

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

Winter 2016 • Volume 8, Issue 2



## Special focus on community



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**Giving back:  
Participation  
Involvement  
Learning through interaction**

# Message from Interim Dean, Dr. Carolyn Ma



As I look back at my first semester as Interim Dean, I am struck by how quickly the time has passed. Decisions have come quickly and, for the most part, successfully, and I am indebted to the faculty and staff, as well as the students, for showing their support while we prove we still have what it takes to be a top college of pharmacy. But most importantly, I want to make sure the community knows how much we appreciate your continued support.

That's a broad statement. What does community mean? In some sense, it means the entire state of Hawai'i, from the Big Island to Kaua'i to Maui to Oa'ahu, which we represent just some of the activities here in this issue. But it also means the personal stories, such as the three-year-old cancer victim hoping to get a bone donor from the health fair, or the senior citizen learning how to manage medications at the Big Island Aging and Disability Resource Center. Each individual gets the same caring, focused attention from every one of our many students, who receive their training from the faculty we feature in some of their efforts within community events.

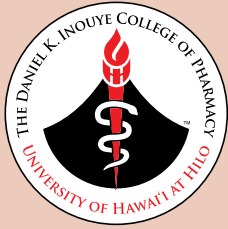
On a global level, we have reached out to Japan for a new agreement that will expand the experiential opportunities to our students and give our researchers potential collaborations. We already have these agreements in Thailand and China, and I am optimistic that we will continue to connect with more and more universities in order to give our students and faculty the most comprehensive opportunities of any other university.

Our student organizations continue to make us proud. You will read about only some of their contributions to the community, but you also should know that each time they enter a store, every time they encounter people on the street, whenever they work on their internships, or rotations, they know they represent not only the Daniel K. Inouye College of Pharmacy but also the State of Hawai'i. I could not be more certain of the continued success of our future when I see their accomplishments.

As always, mahalo for your continued support.

A handwritten signature in black ink that reads "Carolyn Ma". The signature is fluid and cursive, written on a light-colored background.

Dr. Carolyn Ma  
Interim Dean



## Kāwili Lā'au

Winter, 2016  
Volume 8, Issue 2

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*On the cover: Student pharmacists, faculty and staff show community spirit at the 7th Annual Health Fair.  
(Photos by Tracey Niimi)*

# 7<sup>th</sup> annual College of Pharmacy Health Fair pulls community together

More than 150 student pharmacists from the Daniel K. Inouye College of Pharmacy volunteered at the 7th Annual Health Fair on October 24 from 10 a.m. to 3 p.m. at the Prince Kuhio Plaza.

The students developed instructional booths and conducted live demonstrations, entertainment, free health screenings and giveaways and a keiki poster contest for local elementary and middle school students. Members of the community brought in their non-refrigerated medications for review at a “brown-bag” station in the health screening area, supervised by several faculty volunteers who are licensed pharmacists.

Community organizations that participated with their own educational booths included the Center for the Study of Active Volcanoes, Hawai'i Health Connector, Hawaiian Island Aids and HIV, HMSA, Hui Malama Hawai'i, National Alliance of Mental Illness - Big Island, Senior Medicare Patrol, The Arc of Hilo, Partners in Developments, Blue Zone, Ohana Hero Project, Hawai'i District of Health and Hilo Medical Center.

The health fair also provided an opportunity for the Hawaii Bone Marrow Donor Registry to hold a bone marrow drive for three-year-old cancer patient Chelton Arruda, who was present at the health fair with his dad Cortney Arruda and Mom Christy Nachor. (See his story in West Hawai'i Today at <http://westhawaii.com/news/local-news/marrow-donor-sought-help-hilo-3-year-old-beat-cancer>.)



## Reflections

### Mari Louise Cid (Class of 2017)

We expanded the health fair in every aspect we could this year. We had more educational boards, more health screenings, community organizations and more faculty are volunteering. We had both new and old performers coming for entertainment throughout the day. We were excited to be able to serve our community to this magnitude.

Chairing the 7<sup>th</sup> Annual Health Fair was an experience I had never imagined myself partaking in when I first started pharmacy school. As a first year student, I started as an HIV educational board volunteer. As a second year, I became the Entertainment Committee Co-Chair. In my third year, I became Chair of the entire event. Our Annual Health Fair is the biggest and most notable community service outreach we host and every year the event has been more successful, with this year being no exception. We exceeded in all our goals for the annual health fair in terms of health screenings, immunizations, and community members served. The success of our annual health fair is only a small reflection of the continued development and growth of the Daniel K. Inouye College of Pharmacy.

A special thanks to all of the student volunteers, faculty and staff for their support and taking the time out of their weekend to help with the event. I would especially like to thank my 7<sup>th</sup> Annual Health Fair Planning Committee. I could not have done this without their hard work and commitment to this event. We all made a difference that day. It was an honor and a privilege to be able to chair the Annual DKICP Health Fair and serve the Hilo Community.

### Janet Vu (Class of 2018)

Volunteering as the chair of the bone marrow booth was an incredible experience. We were shocked at the overwhelming response from the community. Our booth was busy from start to finish. It was filled with community members signing up to be donors and Chelton's family and supporters. Throughout the event, my team members and I informed those signing up to be donors about the process of donating bone marrow and the positive impact that they are making in the bone marrow registry. With the registration of more than 150 donors, we hope to have found a match for Chelton.

A special thanks to Roy Yonashiro, a recruitment specialist with the Honolulu-based Hawai'i Bone Marrow Donor Registry who flew to Hilo to help with this event. My fellow team members Vivian Tran, Patrick Sa'au, Jesse Santos, Hendrik Vong, Jonathan

Muna, Gurinder Kaur, Vance Hill, and Marlisa Corpuz, and I were honored that we could be a part of this collaboration. We would also like to thank the adult community members and past bone-marrow donors for their help. We wish Chelton and his family and friends the best.

# 7th Annual DKICP Health Fair 2015

as seen through the eyes of student pharmacists/photographers Preston Young (Class of 2019), Megan Olaguer (Class of 2018) and Maddie Fu (Class of 2017).



## Bone Marrow Donor Registry works to help young cancer patient

Three-year-old Chelton Arruda looked like he was having fun at the 7<sup>th</sup> annual DKICP Health Fair with his dad Cortney Arruda and Mom Christy Nachor. The Hilo family visited with folks at the booth sponsored by the Hawai'i Bone Marrow Donor Registry, which was holding a bone marrow drive for Chelton, who had been diagnosed with and treated for cancer. (Photo by Tracey Niimi)

### Dear DKICP Students and Faculty,

Some of the things I learned at the 7th Annual DKICP Health Fair:

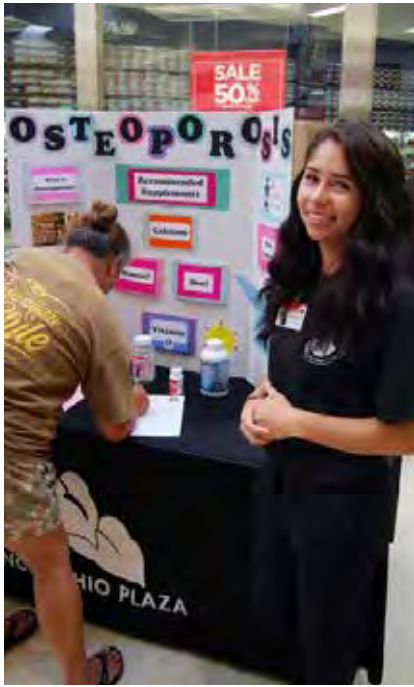
1. That 2 ¼ cups of salt in one gallon of water will kill snail slime to offset not only Rat Lungworm Disease but also kill any weeds in my yard.
2. That Generation RX helps to offset drug misadventures in our young adults.
3. That we have the most awesome student body and student leaders at the DKICP who put on a fantastic health fair.
4. That our faculty put in some super long extra hours to help precept students run a constantly packed screening booth.
5. That our Student Affairs division pulled off another exceptional event that the Hilo community has come to enjoy and be a part of each year.

Well done and Mahalo!

Dr. Carolyn Ma

DKICP Interim Dean and one of the originators of the annual event





# DKICP faculty thrives on getting involved with the community

As the perfect example of teaching by doing, DKICP faculty members are constantly displaying their dedication to the community in which they live. Here are just a few examples of how our 'ohana have been paying it forward.

**Forrest Batz**  
**Associate Professor**  
**Department of Pharmacy Practice**



*What's an example of a community-oriented project you have been involved with in the past year?*

As advisor for DKICP Tobacco Prevention Project (TPP), activities this past year have included "What About Tobacco" (WAT) presentations consisting of a one-hour presentation to groups of 4th grade students on the harmful effects of tobacco.

Our student pharmacists also:

- helped staff two tobacco prevention/cessation information tables, and provide Brief Tobacco Interventions on the UH Hilo campus, hosted by the Doctor in Nursing Practice (DNP) program, to celebrate the Great American Smokeout on Nov 19.
- worked with the Tobacco-Free East Hawai'i Coalition to provide tobacco prevention/cessation information and resource materials at the annual DKICP Health Fair and other local health fairs.
- participated in *DARE Day*, sponsored by the Hawai'i County Police Department (HPD)
- attended the bill reading on the Hawai'i County Bill 302 to limit the use of electronic smoking devices at the Hilo Chambers of the County Council to show support.
- were active in promoting and helping gain Hawai'i County Council support to raise the age of tobacco purchase to 21, which went into effect in July 2014.

*What is the main benefit to this type of activity to the community?*

This past year the TPP reached over 600 fourth-grade students with the WAT presentations. The presentations consist of interactive segments that discuss the harmful effects of tobacco smoke on the body and the various types of toxic chemicals contained in cigarette smoke. At the D.A.R.E. event at the Civic Auditorium in Hilo, attended by roughly 500 intermediate and middle school students, our student pharmacists helped Tobacco-Free East Hawai'i

with a Tobacco Spin Game and provided information about tobacco-free laws. We raised awareness throughout the community regarding Hawai'i County Bill 302 to limit the use of electronic smoking devices. And, raising the age of tobacco purchase to 21 in Hawai'i county led to a state-wide effort that resulted in Hawai'i becoming the first state to raise the legal age of tobacco purchase to 21 in June 2015.

*What do you get out of efforts like this personally?*

I derive great personal and professional satisfaction from the impact the Tobacco Prevention Project has in our community and the opportunities it gives our students to gain community service and leadership experience. TPP student pharmacists have presented posters on their innovative activities at national pharmacy meetings.

*Where do you see yourself expanding to in the future?*

In response to the rapid increase in use of electronic smoking devices among youth and young adults in East Hawai'i, we are working with the Tobacco-Free East Hawai'i Coalition to develop an educational program to discuss the facts about electronic smoking devices with middle and high school students and their families.

*Dr. Forrest Batz's teaching and research interests include the contemporary use of natural medicines, tobacco prevention and cessation, safe drug disposal and enhancing the effectiveness of PharmD curriculum. He earned his PharmD degree from the University of California, San Francisco School of Pharmacy and completed a clinical pharmacy residency at the Department of Veterans Affairs Medical Center, Tucson, Arizona.*

**Aaron Jacobs**  
**Assistant Professor**  
**Department of Pharmaceutical Sciences**



*What's an example of a community-oriented project you have been involved with in the past year?*

*Keanu Pinner (left) in the lab with Dr. Aaron Jacobs*

I have a research laboratory at the DKICP that investigates the cellular and biochemical basis of disease. We focus on how certain diseases occur and try to find new ways of intervening in this process. One of these basic disease mechanisms is inflammation. Chronic inflammation can have a role in serious ailments such as cancer and fibrosis. I have been interested for some time in finding a way that this project might have local relevance. This is where Keanu Pinner, a senior at Hilo High School comes in. Keanu has been volunteering in my lab for the past three years. His family

owns and runs a local kava farm. Kava is a plant that has been utilized for centuries by Pacific Island communities for medicinal, social and ceremonial purposes. Keanu and I have worked together to study the potential anti-inflammatory properties of kava by looking at the effects it has on white blood cells.

*What is the main benefit to this type of activity to the community?*

I believe there are two benefits, really. One is in providing a local student with the unique opportunity to participate in biomedical research right in his own community. Another benefit is in working on a subject with relevance for the local population. Kava is a plant that has a valued history and cultural significance in Hawai'i. But the use of kava has also grown in recent years and establishments that specialize in serving kava have grown in popularity. We know already that kava has many effects. But our work will provide some of the answers as to "how and why."

*What do you get out of things like this personally?*

I enjoy living in Hawai'i, having moved here from the mainland approximately six years ago. Working on a project with local relevance makes me feel a stronger connection to the community. When asked by a local resident what I do for a living, I would commonly answer "I investigate differential gene expression during electrophile stress, and by coupling transcriptome profiles to signaling changes I work to elucidate the molecular mechanisms involved." Now I get to say "I study the effects of kava on the body." It makes "talking story" a lot easier and fun. There is another reason. I myself started working in a lab when I was 16. I was given this opportunity by a professor at a college near my hometown and it's the reason I am a scientist today. Now I get to return this favor by providing another high school student with the same opportunity.

*Where do you see yourself expanding to in the future?*

As Keanu and I work together to find out more about how kava works on the body, I could see us finding new ways to share this information with the local community. Research findings are published in scientific journals in a language that is hard to understand by non-scientists. The way that our work is usually communicated to the public is through newspapers or magazines, but I think more one-on-one meetings between researchers at the DKICP and the community would help strengthen our connections and help to identify new ones too.

*Dr. Aaron Jacobs investigates the role of cell stress in disease processes such as cancer and responses to drug therapy. He earned his bachelor's degree in biology from the University of California Irvine and his PhD in Pharmacology from the University of California, Los Angeles.*

**Susan Jarvi**  
**Professor and Chair**  
**Department of**  
**Pharmaceutical**  
**Sciences**

*What kinds of community-oriented projects have you been involved in the past year?*

Along with my lab assistant Kay Howe, we have given talks or continuing medical education classes on rat lungworm disease

to many sources including Keauu High School, Hilo Medical Center, medical resident students Hilo Medical Center, Kona Library, Realtors, Brokers Meeting, health professionals, community outreach at Imiloa, in Kohala and Pahoa, faculty congress, Kona Tech group, UH Hilo Sustainable Agriculture Class, HAVO Bioblitz, Kona Master Gardeners, Third Thursday Thrive, a platform for community in Honokaa, the Puna Resiliency Block Party, Hawai'i Community College Sustainable Agriculture class, and at a UH Hilo Medical Anthropology class.

*What is the main benefit to this type of activity to the community and to DKICP?*

The main benefit to the community is educating them about a potentially serious disease, rat lungworm disease. It is more preventable the more you know about it. People need to understand how important it is to thoroughly check and clean raw produce before consuming or cooking it. A main benefit to the DKICP is enhanced interaction with the public.

*What do you get out of things like this personally?*

It makes me feel appreciated. People thank me all the time for the work we are doing.

*Where do you see your efforts expanding to in the future?*

There are so many unanswered questions. We need to obtain funding to keep this work going. We would like to expand our educational efforts to include RLW curriculum appropriate for grades 5, 7 and 10 in addition to what we have produced for grade-2 students. We would like to focus on education about the proper treatment and maintenance of catchment systems as so many of us use catchment water, and slugs and snails crawl into catchment tanks routinely. Integrated pest management plans need to be developed to better control slugs and snails. Healthcare providers need to be better educated about this disease and better diagnostics are needed. Statewide surveys should be ongoing to monitor for changes in intermediate hosts and where the transmission hotspots are so we can better target for pest management. Our immediate need is funding, so we are focusing on that right now.



*Kay How (left) in the lab with Dr. Susan Jarvi*



*Dr. Susan I. Jarvi studies host-parasite and parasite-parasite interactions and influences on transmission and virulence of infectious disease. She earned her master's degree in veterinary and animal sciences (genetics) from the University of Massachusetts in Amherst, her PhD degree in biology from Northern Illinois University in DeKalb, and was a postdoctoral fellow at the Beckman Research Institute of the City of Hope National Medical Center Duarte, CA, and at the Molecular Genetics laboratory of the Smithsonian Institution, Washington DC.*

**Patricia Juscak**  
**Clinical Education Coordinator**  
**Department of Pharmacy Practice**



*What kinds of community-oriented projects have you been involved in during the past year?*

Along with many of our faculty, I participated as volunteer preceptor to students doing A1c screening at the 7<sup>th</sup> Annual Health Fair.

As faculty advisor to Hawai'i Student Society of Health-System Pharmacy (HSSHP), we participated in several events that interacted with the community, including the Laupahoe Health and Safety Fair, the 15th Annual Ladies' Night Out, and Hui Malama Ola Na OIwi East Reunion Screening in Hilo and the Hui Malama Ola Na OIwi West Reunion Screening in Kona.

Ongoing community activities include: the Fall Prevention Program at the Life Care Center in Hilo, which is a quarterly event where I present information on medication safety, how medications may affect fall risk, and "talk story" with people from the community who have enrolled in the Fall Prevention program. In conjunction with the talk is a brown bag session where I oversee fourth-year students working one-on-one with people who choose to have their medications reviewed with a focus on meds that may affect the potential to fall.

*What is the main benefit to this type of activity to the community and to DKICP?*

Overall the health and wellness events benefit the community by increasing awareness of health care, commonly seen diseases, safety risks, and steps to take to improve quality of life. The free screenings especially benefit those people with limited or no health care insurance to cover costs for such screenings and who may otherwise go without. Ultimately it is not just about a number value obtained during screening, but connecting with people to help motivate them to adopt a healthy lifestyle. DKICP benefits by showcasing what our students are trained for to provide direct care that goes beyond filling prescriptions. This promotes support for the PharmD program.

*What do you get out of things like this personally?*

It is personally gratifying when I can help others. Helping the community and students at these events provides for

a true sense of accomplishment. It is especially gratifying knowing that as students perform community events while in school they will likely continue this when they graduate and the time I take to mentor will help them to feel more comfortable with planning, implementing and participating in such events in the future. Lastly, I enjoy meeting and talking with people during the events and learning more about the diverse cultures within our community.

*Where do you see yourself expanding to in the future?*

I see myself expanding into other areas of interest including: emergency preparedness and response; working within a regional healthcare cooperative focusing on evidence based care pathways for commonly seen diseases that would lend to improved quality of life.

*Patricia Juscak's areas of specialty include medication safety, pain management, sterile products, Joint Commission Standards for Hospitals, and medication management practice standards. She received her bachelor's degree in pharmacy from the Massachusetts College of Pharmacy and is licensed as a registered pharmacist in Massachusetts, New Hampshire, and Hawai'i. She has been preceptor to pharmacy students and adjunct faculty with colleges of pharmacy for more than 20 years.*

**Karen Pellegrin**  
**Director of Strategic Planning/**  
**Continuing Education**



*What kinds of community-oriented projects has CE been involved in the past year?*

Our primary focus over the past year has been pharmacist training for the Pharm2Pharm service model.

Workforce development is a big part of this Health Care Innovation Award from CMS, so we've continued to train pharmacists on the application of medication management processes in hospital and community settings statewide. We've been offering this training live, but we've almost completed an on-line version of this training. Our other big focus has been our annual Psychopharmacology Conference, which brings physicians, pharmacists, nurses, and psychologists together for updates on evidence-based medication use in patients suffering from conditions like depression and substance use disorders. This year, we've dedicated a session to medical marijuana.

*What is the main benefit to this type of activity to the community and to DKICP?*

Pharmacists are underutilized in their current dispensing roles. The Pharm2Pharm training helps pharmacists adapt to more clinically oriented roles. The psychopharmacology conference is important because healthcare is particularly fragmented for this population. This interdisciplinary conference is an opportunity for primary care providers and to come together with mental healthcare clinicians to learn from experts about cutting edge and evidence-based drug therapy.

*Where do you see the CE program expanding to in the future?*

There's a lot of interest in on-line CE, so we expect to offer more of this if we get positive feedback from our on-line Pharm2Pharm training. We're also considering launching an annual conference on new drugs to provide a regular forum for clinicians to learn about what's emerging from the pipeline.

*Dr. Karen Pellegrin has an MBA from The Citadel and a doctorate in clinical psychology from the University of South Florida. She has been instrumental in bringing to UH Hilo more than \$30 million in federal funding. She is a member of the following non-profit Boards: East Hawai'i Regional Board of Hawai'i Health Systems Corporation, Hawai'i Island Rural Health Association, Hawai'i State Rural Health Association and the Hawai'i Island Workforce and Economic Development Ohana (HIWEDO).*

**Judi Steinman**  
**Instructor, Department of**  
**Pharmaceutical Sciences**



*What kinds of community-oriented projects have you been involved in the past year?*

- 2007-present North Hilo representative, Hilo-Hamakua Community Development Corporation
- 2008-present North Hilo/Laupahoehoe Community Writer, Hamakua Times
- 2014-present Board of Trustees Member, Big Island Substance Abuse Council
- 2014-present Board of Trustees Member, Laupahoehoe Advisory Council (US Forest Service)
- 2015-present Co-advisor, HOSA - Future Health Professionals, University of Hawai'i at Hilo
- 2015-present Laupahoehoe Community Emergency Response Team (CERT) training organizer
- 2015-present DKICP Pharmaceutical Sciences UH Hilo Faculty Congress representative

*What is the main benefit to this type of activity to the community and to DKICP?*

As a member of the Hilo-Hamakua Community Development Corporation (HHCDC), I recently coordinated the first health and safety fair for the Hamakua Coast. Working with Councilwoman Valerie Poindexter, the Laupahoehoe Community Public Charter School and several student groups from DKICP and the UH Hilo School of Nursing, we brought more than 120 volunteers from all types of healthcare and disaster preparedness groups to Laupahoehoe, a community that is 20 miles from its closest healthcare provider.

I also organized two pivotal events through HHCDC in the past year that brought scientists together with the community to learn more about the issues that we face as an island community in these diverse topics. They were the Sustainable Agriculture and the TMT and Common Ground

series. The Common Ground series sought to bring people on different sides of a controversial subject together so that relationships could develop between people with different personal ideologies.

As a board member of the Big Island Substance Abuse Council, I am able to connect the DKICP Master of Science in Clinical Psychopharmacology program to the issue of addressing mental health disorders and addiction on our island.

As a co-advisor to HOSA, I work with undergraduate students who are seeking a professional pathway in healthcare. This relationship encourages students to recognize the value of a career in pharmacy, pharmaceutical sciences and psychology leading to a Master's degree in clinical psychopharmacology.

*What do you get out of things like this personally?*

I have always recognized that if you want something to change then you need to speak up about it. This basic tenet rings true whether it is improving healthcare in my community, getting the roads paved in my district or bringing people together to find their common love for the mauna or the forest. I gain satisfaction in knowing that I participated in creating communication between people who might otherwise choose to stand on the opposite side of the imaginary line drawn in the sand.

*Where do you see yourself expanding to in the future?*

Recently I met with HAM operators, CERT (Community Emergency Response Team) members and County civil defense to figure out ways to improve HAM radio use in isolated communities such as the North Hilo District. I plan to continue to improve healthcare access for my district through partnerships with the DKICP, SON and the charter school.

*Dr. Judi Steinman has a PhD in psychobiology from Rutgers - The State University of New Jersey and many years working in various functions for non-profit organizations. She serves as program coordinator of the Master of Science in Clinical Psychopharmacology (MSCP) program, and is actively educating legislators and the community about HB 1072, a bill in front of the Hawai'i State Legislature this year that would allow licensed psychologists to prescribe medications.*

**Wesley Sumida**  
**Associate Specialist**  
**Department of Pharmacy Practice**



*What kinds of community-oriented projects have you been involved in the past year?*

This year, the activities that I've been involved with include participating in the 2015 COPD conference. This was organized by the Hawai'i COPD coalition and held at the Queen's Education Center in September. The pharmacy students, Thao Le and Kasia Quintal, and I participated in medication education and brown bag reviews.

Earlier, in August, Dr. Taira, Okezie Ironi (Class of 2016), Bryce Fukunaga (Class of 2016), and I joined a cultural immersion activity with some of the JABSOM medical students. Dr. Dee Ann Carpenter and Dr. Martina Kamaka invited us to spend time with the medical students performing a service activity of clearing over growth from a kalo pond on Ka'ala farms in Waianae. We then learned about traditional Hawaiian natural resource management practices of the ahupua'a.

In March, the DKICP participated in the Papakolea Ohana Health Fair that was held at the Lincoln Elementary School on Oahu. This event is coordinated through the Papakolea Community and Development Center. Student pharmacist participants included Wei Lin, Krista Kido, Traci Kusaka, and Darian Oshiro.

In February of 2015 the students, Darian Oshiro, Isaac Lau, Edwina Leung, PGY-2 pharmacy resident Lehua Kay, and faculty Deborah Taira, and I participated in the 1<sup>st</sup> Annual University of Hawai'i, West Oahu Campus Makahiki. We joined some of the JABSOM faculty with the Imi Ho'ola, Native Hawaiian Center of Excellence from the John A. Burns School of Medicine and medical students as well as Keith Kamita and Lani Ladao from the NED in this community educational event. There were a variety of interactive health activities held at our station.

The students and I also participate in a monthly health screening and blood pressure measurement activity for lomilomi participants at the Papakolea recreation center. This activity allows the pharmacy students to work alongside medical students. The Papakolea recreation center serves an urban Hawaiian Homestead on Oahu. This site creates a terrific opportunity to learn about the excellent outreach work and education that is done here.

*What is the main benefit to this type of activity to the community and to DKICP?*

These activities align with the Colleges mission of providing service to our community. These activities also serve as a valuable interprofessional educational experience for our students.

*What do you get out of things like this personally?*

I enjoy expanding the role of the College within our community. It's an important aspect of the work we do. The students also benefit from the opportunity to network with other healthcare disciplines and gain insight into healthcare disparities that exist in our community. These important lessons are applicable to any future practice site that our students establish after their pharmacy school training.

*Where do you see your efforts expanding to in the future?*

It would be great to identify at least one service event to expand faculty and student participation for 2016. This may include health screening with the Department of Native Hawaiian Health's MOVE (Medical Officers Voyaging Education) project for potential crew on Holule'a.

Also, I will begin to provide pharmacist support for Department of Native Hawaiian Health's KaHOLO study

beginning in January 2016. This study will assess the effects of hula in a cardiovascular disease prevention program in native Hawaiians and includes tracking of blood pressure and medications.

*Dr. Wesley Sumida's research focuses on healthcare disparities. He earned his bachelor's degree in 1987 and his PharmD degree from the University of Washington in 1989.*

**Deborah Taira**  
**Associate Professor**  
**Department of Pharmacy Practice**

*What is an example of a community-oriented project you have been involved in the past year?*

In my role as the Director of the Research and Education Training Core for the Center for Native and Pacific Health Disparities Research in the Department of Native Hawaiian Health at the John A. Burns School of Medicine, I recently developed and delivered a 15-week training program to help community-based researchers at local community health centers develop their research skills. The training included both asynchronous coursework and individual mentorship on specific projects. Participants were four community-based researchers from Waianae Coast Comprehensive Health Center, Waimanalo Health Center, and Kula o na Po'e Hawai'i/Papakolea.

*What is the main benefit to this type of activity to the community and to DKICP?*

By the end of the training, each participant either wrote a first draft of a grant proposal or a research manuscript. The course aims to provide skills necessary to conduct and develop translational and interdisciplinary research and interventions to eliminate health disparities and improve health for vulnerable low income groups. All participants successfully completed the training.

*What do you get out of things like this personally?*

Getting involved in the community is very rewarding. A lot of the research that I do involves analyzing large data sets, so you do not feel the direct impact. I find interacting with community health care providers who are motivated and passionate about improving the health of members of the community very inspirational. I also gain a lot of insight into root causes of health disparities.

*How do you see this project expanding in the future?*

I will continue to mentor them as they seek funding for their health improvement initiatives.

*Dr. Deborah Taira's research focuses on understanding and reducing health disparities, particularly involving Asian and Pacific Islander Americans. She earned her bachelor's degree in economics from Amherst College in Massachusetts, her master's in public affairs from the Woodrow Wilson School in Princeton University and a doctorate in health economics from the Harvard School of Public Health.*



# George Karvas represents DKICP at community center

George Karvas (left), instructor in the Department of Pharmacy Practice, was interviewed with Dr. Kimo Alameda (right) by local broadcaster George Yoshida for his cable TV show one afternoon in October at the Big Island Aging and Disability Resource Center (ADRC). Mr. Karvas has been spending Thursday afternoons at the ADRC offering MTM (Medication Therapy Management) counseling,



blood glucose screening, and blood pressure screenings. He also has spent Wednesday mornings offering medication counseling to patients who needed help. Currently, patients are seen on a walk-in basis free of charge, but Mr. Karvas anticipates the clinic

will be eventually appointment-based. He says: I'm really appreciative for the college of pharmacy's interest in partnering with the ADRC and I look forward to this being a difference maker in our small community of Hilo.

# UH Hilo, Yokohama University of Pharmacy sign exchange agreement

The Daniel K. Inouye College of Pharmacy at the University of Hawai'i at Hilo has signed a partnership with Japan's Yokohama University of Pharmacy that promises to expand the horizons of students in both countries.

The agreement states that it covers the fourth-year of experiential training for pharmacy students, called Advanced Pharmacy Practice Experiences (APPEs), as well as pharmaceutical care, pharmaceutical sciences research and the organization of joint research projects.

"This is a great example of how the Big Island of Hawai'i acts as a logical bridge between the United States and Asia as a whole," said Interim Dean Carolyn Ma. "UH Hilo already has several agreements with universities in Japan, from Meio University in Okinawa to Matsuyama University in Matsuyama, Ehime, Japan. We are optimistic that this is a continuation of an already strong educational relationship."

The "International Exchange Program on Pharmaceutical Education, Research and Practical Training" will allow students at UH Hilo to set up six weeks of training during their fourth year in a four-year program with an approved licensed pharmacist in Japan. Likewise, students in Japan can come to UH Hilo to earn their academic requirements.

Yokohama University of Pharmacy is part of the Tsuzuki Education Group, a consortium of more than 20 universities and colleges in Japan, including three colleges of pharmacy.



Pharmacists, technicians, clerks and students from Yokohama University of Pharmacy who work at Futaba Pharmacy owned by Hideo Mukai, (light blue shirt, far right) also chairman of the pharmacist organization in Yokohama City, met with Koji Nishi, lecturer (far left, Yokohama), Eiji Usami, professor of practical pharmacy (blue shirt, dark jacket, Yokohama), and Edward Fisher, former DKICP associate dean of academic affairs (blue Aloha shirt, center).

Representatives from the consortium visited DKICP in May to tour the campus and discuss possibilities for partnerships.

Faculty at Yokohama University of Pharmacy study herbal medicine made from natural products, called "Kampo," according to President Leo Esaki. Because DKICP is well-known for work with natural products, he said he "strongly expects" fruitful collaborative research.

"The significance of this MOU is to promote the exchange of students and faculty members on pharmaceutical education, research and practical training," said President Esaki, who was awarded the Nobel Prize in Physics in 1973. "Through the short- and long-term exchange programs, students in both universities will learn not only regional-specific pharmacy but diversity derived from a medical environment and culture, as well as a long history between Hawai'i Japan."

Former Associate Dean of Academic Affairs Edward Fisher visited Japan in September to finalize the memorandum of understanding (MOU) and to discuss pharmacy education.

"This MOU is groundbreaking because it allows our students to get credit for working on their experiential training in Japan and opens the doors for conversations about collaborative research," Dean Ma said. "It also bodes well for future interchange with the other schools of pharmacy in Japan that are related to this consortium."

While in Japan, Fisher was involved in a symposium entitled "Pharmacist Education in Hawai'i (US) and Yokohama (Japan)," which was videotaped for future reference. He also visited with pharmacies that could qualify as future sites for students. In Yokohama City, he met with Hideo Mukai at Futaba Pharmacy, Machi Shimizu at Heiandoo Pharmacy and Hideo Chubachi, chief pharmacist at Shonan Kamakura General Hospital.

"Because Japan has a similar pharmacist educational program to ours, this collaboration has the potential for not only positive groundwork that can affect our students' careers, but for meaningful synergy in research among our faculty," Dean Ma said.



(From left): Professor Koji Chiba; Asuka Tsuzuki, vice chairperson, Tsuzuki Educational Institution Group; Edward Fisher, former DKICP associate dean for academic affairs; Atsushi Ishige, Dean, Yokohama University of Pharmacy; Professor Kiyomi Sadamoto, Division of Clinical Pharmacy and Shigetoshi Tsuzuki, executive director of administration and admission office.

## Student pharmacists from Class of 2019 pledge commitment in White Coat Ceremony

Eighty-two student pharmacists recited the Oath of a Pharmacist at the Daniel K. Inouye College of Pharmacy's (DKICP) White Coat Ceremony in the UH Hilo Performing Arts Center on October 18. The event was held from 2-4 p.m.

The ceremony signifies a rite of passage for individuals entering their first year in the professional program. Students were cloaked with a short white coat symbolizing their student status and the promise to uphold the values of the profession, including altruism, responsibility, honor and respect. Distinctive to Hawai'i's ceremony was when each



student receives the traditional flower lei as they enter on stage to recite the oath in front of fellow students, faculty and staff, family and the community.

Ka Haka Ula o Keelikolani College of Hawaiian Language performed the Mele Hookipa, Ua Ao Hawaii.

The keynote speaker for the event was Dee-Ann Carpenter, M.D., a Native Hawaiian internal medicine physician in the University Health Partners Lau Ola Clinic of the Department of Native Hawaiian Health at the John



A. Burns School of Medicine (JABSOM) in Honolulu. Dr. Carpenter is a preceptor and teaches fourth-year student pharmacists about ambulatory, or outpatient, care.

UH Hilo Vice Chancellor for Academic Affairs Matthew Platz and DKICP Interim Dean Carolyn Ma addressed the students. Associate Dean for Academic Affairs Edward

Fisher served as the Master of Ceremonies.

This event was sponsored once again by Walgreens. Brent Wolford, RPh, the Waipahu Store Manager of Walgreens, made a presentation. Also attending was Hilo Store Manager Denay Jones.

*(Photos by Robbyn Peck)*





**Dr. Jasmine Kimura**



**Dr. Lauren Peck**



**Dr. Laurie Uehara**

## Three residents join in White Coat Ceremony

Three new pharmacy residents were recognized at the 2015 White Coat Ceremony along with the student pharmacists. These residents earned their PharmD degree and are continuing their training with DKICP faculty Dr. Roy Goo on Kaua'i and Dr. Sheri Tokumaru on O'ahu.

Jasmine Kimura began her Postgraduate Year One (PGY1) residency at Wilcox Memorial Hospital on Kaua'i. She graduated with my Doctor of Pharmacy from Creighton University in Omaha, Nebraska. Professional interests include chronic disease management, anticoagulation, hepatitis C and acute care medicine. She says her professional goals include successfully completing her PGY1 Residency and pursuing a career that includes working in the ambulatory setting with patients with chronic disease states, focusing on hypertension, hyperlipidemia and diabetes and working with patients in the inpatient acute setting.

Lauren Peck is working on her Postgraduate Year Two (PGY2) residency is specializing in critical care at The Queens Medical Center on O'ahu. Originally from Hawai'i, she received a bachelor's degree in biochemistry from Santa Clara University and a PharmD from The Ohio State University. Her professional interests include critical care, neurology, and emergency medicine and plans to receive board certification in critical care. Long-term career goals are to practice as a clinical pharmacist with precepting and committee responsibilities and to remain involved in a local pharmacy organization.

Laurie Uehara is working on her PGY1 residency at Wilcox Memorial Hospital on Kaua'i. She received her PharmD from Creighton University in Omaha, Nebraska where she also completed prepharmacy studies. She developed an interest in psychiatric pharmacy after completing a psychiatric rotation, or internship, at an acute psychiatric hospital in Omaha. She also is considering a PGY2 residency with a focus in psychiatric pharmacy.

## FROM THE GARDEN ISLE:

### Kaua'i

By Roy Goo

Associate Professor

DKICP/HPH PGY-1 Residency Program Director

Department of Pharmacy Practice



One of the fundamental principles of microeconomics is “economies of scale” in which an enterprise obtains cost advantages due to its size as fixed costs are spread out over a larger workforce. This principal helps to explain why the majority of clinical pharmacy functions are pioneered and sustained at larger academic institutions. Unfortunately many hospitals in the state of Hawai'i are

unable to enjoy this benefit due to their small size and limited pharmacy staff.

Often, developing and sustaining clinical pharmacy services can be difficult when the full-time pharmacy staff is occupied fulfilling essential distribution and compounding services. On the island of Kaua'i, student pharmacists from the Daniel K. Inouye College of Pharmacy (DKICP) continue to demonstrate how student interns can be utilized to sustain and develop clinical pharmacy services.

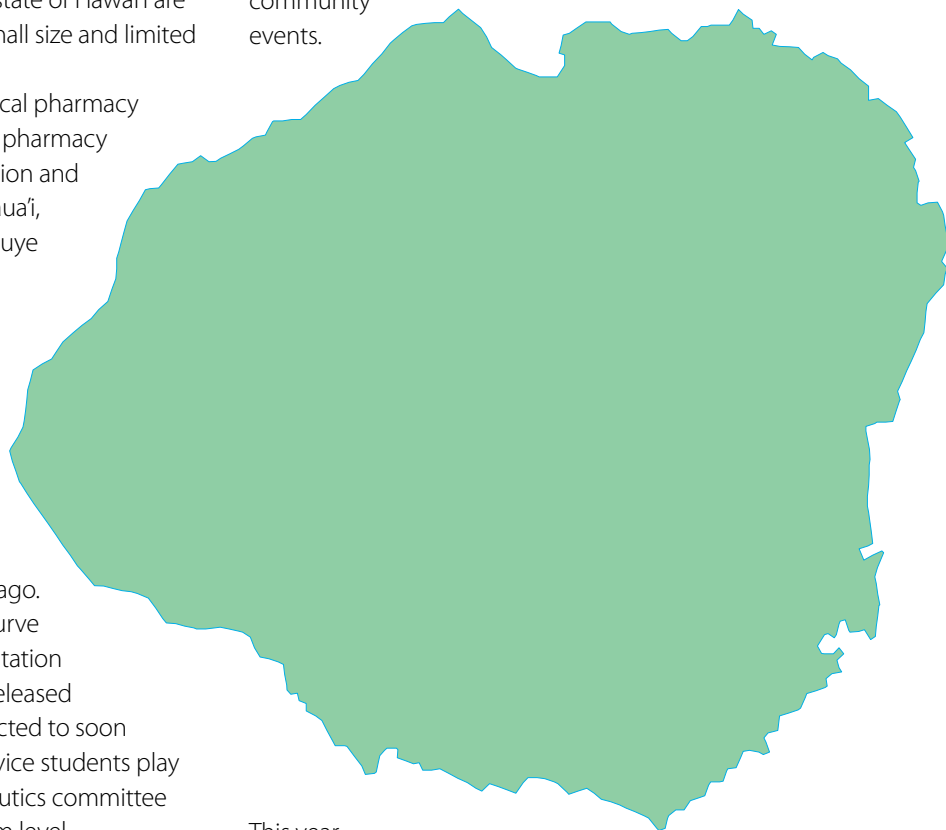
At Wilcox Memorial Hospital (WMH), students continue to sustain the Antimicrobial Stewardship Program (ASP), a program that sets standards for hospitals throughout the state that DKICP graduates helped to pioneer several years ago. This initiative has put WMH ahead of the curve now that the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has released preliminary standards for ASPs that is expected to soon become mandatory. In addition to this service students play an integral role in the Pharmacy & Therapeutics committee meetings both at the institution and system level.

This last year DKICP student pharmacists conducted a medication use evaluation for the new oral anticoagulant Apixiban under the guidance of Dr. Laurie Uehara, one of DKICP's PGY-1 pharmacy residents. This evaluation was performed in response to concerns in regard to the unusual dosing of Apixiban and provider's unfamiliarity with the product. Through this review, it was discovered that an electronic default stop date was predisposing prescribers the ability to order an extended course of high dose Apixiban for the treatment of deep vein thrombi and pulmonary emboli. This system process was quickly corrected to decrease any

unnecessary bleeding risk.

Students also conducted a review of anti-pseudomonal antibiotics, which was the topic of discussion in a recent Hawai'i Pacific Health System-wide Pharmacy & Therapeutics Meeting. More recently, fourth-year student pharmacists Blake Johnson and Okezie Ironi developed a hospital policy for patient-controlled analgesics, which set forth minimum documentation and educational requirements that would ensure both safe and effective pain control in patients requiring this mode of analgesia. In addition they developed an electronic opioid conversion tool that is currently being used by WMH Supportive Care team after several limitations were discovered in currently available online resources.

In addition to these clinical services, students also work with the WMH community benefits department to reach out to the larger community of Kaua'i by participating in numerous community events.



This year students conducted a career fair at Wilcox Middle School where they demonstrated the process involved in donning sterile gowns and personal protective equipment as well as the preparation of IV medications. Students also worked with the fall prevention team to perform medication counseling and reconciliation at the First Hawaiian Bank “Primetime Wellness Fair” at the Kaua'i Beach Resort.

Through these efforts and more, DKICP is helping to augment the regular pharmacy staff on the island of Kaua'i, ultimately improving the safety and quality of patient care.



Maui

# Study indicates large cane burns on Maui linked to respiratory distress

By Lara Hughes

*UH Hilo Stories, an online publication from the office of the Chancellor*

A recent Hawai'i study looked at sugar cane burning on the island of Mau'i and its effects on the respiratory system. The study was conducted by principal investigator Christina Mnatzaganian, a former assistant professor at the University of Hawai'i at Hilo pharmacy college and now an assistant professor at the Skaggs School of Pharmacy and Pharmaceutical Sciences in San Diego.



*Dr. Karen Pellegrin*

Karen Pellegrin, director of continuing/distance education and strategic planning at the UH Hilo Daniel K. Inouye College of Pharmacy, was responsible for the acquisition of the hospital data used in the study through a partnership with Hawaii Health Information Corporation. She also helped edit the manuscript and interpret the results and conclusions.

Also on the research team was Jill Miyamura of the Hawai'i Health Information Corporation, Diana Valencia from UH Mānoa, and Lorrin Pang from the District Health Office of Maui.

The study, entitled "Association between sugar cane burning and acute respiratory illness on the island of Maui" (Oct. 2015, Environmental Health journal), concluded that there was a "significantly higher incidence of respiratory distress in smoke-exposed regions when greater amounts of acres were burned." It went on to suggest that health officials consider actions to help reduce the health risks associated with sugar cane burning.

Pellegrin is not surprised by the study findings. "We know that air pollution is associated with morbidity and mortality," she says.

Only a few studies have been conducted with regards to cane burning and its effects. Many of those studies have been carried out in Brazil, and Pellegrin points out, "based on the findings, Brazil has passed a law requiring the gradual elimination of pre-harvest cane burning." Preliminary studies in Brazil also have found a decrease in hospitalization due to respiratory illness correlating with a reduction in cane burning practices.

While conducting the study on Maui, a major factor that needed to be taken into account was vog from volcanic emissions on Hawai'i Island. According to Maui county

regulations, cane burning is to take place only on days when vog is not present. This means that on non-burn days there is still an environmental factor responsible for higher occurrences of respiratory sickness. This can confound study results if researchers simply compare instances of respiratory distress on burn days versus non-burn days.

To be sure that they were isolating the effects of cane burning on the respiratory system, Mnatzaganian and Pang developed an innovative control through geographic examination.

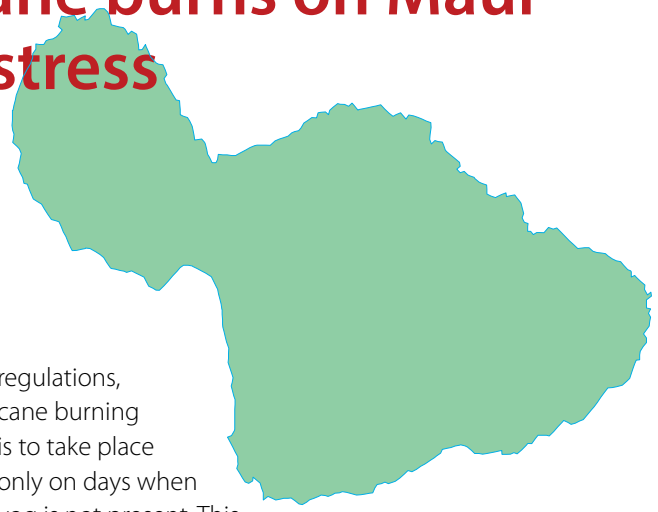
Pellegrin explains, "While vog pollutants affect the island evenly, burning only affects those regions downwind of the burn." This regional analysis allowed the researchers to detect an association between the number of acres burned and prescriptions filled for acute respiratory distress using global positioning system mapping (GPS), wind direction and hospital and pharmacy data.

The study is now contributing to discussions about sugar cane burning. The first case to be heard by Hawai'i's recently established Environmental Court is a case filed to stop sugar cane burning on Maui and the study is already being referenced.

There are many challenges and benefits to living in such an isolated island state and sugar cane burning is a controversial topic with economical and health related importance.

"The field of rural health science is dedicated to understanding what factors in rural areas promote or harm health and finding solutions that can improve health," Pellegrin says. She feels that the study makes a valuable contribution to the fields of environmental and rural health and hopes that it will have an impact on the unique health issues facing Maui.

*About the author of this story: Lara Hughes is a junior at UH Hilo majoring in business administration. She is a public information intern in the Office of the Chancellor.*



# Students explore opportunities at annual job fairs

DKICP held its annual Career Fair on the UH Hilo campus Oct. 30 and Interview Day on O'ahu Oct. 31.

For the Career Fair, student ambassadors Rhea Castro, Chris Diaz, Nick Ferreira, Jessica Lee, and Vicky Nguyen ensured the company representatives from CVS, Fred Meyer-Kroger, Hilo Medical Center, Safeway, Target, Walgreens, and Walmart received a warm welcome upon their arrival.

Interim Dean Carolyn Ma was the host at a full breakfast buffet and provided the representatives with an overview of the college, which included student demographics and building updates. Faculty members Drs. Elizabeth Ackerman, Forrest Batz, Lara Gomez, Sue Jarvi, and Mr. George Karvas were also available to address questions about the program. For the next few hours, the representatives discussed internship and future employment opportunities with current students, including 15 fourth-year students. In addition, nine first- and second-year students were interviewed for intern positions.



The following day, the fourth-year students buttoned up into their professional attire in lieu of Halloween costumes. DKICP's Interview Day, which is co-sponsored by the UH Alumni Association CoP Chapter, took place at Kapiolani Community College in Honolulu. Eighteen company representatives from CVS, Fred Meyer-Kroger, Kmart, Safeway, Target, Walgreens, and Walmart conducted a total of 140 interviews with 34 fourth-year student pharmacists. (Photos by Tracey Niimi)



# Faculty Seminar Series



## Visiting professor adds to research program at DKICP

By Dr. Tamara Kondratyuk  
Laboratory Manager and Assistant Specialist  
Department of Pharmaceutical Sciences

Dr. Parimelazhagan Thangaraj, professor from Department of Botany, Bharathiar University, Coimbatore, India, presented a seminar in the modular classroom on UH Hilo campus entitled, “Cancer Chemopreventive Potential of Psychotria and Vaccinium Species” on October 6.

“Dr. Parimelazhagan” carried out a short term research program last fall at the University of Hawai‘i at Hilo’s Daniel K. Inouye College of Pharmacy. He was awarded the Raman Fellowship for Post-Doctoral Research for Indian Scholars in the United States of America sponsored by the University Grants Commission, Government of India, to pursue his research at DKICP under the guidance of former Dean John

Pezzuto. This experience would provide him the scientific basis for the herbal sciences especially in the field of health care and wellness.

He entered the Botany stream in one of the most reputed Colleges, St. Joseph’s College, Tiruchirappalli, in Tamil Nadu, India, where he received direction and guidance in postgraduate and PhD programs at Bharathiar University. This was the turning point in his life as he started to identify plants that would be herbs with novel molecules for potential cures. He published more than fifty papers in peer-reviewed journals and has authored and co-authored seven books in the field of phytomedicine



### Dr. Aliasger K. Salem

Dr. Aliasger K. Salem (right) presented a seminar entitled “Biodegradable Particles for Vaccine Delivery” November 19 on the DKICP Hilo campus. Dr. Salem, who was the guest of Dr. Mahvir Chuogule from the Department of Pharmaceutical Sciences, is the Bighley Professor and Head, Division of Pharmaceutics and Translational Therapeutics, Leader, Experimental Therapeutics Program, Holden Comprehensive Cancer Center, College of Pharmacy, University of Iowa.

Now he is sharing his experience with his students in India, facilitating them to contribute towards research and encouraging the younger generation to think outside the box. He is also teaching students in several fundamental subjects that would form a part of his research objective. He has been actively involved in the research on cancer chemopreventive potential of Psychotria and Vaccinium species. He strongly believes that the U.S. is a nation that is open to great new ideas, changing the course of human living for the better, giving him a platform to examine, experiment and research existing concepts and create new ones.



## Student pharmacists team with nursing students, community organizations in first Laupahoehoe Health & Safety Fair

*By Judi Steinman, Ph.D.*

*Board member, Hilo-Hamakua Community Development Corporation  
Coordinator, Master's in Clinical Psychopharmacology (MSCP) program*

Three organizations from the Daniel K. Inouye College of Pharmacy (DKICP) took part in the first ever Laupahoehoe Health & Safety Fair, held at Laupahoehoe Community Public Charter School on August 29. It was a remarkable event for our community because it brought together members of the community with members of the health care profession, something that has been needed since the sugar plantations closed nearly 20 years ago.

The DKICP groups were the DKICP/School of Nursing (SON) Inter-Professional Collaboration: The Medication Safety Project, the Pacific Islander Mobile Screening Clinic (PIMSC) and the National Community Pharmacists Association (NCPA).

DKICP/SON introduced two tools targeting medication safety: a wallet-sized, blank "My Medication List" for keeping medication names, dosage, and times in a convenient location. This group encourages you to know why you take a medication and to write down any questions or concerns on a Referral Form. These tools are simple and useful ways to ensure medication safety.

PIMSC strives to provide health education and screenings to the medically underserved populations here in Hilo. PIMSC provided free A1C, cholesterol, blood pressure, and BMI screenings for fair attendees. They also provided health education about vitamins and healthy lifestyles to the keiki. PIMSC participants include preceptor George Karvas and Student Pharmacists: Chelsea Aipoalani, Megan Calderwood, Mark Finlay, David Khan, Kevin Meno, Patrick Sa'au, Lillian Tran, and Shannon Trinh.

NCPA volunteered their time to make silly putty with the keiki and to educate people about the practice of

compounding pharmacy. Members include NCPA Officers Lam Le, Carli Owan and Kevin Meno.

The Health & Safety Fair was brought to Laupahoehoe through the support of the Hilo-Hamakua Community Development Corporation. Special recognition goes to all of my fellow board members but especially Glenn Carvahlo, Eric Weinert and Gerald DeMello and President Donna Johnson for ensuring a successful day. Mahalo to Hamakua Councilwoman Valerie Poindexter for providing support for this special event and for stopping by to say "aloha" at the fair.

Many community organizations participated, including (listed here in alphabetical order): Adult Daycare, Akaka Falls Lion's Club, Bay Clinic Tobacco Cessation, Big Island Running Company, Big Island Medical Reserves Corp, Big Island Substance Abuse Council, Blue Zone, Center for the Study of Active Volcanoes, CERT University of Nations Kona, Hamakua-Kohala Health Center, Hawaii Island Fencing Association, Hawaii Island Neighborhood Watch, Hawaii Life Flight, Hawaii Student Society of Health-System Pharmacy, HHSC Primary Care Training Program, Hilo Family Health Center, HOPE Services, Hospice of Hilo, Jennifer Weinert Purna Yoga, Legacy of Life Hawaii, Mango Medical, National Alliance of Mental Health, National Community Pharmacists Association, Office of Continuing Education & Training (OCET) - Hawaii Community College, Ohana Heroes Project, OSMD Hawaii, Pacific Holistics, Inc., Partners In Development Foundation - Hui Ho'omalua, Project Vision Hawaii, Prosecutors Office, Red Cross Hawaii, Senior Medicare Patrol, Walgreens, and UH Hilo representatives from Admissions, Counseling Services and HOSA - Future Healthcare Professionals.



## HSSHP contributes to community through Laupahoehoe health fair

*By Joann Phan (Class of 2018)*

The Hawaii Student Society of Health-System Pharmacy (HSSHP) participated in the Laupahoehoe Health and Safety Fair event with an educational booth on Medication Emergency Preparedness, and explained the meaning of a “brown bag” as well as the importance of bringing medications to a pharmacy or doctor’s office for medication review.

They also featured the Inter-Professional Collaboration Project with the University of Hawai‘i at Hilo School of Nursing, which focused on medication safety. For this project, visitors received a wallet-sized “My Medication List” card on which to write the name, dosage, and times

they take each medication, as well as emergency contact details and information about healthcare providers. In addition, participants had the opportunity to write down any questions or concerns about their medications or medical conditions on the *Referral Form* and turn it in at their next doctor’s appointment.

Overall the feedback for this project was positive and supportive. Participants found the instructions were clear and easy to understand and the tools were simple and useful, and they appreciated that medication safety is important to their health.



# Fourth-year student pharmacists work on 'Prescribing Guide' to help reduce problems with insurance coverage at the pharmacy

By David Choe & Andy Wong (Class of 2016)

When a patient goes to pick up important medications from the pharmacy, the one thing they don't want to hear is "your medication is not covered by insurance. You need to pay the full retail price if you want to fill your prescription." Now the patient must either wait for the pharmacist to call the doctor, or worse yet, choose not to fill the prescription because it is too expensive. Often, treatment classes have several drugs that are effective and can be used, but only certain drugs are covered by a health plan's formulary. Since formularies differ from plan to plan, doctors find it difficult to guess what drug is covered by each patient's plan while patients and pharmacists find it frustrating when a prescribed drug is not covered.

Starting this year, Dr. Camlyn Masuda, an assistant professor at the University of Hawai'i at Hilo, Daniel K. Inouye College of Pharmacy (DKICP), and fourth-year pharmacy students on their APPE Ambulatory Care rotations from the DKICP have been collaborating with Dr. Chien-Wen Tseng, a family physician at the University of Hawai'i at Manoa, John A. Burns School of Medicine Department of Family Medicine and Community Health to support the [www.PrescribingGuide.com](http://www.PrescribingGuide.com) website, a free resource that summarizes the formularies from six popular health plans in Hawai'i. Dr. Tseng started the website in 2007 with funding from the Robert Wood Johnson Foundation, and maintains it with funds from her University of Hawai'i HMSA Endowed Chair in Health Services and Quality Research. The Prescribing Guide compiles formularies from AlohaCare, CVS Caremark, HMSA, HMSA Quest, Ohana, and United Health Care. The website organizes commonly prescribed medications into easy-to-read charts for 16 common health conditions. Doctors and pharmacists can quickly determine what drugs in each treatment class (e.g. asthma inhalers, migraine drugs) are covered by a patient's health plan and the approximate copayment that the patient will pay. The Prescribing Guide also flags when prior authorizations for medications are required so prescribers can inform patients ahead of time or choose another appropriate

covered drug. Being able to quickly find out which drugs are covered by insurance helps patients, pharmacists, and doctors save time (fewer call-backs to switch medications), money (lower prescription copayments), and improves patient care (improve medication adherence).

The Prescribing Guide website also gives approximate retail prices for drugs (e.g. Walmart \$4 generic list) and provides direct links to health plan formularies. Furthermore, the website includes links to pharmaceutical company assistance programs for patients without insurance, to help lower drug costs and improve treatment adherence.

Every one to two months, student pharmacists check the formularies for each health plan, looking for changes in coverage and copayment costs while Drs. Tseng and Masuda review the information and update the website. Students who have participated include: Traci Kusaka (Class of 2015) for the March 2015 update, Allen Bagalso (Class of 2016) and Kelsey Chang (Class of 2016) checked the formularies for the June 2015 update, and David Choe (Class of 2016) and Andy Wong (Class of 2016) for the July 2015 update. Other students that have provided assistance are Nick Rovang, Kasia Quintal and Allan Higa (Class of 2016).

"The fourth-year student pharmacists have been invaluable in running the Prescribing Guide as a clinical resource for doctors and pharmacists. It allows them to provide better care of patients by prescribing medications that are on the patient's formulary, which reduces the time it takes for the patient to receive their medication. Furthermore, it is a good resource for pharmacists to refer to when letting doctors know which medications are covered by the patient's insurance formulary," says Dr. Tseng.

With the use of the Prescribing Guide, patients won't have to hear "your medication was not covered by insurance" and instead, they will be able to get the medications that they need.

# Faculty Briefs



**Elizabeth Ackerman**, assistant professor, Department of Pharmacy Practice, had an article entitled "Hepatitis C in 2015: Recent Advancements and Current Challenges" published in the

November Issue of *Hawai'i Journal of Medicine and Public Health*.

**Shugeng Cao**, associate professor, Department of Pharmaceutical



Sciences, was a co-author on three articles:

1) "Meroterpenoids from the Marine Algal-associated Fungus *Aspergillus sp.*" *J. Nat. Prod.* 2) "Actinoramide A stereoisomer identified as potent anti-malarial from titration-based screening of marine natural product extracts" *J. Nat. Prod.* 3) "Small molecule reactivation of mutant p53 to wt-like p53 through the p53-Hsp40 regulatory axis" in *Chemistry & Biology*. He was an invited speaker at the 2015 Annual Conference of KSP (Korean Society of Pharmacognosy) December 2-4, 2015 in Seoul, Korea speaking on "Natural Products from Tropics" and at the 2015 International Conference on the inaugural of International Consortium for Chinese Medicine and Cancer (ICCMC) October 16-18 Shangri-La Hotel, Dalian, China speaking on "Boiling herbal medicine in hot water and cancer prevention."

**Mahavir Chougule**, associate professor, Department of Pharmaceutical Sciences, served as a reviewer on the Nanotechnology peer review panel of the 2015 Lung Cancer Research

Program for the Department of Defense Congressionally Directed Medical Research Programs. He also served on the Therapeutics, Treatment

and Resistance peer review panel of the 2015 Lung Cancer Research Program for the Department of Defense Congressionally Directed Medical Research Programs.

**Karen Pellegrin**, director of strategic planning/continuing education, was co-author on two publications: 1) "Association between sugar cane burning and acute respiratory illness on the island of Maui," published in *Environmental Health* with co-authors Mnatzaganian CL, Miyamura JB, Valencia D, Pang L. and 2) "Recruitment of rural healthcare professionals for live continuing education" published in *Medical Education Online* with co-authors Holuby RS, Barbato A and Ciarleglio A. She also was an invited speaker at the Employers' Forum of Indiana All-Stakeholder Meeting on care transitions in Indianapolis, IN, November 10.



**Dianqing Sun**, associate professor, Department of Pharmaceutical Sciences, was invited to give a talk entitled "Natural Product-Inspired New Chemotherapeutic Agents" at the 2015

Chaoyang International Conference of Medicine (CICM), Beijing, China, November 13-15. Dr. Sun also gave a poster presentation entitled "Synthesis and antibacterial evaluation of macrocyclic diarylheptanoid derivatives" at the Pacificchem 2015 conference, Honolulu, December 15-20. In addition, Dr. Sun coauthored the following papers: 1) "Carbazole Scaffold in Medicinal Chemistry and Natural Products: A Review from 2010-2015" in *Current Topics in Medicinal Chemistry* with Tsutsumi LS and Gündisch D. 2) «Hirsutinolide

series inhibit Stat3 activity, alter GCN1, MAP1B, Hsp105, G6PD, vimentin, TrxR1, and importin  $\alpha$ -2 expression, and induce antitumor effects against human glioma" in *Journal of Medicinal Chemistry* with Miklossy G, Youn UJ, Yue P, Zhang M, Chen CH, Hilliard TS, Paladino D, Li Y, Choi J, Sarkaria JN, Kawakami JK, Wongwiwatthananutit S, Chen Y, Chang LC, and Turkson J. 3) «Determination of the Absolute Configuration of Chaetoviridins and Other Bioactive Azaphilones from the Endophytic Fungus *Chaetomium globosum*" in *Bioorganic & Medicinal Chemistry Letters* with Youn UJ, Sripisut T, Park EJ, Kondratyuk TP, Fatima N, Simmons CJ, Wall MM, Pezzuto JM, and Chang LC.

**Ghee Tan**, associate professor and director of PhD program, Department of Pharmaceutical Sciences, was a co-author in an article entitled "The Role of Endophytic Fungi in the Anticancer Activity of *Morinda citrifolia* Linn. (noni):" accepted for publication in *Evidence-based Complementary and Alternative Medicine*



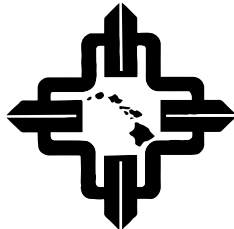
## Student Awards

**Ronnie Jean Delenia**, Student Pharmacist, Class of 2017, was awarded a scholarship from the Native Hawaiian Health Scholarship Program (NHHSP). Originally from Aiea on the island of O'ahu, Ronnie Jean received her bachelor's degree in pre-pharmacy from Oregon State University. NHHSP is a federally funded, scholar-centered, support service-oriented scholarship program for Native Hawaiian college students interested in serving their Native Hawaiian community as primary health care professionals.

## FACULTY & STAFF

# DKICP leader joins health care governance board

Karen L. Pellegrin, director of strategic planning/continuing education for DKICP, has been appointed to the East Hawai'i Regional Board of Hawai'i Health Systems Corporation. The 14-member board is responsible for governing Hilo Medical Center, Hale Ho'ola Hamakua, Ka'u Hospital and ten specialty clinics.



**HAWAII HEALTH SYSTEMS**  
C O R P O R A T I O N

*Quality Healthcare For All*

Pellegrin serves on the Board's

Community Engagement & Legislative and Quality Improvement & Patient Safety Committees.

She joined DKICP in 2008 and has more than 20 years of experience in healthcare quality, strategy, research and education. She has led community partnerships to gain more than \$30,000,000 in competitive federal grants in healthcare innovation, including \$14.3 million in funding for the Pharm2Pharm initiative, which is gaining national attention as a model patient-care program that leverages pharmacist expertise to improve medication management.

After earning her doctorate degree in Clinical Psychology at the University of South Florida, Pellegrin went on to complete a Postdoctoral Fellowship in Quality Management & Health Psychology at the Medical University of South Carolina and an MBA degree at The Citadel.

Other members of the board are Chair Kurt Corbin, Vice Chair Dr. Daniel Belcher, Secretary and Treasurer Dennis Nutting, Douglass Shipman Adams, Dr. David Camacho, Randy Kurohara, Joseph Skruch, Dr. John Uohara, Harry Yada, Gary Yoshiyama and Jennifer Leilani Zelko-Schlueter.

## STUDENT ORGANIZATIONS

# HSSHP works health into dialogue with community

*By Joann Phan (Class of 2018)*

The Hawai'i Student Society of Health-System Pharmacy (HSSHP) is an organization that supports and promotes clinical/health-system pharmacy in the state of Hawai'i and beyond. The chapter strives to foster this field by providing information and opportunities that benefit both pharmacy students and the community they serve at events such as the Laupahoehoe Health and Safety Fair event last summer (see earlier story on Page 17). During the fall semester of the 2015-2016 school year, the HSSHP Chapter participated in four community outreach events, where members







provided their services to make a difference in the community while practicing and advancing their own skills.

At the Hui Malama Ola Na Oiwi Ladies Night Out event, HSSHP members had a chance to serve and show their appreciations to the women of Hawai'i Island that traveled as far as from Kona, Kohala and Ka'u. This event was another good opportunity for members to have hands-on practice with blood glucose screening. By the end of this event, HSSHP members provided 112 blood glucose screenings, received positive feedbacks on their services and got an invitation to come back next year.

At the Hui Malama Ola Na Oiwi East Reunion Screening Event and West Reunion Screening Event, HSSHP members collaborated with PIMSC members to provide HgA1C screening, counseling, and educational services on diabetes, dietary, and lifestyle modification to Hui Malama's patients. These events allowed HSSHP and PIMSC members to work together as a team and providing the best possible services to their clients. For these two events both HSSHP members and PIMSC members not only advanced themselves in their

screening and counseling skills but also provided more than 100 of screenings to the community.

These positive outcomes would not be possible without the help of the Daniel K. Inouye College of Pharmacy, the HSSHP organization is grateful for all of the college's supports and opportunities that allow student pharmacists to improve their skills in teaching, screening, and counseling while contributing to their community on the Big Island.

## Kappa Psi contributes locally, nationally

*By Kevin Meno (Class of 2017) and Lauren Simpson (Class of 2018)*

The fall semester continued in full force and the brothers of the Epsilon Psi Chapter of Kappa Psi were hard at work academically, as well as in the community. As a fraternity, one of our main focuses is working together to serve others along with promoting professionalism and brotherhood.

Brothers of Kappa Psi have worked towards serving the community by participating in numerous service events in Hilo. Our community service cochairs

Tram Le and Hendrik Vong work together tirelessly to provide the chapter with frequent community service opportunities.

During fall semester, brothers spent time with patients at Hawaii Island Adult Care. They got the chance to listen and share stories with patients and even participate in activities, such as arts and crafts, exercise and singing. Brothers also participated in "Walk with a Doc," where they gave a presentation about medication storage to walkers and runners who frequent Liliuokalani Park. Other community service activities include working with animals at the Humane Society and collecting toys for the U. S. Marine Corps Reserve Toys for Tots Program.

Kappa Psi brothers also dedicated their efforts with this year's College of Pharmacy Health Fair, where brothers volunteered at various health education booths to promote wellness and overall healthy living. Working in the community promotes a brighter future for those in need and reflects the high ideals that Kappa Psi holds to the highest of standards.

The presence of Epsilon Psi has not been confined to Hilo this semester. Four of our brothers attended the Pacific West Fall Province Conclave held in Phoenix, Arizona. The four attendees took pleasure in meeting Kappa Psi brothers from other pharmacy schools in the Pacific West region and attending province was beneficial for these brothers because they learned about improving brotherhood and molding well-rounded leaders and had the opportunity to share these with the rest of the chapter. Connecting and promoting fellowship with other brothers can truly be an enlightening and treasured experience.

Overall, this fall semester was very demanding and successful for Kappa Psi. Brothers work relentlessly to have a positive impact in the community and to further develop into professional leaders.



*Brother Ronnijean Delenia (Class of 2017) spent time with a patient at Hilo Adult Day Center.*

# Phi Delta Chi joins the community to help others

In the spirit of community, the members of DKICP's Phi Delta Chi fraternity were involved in the following events throughout the past year:

## **New Hope Food Pantry**

The brothers of Phi Delta Chi help out one Saturday of the month with the New Hope Food Pantry Event, which is made possible by the collaboration of New Hope Christian Fellowship and the Food Bank. Brothers fill up paper bags with nonperishable



food items, and help to distribute them to community members who qualify for the food pantry program.

## **Salvation Army Thanksgiving Banquet**

The Salvation Army in Hilo graciously extended this volunteer opportunity to our chapter, and the brothers of Phi Delta Chi were more than willing to help out at this event, which took place on Thanksgiving day. Brothers helped to deliver and serve food to community members in need, and to those who serve the community.

## **St. Jude Children's Hospital Letter Writing**

St. Jude Children's Research Hospital is Phi Delta Chi's philanthropic partner and each year we help them raise money for research and medical treatment by sending out donation letters to family and friends. Although a minimum of two letters have been required of brothers in the past, brothers often go above and beyond this number to reach as many loved ones as possible.

## **Imiloa's Birthday Celebration**

The Imiloa Birthday Celebration takes place in the Spring semester and is organized by the Imiloa Astronomy Center. During this event, brothers have been able to provide diabetes and vaccine information education, as well as free blood-pressure screenings to community members. The DKICP chapter was also able to offer education to children as well through the "Compounding for Kids" booth, where brothers instructed children on how to make silly putty out of borax, Elmer's glue, and water.

## **Ocean View Health Fair**

Earlier this year, Phi Delta Chi brothers helped provide free health screenings such as A1C, cholesterol, blood pressure, and BMI, for rural community members of Ocean View. The event occurred on their Earth Day celebration at the community center. Brothers not only help celebrate Earth Day with the community but promoted wellness and healthy life choices.



## **Kea'au Health Fair**

Last year, Kea'au Elementary School asked the brothers from Phi Delta Chi to present at their annual health fair. Brothers presented two educational board to elementary school children. One board was on good toothbrushing habits and the other was on the dangers of smoking.



## **Everyday Hero**

Brothers get together to make gift baskets to honor a profession during a specified month. Common items donated include snacks and office supplies. A group of brothers hand deliver the baskets and express our chapters' thanks and appreciation for all that they do in the community. Since starting this event in Fall 2014, we have donated baskets to nurses, firefighters, and police officers.



## **Hospice of Hilo Celebration of Life**

Celebration of life is a community event by Hospice of Hilo. The event had a 2.3-mile walk, food, and live entertainment leading up the Lights of Remembrance at sunset on Wailoa river. Brothers helped set up the morning of the event, guide people during the walk, and cheered on the participants at the end of the walk.

# Phi Delta Chi and Operation Christmas Child gives gifts that keep giving

By Tiffany Alberg (Class of 2018) and Jairus Mahoe (Class of 2016)

Devon Rachae is a senator and pastor from a country named Grenada. He is the product of love and dedication, and he has been around the world spreading his story. This past September, Rachae visited Hilo and shared his story with our community.

Rachae attributed his journey to success to his first experience with Operation Christmas Child (OCC). At the time, he was only 12 years old. His family heard of an event for all the children at the local community church in his small hometown, so they decided to attend. This event happened to be hosted by OCC, and Rachae recalls the room being filled with eager children of all ages. At the conclusion of the night, shoebox-sized presents were passed out to all who attended; every child received one. And on the count of three, everyone opened their gifts.

"It was chaos," Rachae recollected that moment where the excitement

regularly. Ten years down the road, he decided to run for the senate and became the youngest senator in the history of Grenada at the young age of 22.

"Many children around the world do not know what it feels like to receive a gift," Rachae stated.

The gift he received from Operation Christmas Child during the church event ten years prior was the first present he's ever received.

Operation Christmas Child travels to many countries. In Grenada, with a population of approximately 110,000 residents and OCC reached about 16,000 children. This year, the gifts collected on the Big Island will go to



From left: Christopher Diaz (Class of 2017), Jairus Mahoe (Class of 2016), Devon Rachae, Tiffany Alberg (Class of 2017), Nicholas Ferreira (Class of 2017)

42,000 gifts a year, 6,000 from the island of Hawaii, and 4,200 from the city of Hilo last year. This year, Hilo collected 4,915 and the Hawai'i island collected 8,371 shoeboxes!

Phi Delta Chi's involvement started in 2012 when member and DKICP class of 2015 student pharmacist, Jill Anne Villarosa, reached out and encouraged members to make a difference. That holiday season, Phi Delta Chi donated 48 gifts. The following year in 2013, the amount of presents donated almost doubled, reaching 83. In 2014, 107 donated. And on November 15<sup>th</sup>, 2015, under the leadership of Phi Delta Chi's Tiffany Alberg and Lauren Mow, Phi Delta Chi contributed another 119 gifts to Operation Christmas Child. Phi Delta Chi has now contributed 357 gifts over the past 4 years and is looking to continually increase that contribution for years to come.

Each November, Phi Delta Chi holds their annual OCC gift drive event on the DKICP campus, inviting its members and those interested to participate in the donation and wrapping of presents. Donations of boxes and shipping are provided by Big Island Toyota and gift-wrapping supplies are donated by members of Phi Delta Chi.



and joy overcame everyone in the room. The present he received was wrapped in a black and white fabric. There were various toys tucked inside, but the most memorable to him was a shiny, metal slinky. He played with it for hours every day. That experience changed his life. It was after that night, that he began attending church and participating in community events

Mongolia, Philippines, Indonesia, and Native Americans.

Every year, around 10 million shoebox-shaped gifts are donated and dispersed to countries all over the world. These gifts are designated for boys and girls and span the ages of 2 years to 14 years. About 9 million of those gifts come from the United States. The state of Hawai'i contributes about

# PLS promotes leadership by example

*By Nadine So  
President, Phi Lambda Sigma  
(Class of 2017)*

Phi Lambda Sigma (PLS) Delta Lambda Chapter is the Pharmacy Leadership Society at the Daniel K. Inouye College of Pharmacy. Our mission is to recognize, support, and enhance leadership achievement in our school and in the community. PLS has held several events throughout the Fall 2015 semester to recognize student leaders, support leadership development, and enhance professionalism.



Each month, we host a Leader of the Month board displayed in the student lounge to credit leaders on our campus for their leadership achievements. Our hopes are to promote leadership development and to inspire others to do the same.

To enhance professionalism in our school, we hosted two fashion shows focused on professional dress. The first fashion show was presented to the first-year class during Fall 2015 orientation week and was designed to demonstrate appropriate attire for IPPE events and rotations. The second fashion show was tailored to the third-year class and focused on the details of wearing a suit. PLS would like to thank Nicholas Ferreira and Nicholas Nguyen for their participation as models in our two fashion shows.

In September, PLS presented the R.I.S.O (Registered Independent Student Organization) Training Workshop. In order for organizations to gain the benefits of becoming a R.I.S.O., such as equipment rental and funding from the University, Presidents and Treasurers had to attend R.I.S.O. training workshops. These workshops are usually held at the main UHH campus, but PLS coordinated with the main campus to hold a session at the DKICP campus. PLS members, Abraham Jose and Christopher Diaz, presented the R.I.S.O. workshop to the Presidents and Treasurers and we currently have five DKICP student organizations that are recognized as a R.I.S.O.

On November 11, PLS hosted their Fall Leadership Seminar to promote leadership development. The event

was a three-hour long leadership seminar aimed at gaining knowledge of Robert's Rules of Order and enhancing presentation skills. In the first hour, PLS member, Ryan Shiroma, presented the general ideas of Robert's Rules of Order and displayed examples of how to run effective meetings. Valer Povaliaev and Christopher Diaz presented the next two hours and focused on presentation style and tips on how to deliver an effective presentation. We included four example presentations to provide volunteers an opportunity to practice presenting. PLS would like to thank our four volunteer presenters, Valer Povaliaev, Patrick Sa'au, Kimberlee Roseman, and Hoa Vo, for mustering up the courage to present to their peers, organizing an entire presentation with accompanying slides, and ultimately, helping PLS achieve our goal of enhancing leadership development.

Stay tuned for our main Spring 2016 event – the Spring Leadership Symposium! This event will be a great opportunity for students (especially those on executive boards) to refine their leadership skills.

PLS would like to extend a big mahalo to the students, faculty, and staff of the Daniel K. Inouye College of Pharmacy and the University of Hawai'i at Hilo who have supported us through our events and will continue to support our mission to advance leadership in pharmacy. Phi Lambda Sigma Delta Lambda Chapter is proud to end the fall semester and excited to begin the spring semester with new initiated members and purposeful events.

# The Pacific Islander Mobile Screening Clinic spends busy fall semester

By Megan Calderwood (Class of 2017)

The PIMSC is an educational non-profit service organization on campus whose mission is to overcome language and cultural barriers to improve healthcare access and outcomes for underserved populations in Hawai'i County by providing health education and wellness screenings with the intent to refer target populations to an interdisciplinary team of health care providers.

The target population of the PIMSC is the medically underserved, especially citizens of the Pacific Freely



Associated states such as the Marshall Islands and the Federated States of Micronesia (Chuuk, Pohnpei, Kosrae, Yap) and persons of Polynesian ancestry.

This Fall semester the PIMSC has been very active, providing health screenings and educational boards at the Bread of Life Distribution at New Hope church as well as participating in the Laupahohoe Health and Safety Fair, Micronesian United Big Island (MU-BI) fair, and Hui Malama Ola Na OIwi Health Fair.



# Rho Chi continues to mentor peers

By Christopher Diaz (Class of 2017)

The Rho Chi Society Delta Iota Chapter continually strives to uphold academic excellence and the pursuit of it for our student body. We are currently composed of 17 student pharmacists in the class of 2017.

Our goals are to continue offering tutor services, provide review session opportunities pre-and post-exams, and serve as mentors for pre-pharmacy students at the University of Hawai'i at Hilo and Mānoa. Our newest initiative for this academic year is implementing a student-led Journal Club with participation by the faculty.

For this academic year, the Rho Chi members have assumed many responsibilities while continually demonstrating academic prowess in their studies. Every member has participated to help achieve our goals and their work is an inspiration for the students.

Our latest event was a student-led Journal Club session hosted by our Vice President, Kelsea Mizusawa. Four student pharmacists signed up in pairs to present two separate articles with the support of Dr. Supakit Wongwiwatthananukit



and Dr. Carolyn Ma for feedback. The student pharmacists included Megan Calderwood, Nicholas Ferreira, Abraham Jose, and David Khan. This provided them with the opportunity to utilize drug information resources, critically evaluate literature based off of skills learned in evidence-based medicine, and practice their presentation skills.

We will continually refine the activity to provide more opportunities for the third-year pharmacy students, and also extend the opportunity to second-year students.

*(Photo by Allan Higa, Class of 2016)*

# Seniors' Fair Drug Take-back event helps senior citizens, pre-pharmacy students

By Kasia Lynn Quintal (Class of 2016)

The 2015 Seniors' Fair Drug Take-Back was a successful event and a unique opportunity that allowed me and three other fourth-year student pharmacists to work with the Hawai'i State Narcotics Enforcement Division.

Together, we collected various medications, including over-the-counter products, natural supplements, foreign drugs, non-narcotic and narcotic prescriptions. The items collected from the community were individually counted and recorded into a database.

We used our retail experience to hypothesize the name of the medication by its shape, color, and imprint. Mobile resources were then utilized to verify or identify capsules and tablets that were not labeled.

We volunteered to participate in this event to help ensure that these unused and expired medications were properly disposed of and to help prevent potential misuse and abuse.

According to Marie-Louise Ledbetter, a member of the UH Manoa Pre-Pharmacy Association:

Seventeen members of the UH Manoa's Pre-Pharmacy Association (PPA) volunteered at the 2015 Seniors' Fair Drug Take-Back event on September 25, 25 and 27 at the Neil Blaisdell Center in Honolulu. It gave us a great opportunity to

work alongside pharmacy students and professors.

We learned about the importance of disposing expired medication and the proper protocol for disposal. We had the chance to familiarize ourselves with popular medications used in the community. During the Medication Take-Back, we counted the pills while also learning about the medication. When we had a question about the medication, the pharmacy students were able to answer and give us a mini lesson on the drug.

The student pharmacists were so helpful and also gave us advice about applying to pharmacy school. The pre-pharmacy students absolutely enjoyed working with them.

For some PPA members, the Medication Take-Back was our first pharmacy-related experience. It opened our eyes to our future career and it made us excited to pursue pharmacy. We are looking forward to volunteering at the 2016 Drug Take-Back!



## What About Tobacco: Impact on the Community

By Lauryn Mow (Class of 2017)  
Tobacco Prevention Project Co-Chair

Tobacco Prevention Project's "What About Tobacco" (WAT) Presentations aims to educate the local youth ages 9-10 years old about the harmful effects of tobacco. In a one-hour time frame, pharmacy students engage fourth grade students in several different hands on activities to facilitate discussions concerning the harm smoking causes to the body, the many dangerous ingredients contained in tobacco, and how to be tobacco free.

Although a small part of the Daniel K. Inouye College of Pharmacy (DKICP) campus, we continue to make huge contributions to the local community. This past year we were able to reach over 600 students, and we continue to push this number by expanding our outreach to more and more schools on the East side of Hawaii Island.

Initially I intended to participate in this program as a way to teach children about the harmful effects of tobacco; but through my experience of being involved in the WAT Program over the past two years, I've found that there is a dire need for more youth education regarding the dangers of tobacco products. Currently the WAT Program is the only organized youth tobacco prevention program in the DOE system in East Hawaii, and for many students this is their first and only exposure to material regarding tobacco use.

Since Tobacco Prevention Project's first WAT presentation in 2012, we have received a great deal of positive feedback from fourth grade students in the form of letters and drawings sharing with us how the WAT presentations have made a positive impact on their lives. As we carry out our fourth year since the program's inception, we keep our mission and values in mind while continuing to grow and expand our outreach within the community.



# Fourth-year student pharmacist joins forces with alum in humanitarian mission

The following is a documentation of a special collaboration between Thy Ta (Class of 2016) and Dr. Garret Hand, PharmD, LT, MSC, USN (Class of 2011). *Thy's portion is in italics.*

**GH:** When I joined the Navy in pharmacy school, I anticipated the opportunity and even requirement to travel. Of those opportunities, I've wanted to be a part of ongoing humanitarian missions in either the Pacific or Atlantic and Caribbean oceans. This last spring I received the short notice option, 14 days to be exact, to fulfill this career milestone and I gladly took it. One of the pleasant surprises I had was finding out one of the pharmacy students who volunteered was a DKICP student! Although the experience did not count for a rotation she was exceptionally hard working and was an integral part of our pharmacy operation in some of the busiest and most difficult countries. Since it was such a unique experience we thought it might be a good idea to share some of our experiences and thoughts, one from a graduate and military Officer and the other from a civilian 4<sup>th</sup> year student. I hope you all enjoy.

**TT:** *It's my fourth year of pharmacy school. Three long years of drug knowledge packed inside my brain just waiting to be released into real-world applications. What better way to do this than by killing two passions with one capsule: aiding the underserved while travelling across the world. I embarked on the T-AH 20 Comfort Hospital Ship, ready to give my all from physical work to pharmaceutical knowledge. Although the mission was an incredible experience, what made the trip remarkable was that I was able to work with DKICP inaugural class alumni, Lieutenant Garret Hand!*

**GH:** The mission is called Continuing Promise because it has been ongoing since 2007 and aims to make a lasting



impact and partnership with the places it visits. The 6-month mission took place in 11 countries in the Caribbean, Central, and South America. The purpose of the mission is to provide fleet medical support and humanitarian aid and response training with partner nations in the form of mobile medical clinics. There were also about 100 surgeries performed for each country. The ship that makes this possible is the USNS Comfort. An oil tanker converted into a massive floating hospital, which carries about 1,000 medical, logistical, and ship personnel. Aside from the amazing travel experience it was exciting being involved with a purpose at the very roots of medical and pharmaceutical care; a chance to provide health care across vast borders to underserved populations and those in need for free.

**TT:** *Continuing Promise is no joke. The operation was run solely by hundreds of highly trained, dedicated health Navy personnel. The civilian medical volunteers are expected to follow the same standard, which is why the screening process to be accepted onto the mission is very selective. It requires the volunteer to complete a lengthy application consisting of multiple essays and letter of recommendations as well as a letter from the Dean. Thankfully, the DKICP provided me with a rich background in healthcare and community service to qualify for this mission.*

**GH:** The journey was one of contrasts and extremes. From healthy and wealthy to homeless and starving, patients seeking treatment for acne to those with advanced syphilis or filariasis. As is often the case in health care, the execution of complex and varying services and environments is a logistical challenge. Going into it I had many questions. What medications would we carry, how would they be dispensed, how would patients be counseled, and what contributions could I make as a pharmacist? The answers revealed themselves and it turns out there are many opportunities for pharmacists to provide expertise.

**TT:** *I, too, had many questions going into the mission. But there were some things I knew for sure. Uniforms means I don't have to worry about what I'm going to wear and a cafeteria means I don't have to cook!*

*Pharmacy-wise, I prepared myself for is the fact that guidelines won't always apply when working in third-world countries. This is because #1, the guidelines that we follow are based on clinical trials whose subjects are those from first world-countries. #2, because the treatment options recommended in those guidelines may not be on the ship formulary. And #3, we had physicians from various different nations who followed their own guidelines. Since, as students, we've been conditioned to always back our clinical decisions by citing guidelines, my only worry was getting comfortable with straying from guidelines upon coming back to the US!*

*As for counseling, I knew I needed to be acquainted with the languages spoken in Honduras, the Dominican Republic (aka DR) and Haiti. Although we had wonderful translators in each country, I'm glad I reviewed my Spanish because even the few phrases that I knew proved to be extremely helpful in DR and*

*Honduras. "Tome una pastilla por la boca..." for days. Haiti on the other hand was a different story. Haitians speak a French-based creole, which is very different from the French we learned in high school. For example stomach pain, "doulè nan lestomak",*



*Thy Ta (left) and Dr. Garret Hand*

*can actually mean chest pain! A deadly misnomer if we aren't careful. Lt. Hand and I had a great time to learning about the culture and both agree that living in Hilo helped us become more culturally sensitive when it comes to counseling this patient population.*

**GH:** Before I dig into the details some broader perceptions and snap shots should be laid out. For me, the experience was surreal. Long hours and a seemingly endless amount of medications to pre-pack were punctuated by exotic vistas, adventurous trips to shore and unexpected patient and VIP encounters. As a highly exotic floater pharmacist I couldn't have anticipated spending 9 days camping at a school in Belize, taking helicopters to shore every day in Nicaragua, or a 1.5 hour boat ride to an area in Columbia that wasn't accessible by vehicles. Unless there is an unforeseen and shining career change in store for me, I will likely never walk into a pharmacy or hospital to a crowd of thousands of cheering patients.

**TT:** *Although most volunteers dreaded the long days and the uncomfortable living conditions on and off the ship, I relished every minute of it. From sleeping on the small cots to the less-than-gourmet "Meal, Ready-to-Eat" food rations, I was living*



the military life, which is something a brave few will ever be able to experience. Wake-up was at 5 am on some days followed by a sticky humid tender trip to shore, and then a bumpy bus ride to the med sites. All day long, we'd bask in the heat, drinking liters of artificially flavored electrolyte water and then sweating it all out. Packets of freeze-dried, acidic, and bland tasting "Coffee Type III" became my new best friend.

Hundreds of prescriptions needed to be filled, checked and rechecked. Pediatric dosing seemed to be where there was the most discrepancies between countries. This was fine with me because proper pediatric antibiotics, acetaminophen and ibuprofen dosing will forever be engrained in my head.

We retreated to the ship by about 5 p.m. each day. By then, we wanted nothing more than to eat a warm cooked meal and take a long shower to wash off all the dirt that stuck to our sweat throughout the day. A muster closed out the workday. This is a daily meeting between all pharmacy personnel to ensure everyone is on-board and to go over the details and logistics of the day

**GH:** The patients ranged from those just curious to see U.S. healthcare that received well care visits to those beyond the help of any medicine. There were chances to visit local pharmacies and hospitals to observe the profession in other countries, locations where sterile compounding isn't possible. The highs are the adults and children who, had they not come, would have gone untreated for severe infections or diagnoses that are life threatening. Some could be brought on board for much needed surgeries, including Operation Smile patients for cleft lips and palates. The lows are the



terminal patients who needed medications or services we didn't have or would have been too late. The typical filter of triage that separates patients in larger systems became a single line of admittance and discharge with wide ranging



services between. Follow-up care was coordinated as much as possible with the host nations. This ranged from an almost unbelievable level of cooperation in some countries to sparse options in others.

**TT:** The ship was scheduled to stay in each country for about 9 days. Therefore, patients who received the greatest impact were those with STI or other severe infections, or those that required operations that required minimal post-operative care. Most patients were prescribed both multivitamins and acetaminophen. That drug combination, or what came to be known as "combo #1" amongst the pharmacy crew, was also given to patients with chronic conditions or diseases, because we did not have the means to treat or monitor their conditions. Although many of these patients waited overnight in the streets to get care for their chronic conditions, they were still grateful to receive any kind of medication.

**GH:** Now for the nuts and bolts of the pharmacy operation. Although we had several hundred different medications on board in support of surgical operations and crew care, the onshore medical sites were limited to a formulary of 83 different medications. The formulary was determined leading up to the mission dependent upon what services and specialists would be coming along. For us this included optometry, dental, dermatology, cardiology, pulmonology, gastroenterology, women's health, internal medicine, family medicine, and pediatricians. The bulk of medications for the 6 months were delivered before leaving the U.S., which meant we used a good amount of storage on the ship. To adjust to realizations of demand and previous short supplies a few resupplies were coordinated while underway. All countries received a roughly equal amount of medications and what wasn't used was donated to each specific country at the end of our service there. Meds were pre-packed in bags and labeled in the appropriate language. Each country had 2 medical sites operating simultaneously, each serving from 400-1400 patients per day depending on location and population. Meanwhile 4-5 operating rooms

ran during the day on the ship. Our average number of prescriptions was 800 per site with peaks at over 1700 per day. Each site had 1-2 pharmacists and 3-4 technicians working about 8 hours per day. Translators that assisted with dispensing were vital to safe and smooth operations. High volume meant running out of meds, that's where substitution and working with providers to determine alternatives became essential

"Jungle medicine" meant that providers got creative as medication supplies dwindled and off-label or second and third line options became the standard. With new-found prescribing creativity came the added professional opportunity to make valid clinical interventions while referencing available resources. A revealing truth of humanitarian care in improvised practice settings is that the presence of pharmacists is simply vital. Beyond the obvious distributive and supply functions lies the necessity of trained professionals standing in for safety and correct pharmaceutical care where technology and process engineering are absent to prevent or limit prescribing errors. Jungle medicine meant expanded practice privileges such as rewriting prescriptions in Spanish for items we were out of so that local pharmacies could fill them in certain countries, substituting medications to complete alternate classes and dosing, or giving out up to a year supply of medications. It meant being astonished as a minority of patients, in a seemingly destitute surrounding, declined receiving multivitamins when they had no treatable diagnoses because our tablets were not the brands they liked! But then there would be a striking emaciated figure for whom I wished I could give so much more... Jungle medicine meant using whatever resources we had that day to do the best for our patients."

**TT:** *I was told to know my antibiotics and when worst comes to worst, be prepared to turn "jungle-medicine." At that time, I had no idea what that meant but it wasn't long until I was speaking Tarzan. For example, Haiti had the highest rate of vaginal infections of all eleven countries. Usually, we would have a surplus of vaginal cream in pre-filled applicators. But for Haiti, we completely ran out of Monistat®, its generic, and clotrimazole*

*vaginal cream within a matter of days. However, we did have plenty of clotrimazole in tubes used to treat athlete's foot and other fungal skin infections. The tricky part was figuring out a way to get those tubed clotrimazole to the area of interest, intravaginally. We had very few resources on-site: measuring cups, blank labels, tiny bags, medicine bottles and last, but certainly not least... children's dosing syringes. Can you guess what happened next? We counseled our patients to draw up the clotrimazole cream into the dosing syringe and inject it intravaginally once a night. Problem solved.*

**GH:** In retrospect, when talking about UH Hilo with Ms. Ta, I realized attending pharmacy school in Hawai'i likely afforded me cultural experiences that I wouldn't have found elsewhere. Hawai'i is an open melting pot and the patient care experiences I had as a student with patients who spoke other first languages were many. I firmly believe learning to counsel patients and practicing pharmacy in that environment helped me become better prepared for this humanitarian experience. Sure, other cities in the U.S. have mixed cultures and languages, but Hawai'i has Aloha and that is exactly the attitude to have when providing care across borders.

**TT:** *The DKICP has done a phenomenal job in qualifying and preparing me for Continuing Promise 2015. This involves being an active member of the Pacific Islander Mobile Screening Clinic (P.I.M.S.C.), working in the health fairs, having first hand experiences in the hospital, clinic and pharmacy setting during our community-outreach centered IPPE rotations, and of course our patient-centered pharmaceutical curriculum. Similar to the Pacific Islander cultures we immerse with in Hawai'i, the cultures that we encountered on the missions also practiced their own traditional medicine and had their own views about western medicine. As healthcare professionals, we need to be cognizant and respectful of these views and practices, and learn to work with them. I am so lucky to have met and be under the mentorship of Lt. Garret Hand. It is promising and encouraging to know that this hard-working, multitalented pharmacist was bred from the same institution as I; that I will harness the same knowledge and skills as he to pursue and conquer amazing initiatives.*

## Stay in Touch

Note to all DKICP alumni. Please send updates to [pharmacy@hawaii.edu](mailto:pharmacy@hawaii.edu)