worked last semester and throughout this summer to found a new professional chapter of a national organization at DKICP called the Industry Pharmacists Organization (IPhO).

According to their mission statement: The Industry Pharmacists Organization is exclusively dedicated to advancing the careers of



industry pharmacists.

The Industry Pharmacists Organization (IPhO) began its first year at DKICP with its first general meeting on September 18. About 40 participants learned about the specialized roles in which

pharmacists can contribute to the development, commercialization, and optimal use of medications into a presentation called "Welcome to IPhO, an Intro to Industry Pharmacy."

IPhO believes that pharmacists' scientific training, medication expertise, clinical acumen, patient focus, and experience as healthcare providers makes us ideally suited for a career in the pharmaceutical industry. Throughout the semester we will have guest speakers coming to talk to our students about their specific careers in various pharmaceutical companies.

We are very excited about this new organization at DKICP.



Kappa Psi

Summer Leadership Symposium, healthy eating workshop, community outreach all part of membership

By Sean Domingo, Class of 2021

The Brothers of Kappa Psi Pharmaceutical Fraternity, Epsilon Psi Chapter, kicked off the new school year by presenting an exercise and healthy eating to more than 150 second grade students at Waiakea Elementary School. The superhero-themed presentation consisted of various ways to eat healthy, stay active, and even included a small zumba exercise. The Brothers were enthusiastic to share this knowledge to the students because, as health professionals, our ultimate goal is to perpetuate health awareness, especially to future generations.

Also part of the first month back to school was training on how to become an effective leader from third-year student pharmacist Johnson Tran, who attended the Kappa Psi Leadership Symposium in Fort Worth, Texas this past July. The purpose of the three-day event was to develop leaders through focused workshops led by the different Kappa Psi alumni. He was given the opportunity to network with other Kappa Psi Brothers from various pharmacy schools throughout the nation.

Like most organizations around the country, the fall semester is filled with membership drives, recruitment retreats, and various ways to detail our accomplishments and goals. This September, we began our sixth rush season at UH Hilo. To stir excitement and encourage engagement outside the classroom, Epsilon Psi Chapter featured new events and activities for rushees to participate in.

Our core events, "Meet the Brothers" and "Meet your Match" introduced rushees to our fraternity, our mission at DKICP, as well as our many collegiate and graduate brothers. At DKICP our goal is to instill the values of excellence and integrity, as well as to strengthen the bonds of brotherhood, and further the promotion of high ideals and scholarship.

A new event introduced this year after the first-year's students first exam was "Sugar Rush," meant to serve as a reprieve from studying and classwork. With more than 50 attendees, we held icebreaker games, an interactive photo booth, and of course an ice cream bar. Throughout the evening, brothers helped first- and second-year peers with advice on how to study the catalytic triad for biochemistry to where they can find the best dessert in Hilo.

Closing out our 2018 Rush Season was our Chill & Grill at



Coconut Island. Volunteer brothers led team building and icebreaker games for rushees.

These are just the beginning of the many activities Kappa Psi seeks to pursue this new academic year. The Brothers of Kappa Psi look forward to carrying out our pledge process while also planning more community service events, philanthropy projects, and finance and fundraising activities. Overall, Kappa Psi looks forward to maintaining a professional organization and fostering the spirit of Brotherhood for the new 2018-2019 academic year.

Community learns about personalized medicine through popular keiki booth

Hilo County Fair Compounding for Kids Booth

By Jared Toba, Class of 2020
NCPA Student Chapter President

Members of the National Community Pharmacists Association (NCPA) presented the popular “Compounding for Kids” booth at one of Hilo’s biggest events of the year, the 68th Hawai’i County Fair September 22.

Their first community service event of the fall semester drew in individuals from all over Hilo and throughout other areas of Hawai’i Island with promises of fun rides, good food, and an overall enjoyable and memorable weekend.

A total of 20 student-pharmacist volunteers from NCPA participated, including 10 beginning first-year students who attended a Silly Putty Compounding Workshop earlier that week led by NCPA Community Service Co-Chairs Brittany Luna and Kevin Lee. The booth at the fair was the perfect chance for the new NCPA members to put their compounding and presentation skills to the test.



With this training under their belt, NCPA members were able to teach children on how to compound silly putty from common household ingredients including glue, water, borax, food coloring, and glitter. While the kids were having fun compounding their own silly putty creation, other NCPA members were able to inform parents on what compounding is in pharmacy and why it is such an important aspect of the pharmacy profession. Creating



NCPA GROUP: (Back row): Kevin Lee, Brooke Higa, Ashley Maldonado, Brittany Luna, Yushuan Huang, Roanne, Deabler, Melody Keshavarz, Keisha Salvilla, Liana Ang, Nikko Magtoto, Kayla Bajo, Rebecca Wu, James Soe, Alysha Cosier, Trisha Nobriga, Earl Emboltura. (Front row): Cherie Baldugo, Jared Toba

personalized medication through compounding is becoming increasingly important because it allows pharmacists to design medications based on patients’ specific needs. The Hilo County Fair proved to be a popular event with NCPA being able to help compound numerous silly putty samples for the children who attended.



Compounding booth: Keisha Salvilla demonstrates compounding at Hawai’i County Fair.

NCPA will continue to be an active member in our Hawai’i Island community and will continue to promote events that foster professional growth and development in its members, while supporting independent and community pharmacy. (Photos by Cherie Baldugo)

Phi Lambda Sigma

Phi Lambda Sigma celebrates start of new school year with Student Organization Mixer

By Mary Lui, Class of 2020



Five weeks into the Fall Semester, various student organizations on campus held multiple membership drives, trainings, and orientations for first-year student pharmacists. Following a slew of emails promoting outreach within our community, Phi Lambda Sigma sought to offer the first-year students a succinct summary of all that the DKICP had to offer in terms of student involvement with a “Student Organization Mixer.”

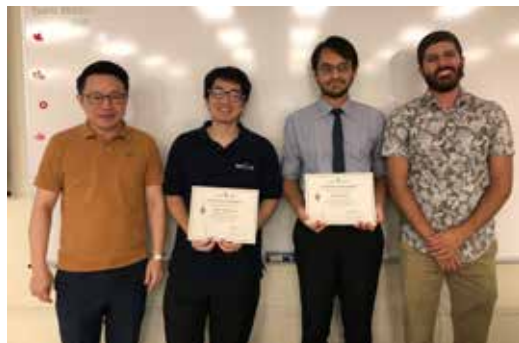
The mixer presented various pathways in pharmacy that new students could embark upon during their three didactic years on campus. Whether it was community pharmacy, hospital pharmacy, or even industry, interest was sparked and students were able to gain a comprehensive understanding of the unique offerings of each organization on campus.

Organizations participating in the event included APhA-ASP/The A.L.O.H.A. Project, HSSHP/AMCP, IPHO, NCPA, PIMSC, Rho Chi, Phi Delta Chi Fraternity, Kappa Psi Fraternity, Blue Zones Project, Tobacco Prevention Project, and UHHS.A.

Rho Chi Student Involvement Fair

By Taylor Hori (Class of 2020)

The Daniel K. Inouye College of Pharmacy’s Delta Iota Chapter of The Rho Chi Society: The Academic Honor Society in Pharmacy started off the school year by participating in the Student Involvement Fair which was held during the orientation week for the first-year pharmacy students. Rho Chi members Joshua Dillon, Jensine Melody Domingo, and Taylor Hori were excited to meet many P1 students and talk to them about all of the academic activities our organization has to offer. We passed out cards with our tutoring information and a QR code which was linked to our organization’s “Survival Guide,” a student prepared resource which includes tips that we found useful and a variety of hyperlinks to helpful online resources. With the start of the new school year, the Rho Chi Society also began accepting tutoring requests. Members volunteer to tutor first and second-year pharmacy students.



From left: Dr. Supakit Wongwiwatthananut, Jarin, Brent, Dr. Louis Lteif at journal club

Journal Club

In September, third-year pharmacy students, Jarin Miyamoto and Brent Ocker, participated in the first journal club of the semester which was hosted by Rho Chi. Journal clubs allow students to critically evaluate recently published articles, apply the knowledge they learn in the classroom to arrive at a conclusion, and present their recommendations to their peers as well as faculty members. Jarin analyzed an article that compared nitrofurantoin and fosfomycin while Brent looked at the effects of using cannabis to treat chronic pain. DKICP faculty members Dr. Supakit Wongwiwatthananut and Dr. Louis Lteif attended this journal club session and were able to provide their expertise.

Student Organizations

Rho Chi



Winning Quiz Bowl team

Quiz Bowl

Integrated Therapeutics I, which consists of applying pathophysiology, medicinal chemistry, pharmacology, and therapeutics to patient care, is a course that second year pharmacy students take during the fall semester. To help students prepare for their first exam, Quiz Bowl Co-Chairs Mary Lui and Amelia Furlan hosted a jeopardy style review session. Students were broken up into teams and worked together to answer questions to earn points in a friendly competition. Quiz bowls are designed to help reinforce the concepts learned during lecture in a fun environment.



Drug Action I Exam Review

Drug Action I, which introduces students to medicinal chemistry and pharmacology, is a class that first year pharmacy students take during the fall semester. Quiz Bowl Co-Chair Mary Lui hosted a lecture-style review and along with Rho Chi members Shaina Saiki, Robyn Rector, and Taylor Hori, delivered a presentation with practice questions to over 70 first-year pharmacy students.

Pre-Pharmacy Mock Interviews

Rho Chi's Pre-Pharmacy Co-Chairs Hong Vo and Tracy Lopez organized mock interviews for University of Hawaii at Hilo students who are enrolled in the pre-pharmacy program. This event provided these students with an opportunity to familiarize themselves with the interview process at DKICP. Eleven pre-pharmacy students were given a short presentation containing tips for a successful interview. Rho Chi members Hong Vo, Tracy Lopez, Robyn Rector, Taylor Hori, Reid Shimada, and Jarin Miyamoto facilitated the mock interviews and provided feedback to the pre-pharmacy students.



Rho Chi members and pre-pharmacy students after mock interviews



Rho Chi members (from left) Taylor and Stacey at the Student Involvement Mixer

Student Involvement Mixer

The Delta Lambda Chapter of Phi Lambda Sigma hosted a Student Involvement Mixer which was held to help first-year pharmacy students learn more about the different student organizations at DKICP. Members Stacey Nguyen and Taylor Hori represented The Rho Chi Society and were able to answer questions about our organization. The fall semester has been exciting so far and we look forward to all of the events to come!

Experience at locally owned pharmacy on Maui shows the personal side of health care

By *Krishelle Kamakeeaina-Mendoza* (Class of 2019)

This summer, I conducted an Advanced Pharmacy Practice Experience (APPE) rotation at Wailea Pharmacy on Maui, a locally-owned neighborhood pharmacy committed to serving the people of Maui, including the communities of Kihei and Wailea. Like many independent pharmacies, Wailea Pharmacy prides itself on customer service through creating personal relationships between the pharmacist and patient. Still there's



From left: *Debbie Kaho'ohanohano, Vill Eala, Shelley Seideman, Farah Mikhail, and Krishelle Kamakeeaina*

a uniqueness that sets Wailea Pharmacy apart from the conventional independent pharmacy setting. The pharmacy staff consists of well-rounded and knowledgeable health and wellness specialists. As part of their mission and goals, they provide an integrative approach where patient care is personalized using pharmaceutical treatments, holistic and natural remedies, or a combination of the two. The pharmacy is an essential health resource for the community by providing complimentary prescription and wellness consultations. Other services provided include: urgent care supplies, compounding bioidentical hormone and pet products, and delivery programs.

Wailea Pharmacy provides a "homey" feel, full of healthcare workers who dedicate their skills and services to improving the health of those who walk through the doors on a daily basis; a true neighborhood pharmacy. Upon entering the pharmacy, you are greeted with a gentle serenade of music playing through the speakers, accompanied by a subtle yet tantalizing aroma of the day's essential oils. You look around and see fully stocked shelves of products from homeopathic remedies to supplements to high-end skin lines, as well as the normal over-the-counter items. Upon reaching the counter, you are greeted by a staff who are there to cater to every one of your health care needs. Wailea Pharmacy is able to provide the care and services it does because of the co-owners/pharmacists, Shelley Seideman and Farah Mikhail, that go above and beyond their call of duty. Their vast knowledge and experience combined allowed me to experience a part of community pharmacy that I never had in my 10-plus years of experience.

I was given many of the responsibilities of a pharmacist. I communicated with doctors on behalf of patients, compounded personalized vet medicine, hormone-containing capsules, creams and ointments. I also was given the opportunity of the quality assurance process, where I verified prescriptions ensuring the "5 Rights" (Right patient, Right drug, Right time, Right dose, and Right route). When verifying, it challenged me to be mindful of drug-drug interactions and/or therapy duplication. There were also days in which I interacted with different healthcare specialists. Naturopathic physician, Teri Jackson, was also available a few days out of the week to provide customers with any homeopathic supplement questions. She was receptive to my questions about naturopathic medicine. Her vast knowledge

base is interesting and fits hand in hand with the mission of the pharmacy. Outside of the pharmacy, I was able to attend a CBD seminar highlighting the industry's latest products and their health benefits. This experience allowed me to be exposed to a variety medications and formulations.

On several occasions, customers expressed how much the pharmacists lend a helping hand and that I would thoroughly enjoy and love my experience

at the pharmacy, and I couldn't agree more. I highly recommend Wailea pharmacy for a fourth-year retail rotation. Wailea Pharmacy is a reflection of adequate patient care by focusing on personalized care, tailored to each individual patient. The rotation challenged my skills and provided opportunities as well as insight into pharmacy and patient care.

Elective rotation in Thailand allows students to split time at two universities

Last summer, two students completed a six-week elective rotation in Thailand. One of their required assignments for this elective international rotation was to capture their daily activities through an online blog.

Faith Hicks and Krishelle Kamakeeaina-Mendoza, both from the Class of 2019, completed a blended rotation at both Bumrungrad Hospital (coordinated with Chulalongkorn University) and Rangsit University.



Faith Hicks



Krishelle Kamakeeaina-Mendoza

They spent their first two weeks at Chulalongkorn University and Bumrungrad International Hospital in Bangkok, one of the largest private hospitals in Southeast Asia, primarily focusing on pharmacy practice/education in Thailand. Their last four weeks were spent at Rangsit University, with the majority of their time at the Sino-Thai Traditional Medicine Research and Development Center and Sun Thai Chinese Manufacturing facility. Rangsit University is located in Pathum Thani Province, slightly north of Bangkok and is part of the Bangkok metropolitan area.

Visit their blog at: thailanddkicp2018.wordpress.com

Newsletter keeps preceptors on the same page

In the second year of the quarterly e-mail newsletter for preceptors, Quarterly Dose, Lara Gomez, director of clinical education, gives our mentors some good tips for success. Dr. Gomez uses an article called "Teaching clinical problem solving: A preceptor's guide" published in Am J Health-Syst Pharm. by authors Weitzel et al. The following is an excerpt from her helpful synopsis put together by the DKICP Experiential Office that sheds a light on what our volunteer preceptors must go through to mentor student pharmacists.

As a preceptor, at times, you may question/wonder, what role do I play in this student's education/experience.

Precepting can have many varying roles which is dependent on many factors:

What is the experience- is this a one time shadowing or is this a six- week APPE rotation?

What year is this student?

In this student's rotation sequence, am I his/her first ?, last ? preceptor?

What other experiences has this student been exposed to and what is his/her experience in what I do.

An article published back in 2012 discusses validated teaching strategies to supplement and tailor learning experiences to individual learners. The chart represents varying stages of learning and preceptor roles that appropriately correspond to those stages alongside the levels of Bloom's taxonomy. Depending on year of study, type of rotation, sequence of rotation and perhaps other factors, our preceptor roles can change.

With direct instruction, our goal is to build foundational knowledge, organize content for quick recall, and have student gain an understanding of skills required in specific practice.

Some techniques of direct instruction include assigning required reading and case based teaching/scenarios.

Although your precepting role should NOT be a primary teaching role, sometimes even the most advanced learner will benefit

from some direct instruction.

With modeling, you are providing an example for learners to follow (i.e. "shadowing"). The value of modeling is the articulation of YOUR thought process; without sharing your thought process with the student, the student will simply observe, instead of comprehending WHY you are doing WHAT you are doing.

The Experiential Office is an integral part of the student educational background. They coordinate the more than 1700 hours of off-campus rotations in the Introductory Pharmacy Practice Experiences and Advanced Pharmacy Practice Experiences in each and every student's academic lifetime.



(From left): Christina Method, Lara Gomez and Jennifer Aguiar attended a hard-hat tour of the new permanent building.

The office includes:

Lara Gomez PharmD, Director of Clinical Education lhomez@hawaii.edu 808-932-7708

Jennifer Aguiar MBA, Clinical Education Support Specialist jaguiar@hawaii.edu 808-932-7706

Christina Method CPhT, Clinical Education Support Specialist method@hawaii.edu 808-932-7709

Check out the new DKICP site designed for mobile devices for the latest on pharmacists jobs, events, continuing education AND MORE...

Scan code for access to site (requires QR scanner app) or



simply go to site:

<http://www.careertapp.com/careertapp/645420>



University of Hawai'i at Hilo Daniel K. Inouye College of Pharmacy Mid-Year Pau Hana in Anaheim



**Tuesday, December 4,
7:00-9:30 p.m.**

The Fifth at the Grand Legacy at the Park
1650 South Harbor Boulevard
Anaheim, CA 92802

Ticket prices

Early Bird RSVP (before October 31) - **\$55**

Regular RSVP (November 1-December 3) - **\$65**

Pay at the Door (December 4) - **\$70**

Come celebrate with DKICP alumni and friends in Anaheim during ASHP Midyear*. Join us for Tiki Tuesday at The Fifth, a hip outdoor rooftop venue.

Ticket price includes an assortment of heavy pūpū, one drink ticket and a skyline fireworks display at 9:30 p.m. Alumni, family, friends and students are all welcome!

*Attendance at the convention is not required. The Mid-Year Pau Hana is open to everyone.

If you have questions, special needs, or concerns please call (808) 932-7707.



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RSVP online: hilopharm18midyear.eventbrite.com

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*Save
the
date!*

All-Class Reunion Weekend
at the grand opening
of the new home of DKICP

*August 17-18, 2019
in Hilo*

Details to come

Nominate

DANIEL K. INOUE COLLEGE OF PHARMACY

ALUMNI *of the* YEAR

Nominations are open for the very first DKICP Alumni of the Year Award.

By March 1, fill out form at:

<https://www.surveymonkey.com/r/PharmAlumniAward2019>

NOMINEES MUST:

- BE a DKICP graduate from the Class of 2011-2015 with at least 3 years professional work experience.
- SHOW record of professional and/or extra-professional activities to advance the practice of pharmacy, and/or contributions of time, talent or financial support to benefit the college, the profession, or the public.

STATEMENT OF NOMINATION TO INCLUDE:


- Name of nominee
- Year of graduation
- Current employer and position, including city/state and years employed
- Letter of support describing why you think this person should be recognized.
- Name, company, address, email and phone for person responsible for nomination.

Deadlines: Submit nominations and corresponding documents by March 1, 2019. Submissions may be made online at **<https://www.surveymonkey.com/r/PharmAlumniAward2019>** or e-mailed to DKICP Alumni Advancement Committee at **DKICPalumni@gmail.com**.

Honorees will be presented with the inaugural award at the
All Class Alumni Reunion & Grand Opening in Hilo in August 2019.
Direct any inquiries to **DKICPalumni@gmail.com**.

NOTE TO ALUMNI

**Resuscitate that sense
of camaraderie and
class loyalty that you
built at UH Hilo by
submitting to Kawili
La'au Class Notes**



Share what's new with you, from professional life to expanding your family, from adventures at home to travels near and far while providing ways to connect and network. Send whatever you want people to know about you to Kawili La'au editor, morrismm@hawaii.edu.

Champions of Pharmacy

Dr. Dee-Ann Carpenter has been named a Champion of Pharmacy for Fall 2018.

Dr. Carpenter works on O'ahu as a Native Hawaiian Internist previously in the Lau Ola Clinic, the clinical practice of the Department of Native Hawaiian Health, now in Medicine Faculty Practice, the clinical practice of the Department of Internal Medicine, both at the University of Hawai'i, John A. Burns School of Medicine (JABSOM.) But her roots are on Hawai'i Island where she was born and raised, and she often partners with DKICP faculty to help provide Native Hawaiian experiential education.

"Whether you are from Hawai'i, if you are Hawaiian, or simply going to school here in Hawai'i, it is important for you to learn about the community here, about the host culture," Dr. Carpenter says of her work with students. She says she hopes students will become more grounded in the host culture and decide to stay.

DKICP student pharmacists have opportunities to engage with the community and conduct hands-on activities in many settings, including an ambulatory rotation at Papakolea, the only urban Hawaiian Homestead Land, headed by Dr. Carpenter.

"I love to get them a little bit out of their comfort zone, in asking questions, as well as learning about some of the physical exam and come up with a differential diagnosis as well as possible treatment for whatever the chief complaint is," Dr. Carpenter says. "We hope that this will spur them to add community -- and community service -- into their professional lives as pharmacists. One can only hope. The seeds have been planted and watered, and now, we'll just watch it grow."

Dr. Carpenter earned her bachelor's degree in Zoology at UH Mānoa and was accepted to begin post-baccalaureate work at the Imi Ho'ola Program in JABSOM, an elite program designed to help disadvantaged students succeed in medical school. She received her M.D. at JABSOM and completed Internal Medicine Residency at University Integrated Medical Residency Program in Honolulu, HI. She has Fellowships in Faculty Development and in Medical Education.

She is a member of the 'Ahaui o na Kauka (Association of Native Hawaiian Physicians) and the Founding President and present Treasurer of the Friends of Imi Ho'ola. She is active in being part of the team that teaches the Cultural Competency Curriculum for medical students at JABSOM and interns in the Department of Community and Family Medicine, the Department of Internal Medicine, has a clinical practice teaching medical students and Internal Medicine Residents, as well as doing research, previously Co-Investigator in the Hanapu Study, a Comparative Effectiveness Research in the Center for Native and Pacific Health Disparities Research. She is the immediate past-President of the Hawai'i ADA Leadership Board and was on the national ADA Community and Volunteer Development Board.

"Dee-Ann has been a very effective partner to provide Native Hawaiian experiences for our students," said Dean Carolyn Ma. "The College is fortunate for her tremendous support and guidance as we embark on setting the foundation for establishing the four pillars of Na Pou Kihī, or Native Hawaiian Values, that are integrated in our college of pharmacy and ingrained in everything we do." (see related story, page 10).

This past summer, she spearheaded an effort to transition from the O'ahu medical group to the group from Hawai'i Island at the 46th anniversary of the Ho'oku'ikahi Establishment Day Hawaiian Cultural Festival at Pu'ukoholā Heiau



Wearing hand-painted robes, or kihei, at event this summer at the 46th anniversary of the Ho'oku'ikahi Establishment Day Hawaiian Cultural Festival at Pu'ukoholā Heiau National Historic Site, are (from left) Bryce Fukanaka (DKICP assistant professor in Pharmacy Practice, Alum Class of 2016), Kalei Hosaka (Second-year Med Student), Jerrick Laimana (Second-year Med Student), Pi'imauna Kackley (Second-year Med Student), Wes Sumida (DKICP assistant professor in Pharmacy Practice), Dee-Ann Carpenter, MD, Kehau Kong, MD (the Hawai'i island Kauka, or doctor now in charge at Pu'ukohola), and med students Kat Roberts (Fourth-year Med Student), Edy Kaleimomi Gomes (Second-year Med Student) and Kadee-Kalia Tameshiro (Second-year Med Student).



Dr. Dee-Ann Carpenter (on the right) celebrates being named the UH Board of Regents' Medal for Excellence in Teaching Award this past spring with her parents, Dante and Olan Carpenter.



National Historic Site. Wes Sumida, associate professor in the Department of Pharmacy Practice supervised the group from DKICP (see related story, page 3).

"I truly enjoyed having Carolyn, Wes and their students join us in cultural protocol, which is grounding for the work we do with healing our people, those that we touch," Dr. Carpenter says. "Since many Hawaiians don't go to doctors, don't come to see us in the clinic, we go to them; hence, the health screening being done there for many years. I am happy to see that the College of Pharmacy will be a part of caring for our kanaka maoli there at this annual cultural gathering on moku o keawe, the best island."

With this award, we recognize Dr. Dee-Ann Carpenter's unwavering support and guidance to the Daniel K. Inouye College of Pharmacy, and are grateful for her continued affiliation.