

*One who mixes ingredients, drugs or medications: a pharmacist*



# Kāwili Lā'au

Winter 2012 • Volume 4, Issue 2



## INSIDE

- Meet Grace Miyawaki, friend to the College of Pharmacy
- Class of 2015 recites oath in White Coat Ceremony
- Third Annual Health Fair declared a success

# Dean's Message



As we enter a New Year, invariably we find ourselves reflecting on accomplishments and planning for the future. At the College of Pharmacy, we can look back with pride and fulfillment, and look ahead with hope and promise. Naturally, of the many things we look forward to achieving this year, one particular item dominates: the construction of our permanent College of Pharmacy building. We must remain focused on this goal, a goal that will everlastingly transform the history of pharmacy in Hawaii and the Pacific and one that is absolutely necessary for our success.

On a much more personal level, the joyful face of Grace Miyawaki on our cover and her story in this issue serves to remind us of the importance of the history of pharmacy. Not only can she fill in the blanks on many aspects of the evolution of the profession, she is a symbol of the value of education. And she is a friend of the

College of Pharmacy.

For a College of Pharmacy, indeed for all academic institutions, the gathering of friends is more critical than the popularity contest implicit in online social networks. My 9-year-old son, Michael, once said when he was having a bad day, he would think of his friend and he felt better. Friends are our support system that will help us through days that seem impossible, and they're the ones we reach to when we have milestones to celebrate.

We owe a debt of gratitude to the many friends in Hawaii who have shown great faith in us from the very beginning, people such as Grace Miyawaki, and to so many more who stop me on the street or in the supermarket to tell me how excited they are about what we are doing. They say thank you for helping to transform our community into a better place. They realize the void that existed before the College of Pharmacy was created. It is heartening to know the citizens of our community are paying attention, we're on the right path, and the education of our youth is imperative.

The community continues to play an important role in the education of our students, as evident by the enthusiastic participation at our third annual health fair. The range of interest was well exemplified by a local candidate for the US Senate who mingled with elementary school children to learn about preventative health care. The age diversity in the population we serve is inspirational.

Each story in this issue illustrates how our students have opportunities unlike anywhere else in the world. From the veterinarian to the teachers, from the politician to the business sector, we are touching lives and people are touching ours. They may not become supporters immediately, but once they become aware of the sincerity of our students, once they have contact with more of our dedicated faculty through community projects and service, they can better understand our dedication to improving health and health care in Hawaii and throughout the Pacific.

We are all familiar with the proliferation of pharmacy schools on the US mainland. I am sometimes asked if this is a problem, and I have to admit that it is in fact a problem because it illustrates short-term exploitation and creates a non-sustainable scenario. Our response is to be better than the rest. We are the only College of Pharmacy in Hawaii and in the Pacific, not the seventh start-up in a state where there is no demonstrable need, as is the case for some of our competitors. We will continue on our path of becoming a top-ranked program through excellence in teaching, research, and scholarship, and, of special note, community service.

To loyal supporters such as Grace Miyawaki, our hat is off. To all of our friends and supporters, I hope you will share our pride in constructing a program and a building that will provide a permanent place to learn that should be the first choice for students, not just a convenience, and will be a focal point for the community.

Best wishes to all for a happy, healthy and prosperous New Year!

A handwritten signature in black ink, appearing to read 'John M. Pezzuto'. The signature is stylized and fluid.

John M. Pezzuto  
Professor and Dean



## Kāwili Lā'au

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the University of Hawai'i at Hilo



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of HAWAII  
HILO

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### ON THE COVER –

Margaret Shiba (left), Senior Director of Development, UH Foundation, Grace Miyawaki and  
CoP faculty member, Mimi Pezzuto met in Hilo in November.

# The face of CoP friendship: Grace Miyawaki

Even though Grace Miyawaki retired from her successful career as a hospital pharmacist at Kuakini Health System, she is still active in the profession by being an avid supporter of UH Hilo's College of Pharmacy.

A firm believer in education, she supports both the College of Pharmacy and the University of Hawai'i-Manoa Shidler School of Business, from which she received her MBA, with a scholarship to a student from each school.

"I am humbled and honored to call Grace Miyawaki a friend to the College of Pharmacy," said Dean John Pezzuto. "Her experiences in the field are invaluable to our faculty as well as our students, and I hope we can continue to build on that knowledge base for a very long time to come."

Ms. Miyawaki said she remembers how much a stipend from the Charles Pfizer Fellowship in Hospital Pharmacy helped her when she was working for her master's degree in pharmacy at Temple University in Philadelphia. She also remembers having to go to school in Philadelphia because there was no pharmacy school in Hawai'i at that time.

"I didn't have the choice to stay home when I decided to go to pharmacy school so I had to go to

the mainland," said the Honolulu-born pharmacist, who has two degrees from Temple University in Philadelphia. "We were all very happy when we heard there was going to be a College of Pharmacy in Hilo. I'm proud to be a supporter."

Originally planning to be a lab tech, she was encouraged to look into pharmacy school by a family doctor. She chose to go to the east coast in 1948 to study pharmacy because she had an interest in historical places.

Philadelphia and the Temple University School of Pharmacy were equally rich with American history. Founded in 1901, Temple's pharmacy school was one of the first to be accredited to offer the bachelor's degree by the Accreditation Council for Pharmacy Education (ACPE) in 1938.

At that point in time, people on the mainland had very little information about Hawai'i even though it had been a U.S. territory for more than 50 years.

"People would be surprised that

I spoke English even though I grew up speaking it," she marveled. "Things were different then."

Also strikingly different in the middle of the 20<sup>th</sup> century were gender issues. For example, men could live anywhere they wanted, but women had to live in dormitories. She estimates only about 10 percent of pharmacy students were women when she was in school. That's compared to 61 percent women in 2010, according to statistics from American Association of Colleges of Pharmacy (AACP).

But Ms. Miyawaki succeeded irrespective of gender. Despite the death of her father after her freshman year, she completed her Bachelor's degree in 1952. She worked for four years in both community and hospital pharmacy in Honolulu to save money to return for her master's. She was awarded a Pfizer fellowship that allowed her to return to Temple and complete her Master's Degree in Hospital Pharmacy.

Returning to her home base



in Honolulu, she worked in retail pharmacy. "When I first started working in community pharmacy, patients would question me because I looked young, but also because I was female."

That changed when she accepted a job as hospital pharmacist at Kuakini Health Systems where she ultimately supervised 10 pharmacists. She worked there until her retirement in 1989. Retirement has good points and bad points, she said.

"It's nice not to get calls in the middle of the night any more," she said laughing. The pharmacists usually knew what to do in the case of an emergency; their questions were largely procedural. But she loved her job.

"It upsets me when people think all we did was count pills," said Ms. Miyawaki. "We did so much more than that even though we didn't have as much patient interaction then."

Her staff included a clinical pharmacist who reviewed charts. Her operation had two laminar flow hoods and a separate room as well as another laminar flow hood for compounding chemotherapy drugs. Sterility was a key concern, and IV technicians, supervised by pharmacists, used foot-operated faucets.

She watched technology change the profession in her 30 years. For example, prior to computerized

labeling, pharmacists typed the labels for the pill containers on a manual typewriter and later electric typewriters.

"We didn't put the strength of the drug on the label or even the name of the drug," she said. "We just told the patient to check with their doctor. Communication is much more open now."

Pharmacists had limited contact with patients when she started out in the field. By the time she left, patients were coming to her to go over the medication list and the pharmacist had more of a chance to develop a relationship with patients.

Since retirement, she has discovered many ways to keep active. She's played bridge for several years, though said she's still learning. She has traveled extensively worldwide, and visited relatives in Japan several times. A Japanese calligraphy class, taught by a retired Buddhist priest, helps her

practice speaking Japanese to the other students, many of whom are from Japan. This will come in handy for future trips.

She also volunteers at the University of Hawai'i Thrift Shop, where the proceeds fund scholarships. Other volunteer work takes her to the J. L. Gressitt Center for Research in Entomology at the Bishop Museum, where she helps to preserve insects and does whatever she's asked to do. Her latest job was transferring insects to another container and filling it with alcohol.

"I think some of the bugs are really gross but the butterflies are beautiful," Ms. Miyawaki noted.

She depends on UH Hilo's College of Pharmacy to help keep her in touch with her beloved profession, and her scholarship fund has helped students stay in Hawai'i to study pharmacy the way she never could.

**“ I didn't have the choice to stay home when I decided to go to pharmacy school so I had to go to the mainland,” said the Honolulu-born pharmacist, who has two degrees from Temple University in Philadelphia. “We were all very happy when we heard there was going to be a College of Pharmacy in Hilo. I'm proud to be a supporter. ”**



# Class of 2015 White Coat Ceremony

On October 16, Associate Dean Edward Fisher led 92 pharmacy students from the class of 2015 in reciting the Oath of a Pharmacist at the College of Pharmacy White Coat Ceremony beginning at 2 p.m. in the UH Hilo Performing Arts Center.

The ceremony is a rite of passage for students entering their first year in the professional program to affirm their commitment to professionalism, respect, integrity and caring.

In addition to Dean Pezzuto, speakers included UH Hilo Chancellor Donald Straney, Pat DeLeon, former Chief of Staff for Senator Daniel K. Inouye, and Hawai'i State Representative Jerry Chang. Also speaking were Nancy Huang, Walgreens district pharmacy supervisor for Hawai'i, and CoP Preceptor of the Year Miles Nakatsu, RPh, from Ululani Pharmacy. (Photos by Robbyn Peck and Maggie Morris)





Walgreens Corp. sponsored the Class of 2015 White Coat Ceremony. Dean Pezzuto accepted a check from Nancy Huang, District Pharmacy Supervisor from Hawai'i along with other Walgreens representatives Sheena Hokutan, Heidi Muniz and Max Alipio.



# Health Fair 2011

The third annual Health Fair was held in a new location this year in the center of campus from 9 a.m. to noon on Sunday, October 16 at the UH Hilo Campus Center. Students and faculty presented activities that promoted healthy living, such as a “brown bag” medication check as well as blood pressure, cholesterol and glucose screenings. Other activities also included a diabetes cooking lesson, yoga demonstration and zumba class.

With more than 20 educational booths, six screening booths, and six community participant booths (HMSA, Bay Clinic, Life Center, Jill Dawrs

Chiropractic, Food Screenings with Dr. Rand Mundo and Aloha Care), the Health Fair drew in more than 200 participants from the community.

A new addition to this year’s health fair was the new initiative of the “Kid’s Poster Contest.” In partnership with local elementary schools, more

than 40 children entered the contest with art work depicting their definition of “Healthy Living.” Community businesses donated prizes to award winning children in each category.

*Kyle Kumashiro, Class of 2014, checked blood pressure for Patrick DeLeon, former Chief of Staff for Sen. Daniel K. Inouye, who was in Hilo to speak at the White Coat Ceremony.*



*Diem Le, Class of 2013, explains asthma control to Dr. Ken Morris, Professor of Pharmaceutical Sciences.*

*Paul Tallett, a long-time CoP supporter, discusses bone health with Matthew Mullahy, Class of 2013.*





Left to right, Student Services Specialist Ana Sofia Barrenechea, Assessment Coordinator Dr. Paula Zeszotarski and Dean Pezzuto take a minute to pose at the Health Fair 2011.



Dr. Katharyn "Kay" Daub, Director and Chair of the School of Nursing, stopped at Hilo Medical Center's booth.

Michelle Kim, Class of 2014, demonstrates how medications are made.



# Public shows interest in rat lungworm disease at College of Pharmacy forum

Even the name of the disease conjures up old Twilight Zone episodes and horror films: rat lungworm disease. The rare parasitic infection has been reported to have devastating effects when transferred to humans, and can lead to coma, paralysis and death.

But there is some comfort in the fact that there are experts on the disease in Hawai'i gaining knowledge about the potentially life-altering condition.

Susan Jarvi, Associate Professor in the College of Pharmacy and Director of the Pre-Pharmacy Program, organized and served as moderator for a panel of scientists, health professionals and community educators who spoke to a capacity crowd of largely community members Nov. 9 on the UH Hilo campus.

More than 100 concerned citizens, some victims of the disease, filled one classroom at the College of Pharmacy's temporary headquarters on South A'ohoku, and overflowed to another classroom set up with video conferencing.



**“This disease isn’t specific to Hawai’i,” Dr. Jarvi told the audience. “Rat lungworm disease has been reported in more than 30 countries, including Thailand and China.”**

– Dr. Sue Jarvi

“This disease isn’t specific to Hawai’i,” Dr. Jarvi told the audience. “Rat lungworm disease has been reported in more than 30 countries, including Thailand and China.”

Dr. Jarvi, who was an invited participant in the International Rat Lungworm Workshop on O’ahu in August, is coordinating efforts to consolidate available educational and research information toward establishing a Center for Rat Lungworm Studies here on the Big Island.

“This potentially debilitating disease can be prevented but it takes a great deal of diligence and educating the public, and our health professionals, to recognize the threats,” Dr. Jarvi said. “I’m hoping to increase our bank of knowledge through applying for grants and conducting more research, but the bottom line is that people need to know what it is and what they can do to avoid becoming infected.”

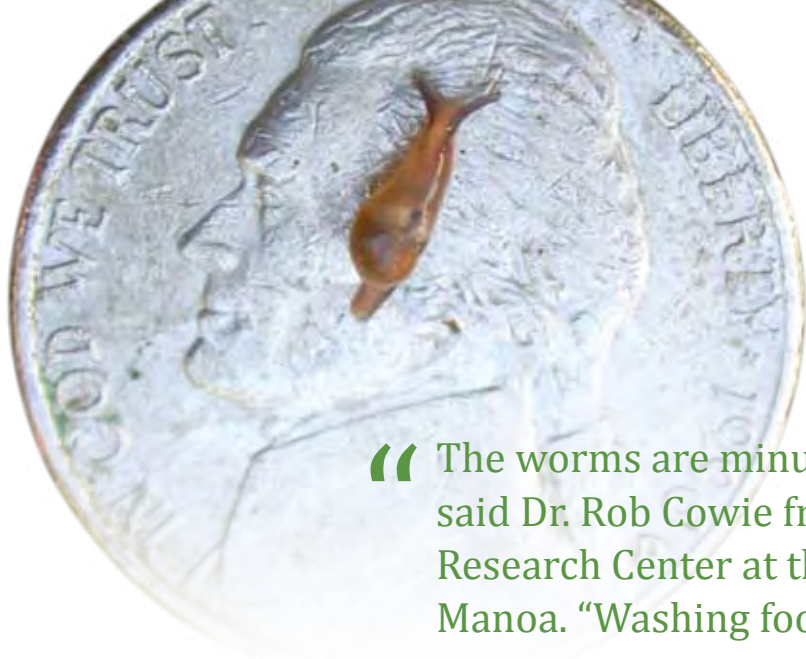
The disease-causing organism (*Angiostrongylus cantonensis*) reproduces in rats and is transferred to slugs and snails. Eating raw snails and slugs, intentionally or unintentionally, infects people, and the larvae can hide in salads or other uncooked vegetables.

“The worms are minute in their first stage,” said Dr. Rob Cowie from the Pacific Biosciences Research Center at the University of Hawai’i at Manoa. “Washing food carefully is the key.”

Undercooked or raw snails, are a delicacy in Thailand, but people also can become infected while preparing to cook them. He said there was no record of people getting the disease by drinking contaminated water or from contact with an open wound.

Larvae enters the nervous system through the intestines, leading to eosinophilia enteritis, which can cause abdominal pain, nausea and diarrhea. It eventually travels to the brain, said Dr. Jon Martell, Associate Professor of Medicine at the University of Hawai’i, John A. Burns School of Medicine.

Diagnosis is made indirectly by piecing together a patient’s history and exam, but the first CAT scan and MRI is usually normal, he said. Only a few labs currently conduct blood tests and getting the results take too long to do any immediate good.



The slug on the nickel shows how small the carriers of rat lungworm larvae can be. (M. Dixon, Hawai'i Department of Health)

“ The worms are minute in their first stage,” said Dr. Rob Cowie from the Pacific Biosciences Research Center at the University of Hawai’i at Manoa. “Washing food carefully is the key. ”

Symptoms include headaches, nerve pain, sensory disturbance, urinary problems, ascending paralysis, weakness, coma and, in some cases, he said, death.

“This disease is a self-limited illness because the larvae eventually die,” he told the audience. “But a lot of damage can be done as the worms travel through the central nervous system.”

Kay Howe knows first-hand the destruction left behind. Her son contracted the disease in December of 2008. It took three visits to the emergency room before doctors admitted him and diagnosed him with rat lungworm disease. He spent two and a half months in a coma, and the last three years working with his Mom, an educator who worked with doctors to combine their medicinal approach with more non-traditional methods, to achieve almost full recovery.

“I’ve spent the last three years trying to make sure other people don’t have to go through what we went through,” she said.

Dr. Ann Kobsa, Vice-President & Invasive Species Coordinator from Malama O Puna, an environmental nonprofit organization, encouraged the audience not to be so fearful that they won’t eat local fresh foods and offered this advise:

- visually inspect all produce
- throw away anything suspect
- eat more cooked produce

Other panelists included Marlena Dixon, Hawai’i Department of Health; Dr. Rob Hollingsworth, U.S. Department of Agriculture, Pacific Basin Area Research Center; and Jim Hollyer, University of Hawai’i at Manoa Director of Agricultural Development in the American Pacific Program,

College of Tropical Agriculture and Human Resources.

The forum was a public service by the UH Hilo College of Pharmacy, and sponsored by the National Institute of Food and Agriculture, the US Department of Agriculture, UH Manoa, and Big Island Global HOPE.



From left to right, Dr. Rob Hollingsworth, Dr. Rob Cowie, Dr. Susan Jarvi and Dr. Jon Martell spoke to more than 100 people who attended “Rat Lungworm Disease: What DO We Know?” at the College of Pharmacy Nov. 9.

# Big Island teachers team with College of Pharmacy at engineering workshop

**T**wenty-nine local teachers will be better equipped to introduce engineering concepts to their students after attending a workshop during their Christmas break. The workshop was led by the College of Pharmacy on the UH Hilo campus Dec. 16.

“Engineering plays an important role in many careers, including pharmaceutical manufacturing,” said Ken Morris, professor of pharmaceutical sciences who led the one-day workshop that provided tools teachers need to inspire students to look into engineering careers. “This represents a huge opportunity to address many issues on the Big Island from energy generation to the observatories, to roads and bridges.”

The program is funded through a grant from the National Science Foundation Engineering Research Center on Structured Organic Particulate Systems (NSF-ERC-SOPS), with UH Hilo as an outreach partner.

The opportunity to attend the workshop was offered to faculty members at the Hilo-Laupahoehoe-Waiakea Complex who teach in science, technology, engineering and math, known as STEM disciplines. Future plans are to offer the workshop to all Big Island school complexes.

“We hope this will provide a natural link to training students in engineering at the undergraduate level at UH Hilo and other UH campuses,” Morris said.



*Dr. Ken Morris (at microscope), Professor of Pharmaceutical Sciences, demonstrates crystal structures on video to teachers from Hilo-Laupahoehoe-Waiakea Complex in a College of Pharmacy workshop on teaching engineering concepts at UH Hilo.*

The course combined classroom instruction with hands-on activities and laboratory exercises that focused on understanding engineering concepts and methods. Raj Davé, Distinguished Professor of Engineering at New Jersey Institute of Technology (NJIT), was both an instructor and advisor for the College of Pharmacy on the engineering-specific content of the workshop. UH Hilo instructors included Mahavir Chougule, assistant professor in pharmaceutical sciences, and Mazen Hamad, assistant professor in chemistry. Xinyan Wang undergraduate engineering coordinator at UH Hilo, organized the workshop with Bess Jennings, one of three state Department of Education (DOE) STEM resource teachers on the Big Island who attended the workshop.

“The workshop gave teachers a better understanding of the range of careers in engineering and how to interest their students in the subject,” Jennings said. “This is important because the discipline

of engineering is a key aspect of the focus on revitalizing teaching and learning through STEM-based education.”

Ms. Janice Harvey, Community Outreach and Education Programs Leader at the Hawai‘i “Journey through the Universe” project at the Gemini Observatory, helped link the CoP driven effort with her school system network in an introductory session to principals this summer. Superintendent Valerie Takata led the effort with the Hilo-Laupahoehoe-Waiakea Complex area schools.

The collaboration between the Hawai‘i Department of Education and UH Hilo College of Pharmacy (CoP) should result in more students understanding engineering concepts and possibly choosing careers that will help build a better Hawai‘i. Teachers rated topics they would be interested in learning more about for a future three-to-five day workshop.

“I want to introduce my middle-school students to careers in

engineering, so lessons that deal with relevant activities that highlight careers in STEM fields would be great, especially for Hawai‘ian jobs,” one of the teachers said in a review of the class. Many teachers also said they would like to see future workshops geared to elementary level students.

“K-12 students could benefit from more exposure to these concepts so they can get excited about careers in these important developmental fields,” Davé said. “Teachers who teach STEM classes are key to communicating that excitement; particularly those who are exposed to what engineering is all about such as in this workshop.”



*Dr. Raj Davé, Distinguished Professor of Engineering at New Jersey Institute of Technology (NJIT), was both an instructor and advisor for the College of Pharmacy on the engineering-specific content of the workshop.*



*Dr. Mahavir Chougule, Assistant Professor in Pharmaceutical Sciences, gave teachers a tour of pharmacy labs.*



*Dr. Mazen Hamad, Assistant Professor in Chemistry, demonstrated making tablets.*



*Twenty-nine local teachers attended a workshop at the College of Pharmacy during their Christmas break to learn about engineering concepts.*

## Dr. Rose Tseng appointed CoP Coordinator for International Affairs

**D**r. Rose Tseng, faculty with the College of Pharmacy (CoP) since stepping down as UH Hilo Chancellor in 2010, has been appointed CoP's Coordinator for International Affairs in addition to being a full professor of CoP and an Advisor for the Chancellor.

In her new added role, she arranged a visit from a delegation of distinguished administrators from Zhejiang University, who met with CoP's administrative team on October 6-7 to discuss how the two institutions can develop more collaborative projects.

The meeting, held in the large conference room at the Institute for Pacific Island Forestry, was part of Zhejiang University's fact-finding tour of UH Hilo. The two universities entered an agreement in 2009, spearheaded by Dr. Tseng, in order to develop common areas of interest.

"We are exploring different options and the potential of a joint degree and research collaborations," Dr. Tseng said. "It has taken several visits and many communications. I would like to see if we can build upon the relationship and make it more comprehensive than the original agreement."

Dean John Pezzuto welcomed the delegation to Hilo and outlined the highlights of the College of Pharmacy. Dr. Dianqing Sun, Assistant Professor in Pharmaceutical Sciences, was present to bridge languages when required.

"This was an excellent opportunity to do some creative brainstorming with our colleagues from China, and it was invigorating to have a chance to discuss ideas about future endeavors,"



*A delegation of distinguished visitors from Zhejiang University in Hangzhou, China, met with CoP faculty and administrators Oct. 6-7.*

Dean Pezzuto said.

The delegation included Vice President Dr. Jianmin Si; Ms. Meifeng Zhang, Director, Alumni Affairs and Executive Secretary General; Mr. Chen Wu, Deputy Director, Alumni Affairs and Executive Secretary General; Dr. Xiaoe Lou, Vice Dean, College of Pharmaceutical Sciences; Ms. Chunhui He, Deputy Director, Zhejiang University Archives; and Ms. Canyan Zhang, Deputy Director, Secretariat Office, Zhejiang University Alumni Association.

Dean Pezzuto said that appointing Dr. Tseng to direct international relationships was a natural progression in her career that blends nicely with other work at UH Hilo. She brings decades of experience to the job.

Born in China, Dr. Tseng was the first Asian woman to head a four-year degree-granting institution in the U.S. She is fluent in both oral and written Chinese language and culture. She was a principal consultant for the Food and Agricultural Organization of the United Nations (FAO) in the late 1980s for six years. In this function, she traveled to China many times. In addition, she always had some relationship with universities in Asia. Dr. Tseng was an invited speaker for a major higher education conference just last month.

"As a chancellor, I always believed Hawai'i was in a unique position to build upon our geographic location to improve connections between

the East and the West and in doing so gradually build our niche," said Dr. Tseng. "The primary focus as a university is to meet our mission to offer a high-quality professional programs."

Additionally Dr. Tseng said she sees this appointment as a chance to continue to fulfill her long term interest and commitment to help improve quality of life and promote the marriage of east and west research.

"As long as my work is for the greater good of the world, I hope to continue this line of work," she said. "Zhejiang University is the first university where we have discussed these possibilities, but we are considering other institutions in China and other Asian countries as well. And it won't happen overnight. Each partnership requires a lot of work including traveling. Partnerships are about building personal relationships and trust. I am willing to take on this added task as my regular assignment, hoping to strengthen further the reputation of our College of Pharmacy."

Zhejiang University, at almost 100 years old, is one of the earliest institutions of higher learning in China. The College of Pharmaceutical Science is one of the 23 colleges at the university, located in the beautiful city of Hangzhou, about 180 miles from Shanghai.

# College of Pharmacy scholarships increase more than 3-fold for 2011–2012 academic year



Students enrolled in the PharmD program at UH Hilo were awarded \$262,477 in scholarships for the 2011–2012 academic year. That's a more than three-fold increase in scholarship funds from last year.

"The scholarship program has been growing each year and we are fortunate to have such generous donors," said Liz Heffernan, Director of Student Services. "More students were given Merit Awards and six new scholarships were added this year."

All UH Hilo College of Pharmacy scholarship funds come from a variety of sources such as private donors, professional associations, and state and local business firms.

The purpose of the UH Hilo College of Pharmacy scholarship program is to recognize and reward students who have demonstrated outstanding academic performance and have shown a commitment to leadership and community activities within the college. Many awards also consider financial need. The scholarship awards imply the expectation of continued exceptional performance and leadership by the recipients in the years ahead. Scholarships are contingent upon availability of funds and the continued commitment of our generous sponsors.

## Awarded via College of Pharmacy and the UH Foundation:

### Aloha Shoyu Pharmacy Scholarship

Scholarships are for full time students enrolled in the PharmD program. Preference is given to students who have graduated from a high school in Hawai'i.

**Recipient: Denis Kobashikawa, Class of 2014**

### Community Health Center Success Scholarship in Pharmacy

The purpose of this award is to provide an annual scholarship to support one UH Hilo College of Pharmacy student through four consecutive years in the PharmD program. To be eligible for consideration students must have graduated from a high school in the state of Hawai'i. Preference for this award is for students with an interest in pursuing a career as a pharmacist in a community health center setting and with prior volunteer or work experience, preferably in a federally qualified community health center setting, or alternatively in a hospital.

**Recipient: Edwina Leung, Class of 2015**

### CoP Inaugural Class of 2011 Scholarship

Scholarships are for full-time students who are pursuing

a PharmD degree at UH Hilo. Recipients must demonstrate leadership and community service that promotes the CoP. This scholarship is available to second, third and fourth year students only.

**Recipient: Daniel Hu, Class of 2012**

### CoP Wal-Mart Scholarship

Scholarships are for full-time students who are pursuing a PharmD degree at UH Hilo. Recipients must have desire to enter community practice upon graduation and demonstrated evidence of leadership. Preference for this award will be for individuals who have achieved high academic standing over the past three years and have previous experience in community practice. The amount of the scholarships will be based on the availability of funds.

**Recipient: Irene Chaisri, Class of 2012**

### CVS Caremark

Scholarships are for full-time students who are pursuing a PharmD degree at UH Hilo. Recipients must have an interest and commitment to practice in a retail pharmacy setting upon graduation. This scholarship will not be awarded twice to the same individual. The number and amount of the scholarships will be based on the availability of funds.

**Recipients: Class of 2012: Alicia Loh, Catherine Fadrowsky, Henry Tran, Kelly Kwok; Class of 2013: Cheryl Lopez**

### Elwin and Valerie Goo Endowed Excellence Scholarship

Scholarships are for full-time students who are pursuing a PharmD degree at UH Hilo. This scholarship is available to third year and fourth year students.

**Recipient: Shanelle S Shimabuku, Class of 2013**

### Good Neighbor Pharmacy Scholarship

The purpose of this award is to provide scholarship assistance for third or fourth year students enrolled in the University of Hawai'i at Hilo College of Pharmacy. Funds shall be used for costs associated with attendance (tuition, books, fees, etc.). Recipients must show academic merit as demonstrated by a minimum cumulative GPA of 2.5. be a student member of the National Community Pharmacists Association for at least six months, provide evidence of community service. In addition, preference shall be given to past participants of the NCPA Student Business Plan Competition.

**Recipient: Christine Lucas, Class of 2013**

### **Grace Miyawaki Pharmacy Scholarship**

Scholarships are for full-time students who are pursuing a PharmD degree at UH Hilo. Preference is given to students who have graduated from a high school in Hawai'i and demonstrates some degree of financial need.

**Recipient:** Alice Hwang, Class of 2012

### **Haga Family Endowed Scholarship**

Scholarships are for full-time students who are pursuing a PharmD degree at UH Hilo. Selection will consider both academic merit and financial need. Preference is given to Big Island High School graduates.

**Recipients:** Class of 2013: Christine Lucas; Class of 2014: Miho Aoki and Nicole Tabandera

### **Hawai'i Independent Pharmacies Endowed Excellence Scholarship**

Scholarships are for full-time students who are pursuing a PharmD degree at UH Hilo. Recipients must be a graduate of a high school in the state of Hawai'i and demonstrate financial need.

**Recipients:** Class of 2014: Stacie Takahashi; Class of 2013: Alison Kobayashi

### **J.M. Long Foundation Pharmacy Scholarship**

Scholarships are for full-time students who are pursuing a PharmD degree at UH Hilo and preference is given to students in their 2nd or 3rd professional year of study. Recipients must have interest in practicing in a retail community setting.

**Recipients:** Class of 2013: Kurt W Adkins, Melissa Yoneda, William Walker; Class of 2014: Dayna Wong, Hai Huang, James Yi, Koon Ting, Li Chen, Naoto Oki, and Romelynne Lamosao

### **National Association of Chain Drug Stores (NACDS) Foundation Pharmacy Partners Scholarship**

Scholarships are for full-time students who are pursuing a PharmD degree at UH Hilo. Recipients must have interest in pursuing a career in community pharmacy.

**Recipient:** Reece K Uyeno, Class of 2013

### **Safeway Pharmacy Scholarship**

Scholarships are for full time students who are pursuing a PharmD degree at UH Hilo and are selected based on a variety of factors including academic merit and interest in retail pharmacy.

**Recipient:** Behnam Rostami, Class of 2014

### **UH Hilo College of Pharmacy Alumni Association Scholarship**

Scholarships are for full-time students who are pursuing a PharmD degree at UH Hilo. Recipients must demonstrate a strong interest in participating in UHH CoP Alumni Association activities and show leadership and community

service that promotes the UH Hilo CoP. This award is available for second, third or fourth year students.

**Recipient:** Stephanie K.Y. Lam, Class of 2013

### **Walgreens Diversity Scholarship**

Scholarships are for full-time students who are pursuing a PharmD degree at UH Hilo. Recipients must have demonstrated efforts toward raising awareness and/or educating others of diversity in the Pharmacy profession.

**Recipient:** Modaniet Young, Class of 2013

## **UH Hilo Grants and Scholarships:**

### **UH Hilo College of Pharmacy Merit-Based Scholarship Award**

This prestigious award recognizes exceptional academic achievements. Scholarship recipients are chosen based on a competitive process that takes into consideration academic and leadership success. Awards are available for incoming and current students enrolled full time in the PharmD program.

**Class of 2012:**

Alexandra Marie Perez, Anthony Thai, Bernie J Cheng, Brian Vo, Candice Carbaugh, Carol Lynn G Y Goo, Jenna M Fujimoto, Kari Kurihara, Lawrence Y Chan, Marina Yeh, Megan C Venegas, Megan M Ching, Raenne Fuller, Richelle Y Hirata, Sally Van Merit, Susan J Kang, Tanya A Moore, Wendy A Yamasaki-Herring.

**Class of 2013:**

Christopher A Kamei, Diem Le, Kaylene M Peric, May Yu, Prabu R Segaran, Victor W Lin, William J Engen, Christine A Lucas, Modaniet Young, Christopher N Tsue, Tracy M Nakama, Daniel Kim, Jed E. Sana, Kyle R Kumashiro, Yan F Lin, Steven M Nishimoto.

**Class of 2014:**

Keri E Oyadomari.

**Incoming Merit Award Recipients from the Class of 2015:**

Andrea Brauer, Jennie Kay Lim, Davis Hanai, Jeremy Daube

*UH Foundation scholarship recipients were honored at a banquet held in the Campus Center Dining Hall in November.*





# CoP: Fourteen Years in the Making

Amy Knehans, Pharmacy/Health Sciences Librarian

With the New Year it is a time to reflect on the past and look to the future. Time goes so fast. In order to capture the years that have gone by at our college Maggie Morris and I have put together a book on the history of our college, *The Emergence of the University of Hawai'i at Hilo College of Pharmacy*. The book chronicles the events that have led us to where we are today.

"In 1998 a concept emerged of an institution that would add an essential component to improve the health of

the people of the islands in the Pacific: training students to become licensed pharmacists." (Maggie Morris)

Being a part of this history and recording it has been a privilege. It has given me a once-in-a-lifetime chance to "talk story" with some of the people who made our college materialize, and experience their personal perspective. It took a vast amount of collaboration, dedication and commitment to make our college happen. It also took a certain amount of trust from the first class to come here and pursue their dreams at the UH Hilo College of Pharmacy. This book is dedicated to them.

"We started with a dream and we have come a long way. While we still don't have as much as some other top pharmacy schools, we keep plugging away. What we have are our remarkable students. They are our best supporters. Nothing comes close to the amount of energy they provide." (John Pezzuto)

The production of this book was supported in part by congressionally directed grant P116Z100211 awarded by the Department of Education, and a generous gift provided by CVS Caremark.

Watch for more on this project in future editions of *Kāwili Lā'au*.

## U.S. senate candidates visit CoP



Candidates who hope to win Senator Akaka's senate seat when he retires have spent time learning about the College of Pharmacy while in Hilo. Photo on the left: former Hawai'i Gov. Linda Lingle came to the College of Pharmacy Health Fair on Oct. 16. Photo on the right: During a tour of the CoP campus, (from right) Audrey and Senate candidate Ed Case met faculty member Mimi Pezzuto and PhD students Marites Calibuso and Suzanne Youngren.

# Ron Taniguchi: A soft-spoken man making a resounding impact

*Deborah Juarez, Associate Professor, Pharmacy Practice*

At a time when the College of Pharmacy was just a twinkle in the eye of advocates, including Senator Inouye and his staff, Dr. Taniguchi dedicated countless hours to the cause. He served on committees that made a case for a pharmacy school in Hawai'i and visited the Chancellor at the University of Hawai'i at Hilo to describe the potential benefits of locating the school there. This dream became a reality when the College of Pharmacy at Hilo was approved by the University of Hawai'i Board of Regents in October of 2004.

After serving in leadership roles in the changing world of health system pharmacy for 25 years at Kaiser Permanente and a 3-year stint at HMSA (Blue Cross and Blue Shield of Hawai'i), Dr. Taniguchi went from being an advocate for the school to being its Director of Community Partnerships in May of 2008.

As Director of Community Partnerships, Dr. Taniguchi met with legislators and community and business leaders in order to build ties with the College of Pharmacy. These connections proved to be important as they aided Dr. Taniguchi in his attempt to get the state legislature to pass a law in 2010 allowing internship hours in U.S. territories to count toward licensure requirements.

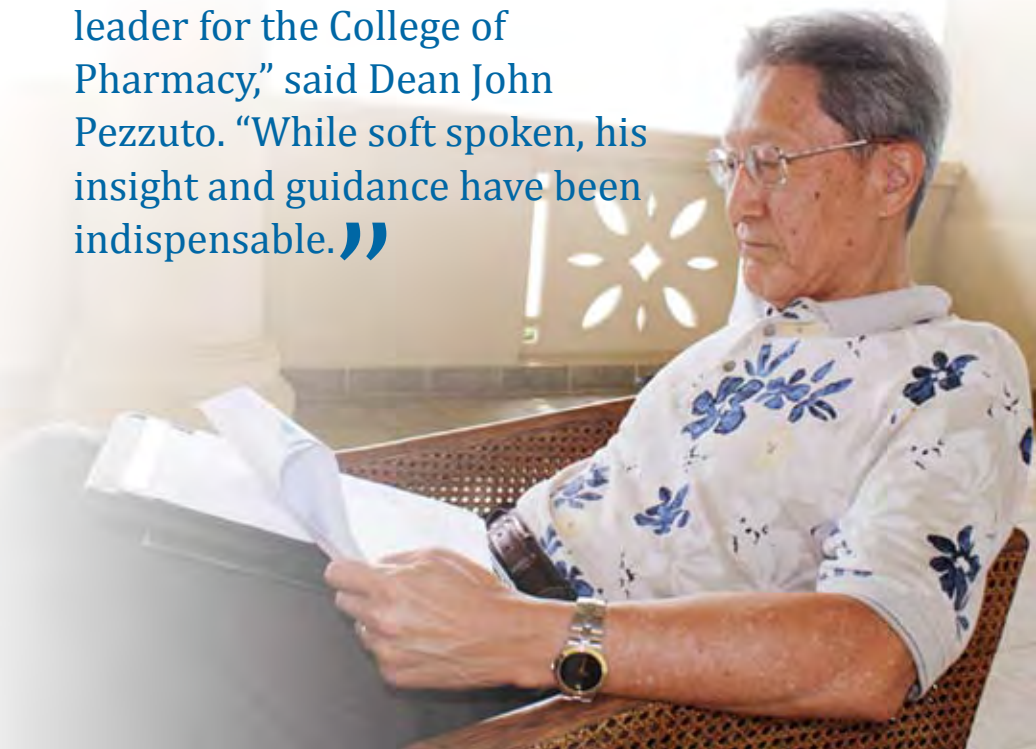
According to Dean Pezzuto, Ron showed us the depth of his character in April of 2010 when he stepped up in our time of need to serve as Interim Chair of the Department of Pharmacy Practice. As Interim Chair, Dr. Taniguchi has made many indelible contributions that helped shape the fabric of our organization and aided in achieving the College's full accreditation status.

"Ron was instrumental in getting me and other new faculty set up in practice," said Dr. Roy Goo. "Although the location had been selected, Ron helped finalize the agreements to establish the practice site and allow us to take students there. I don't know what we would have done if he hadn't stepped up so quickly into the new role as Interim Department Chair and been so willing to put in the time needed to get things done."

Students also benefited from his presence. In addition to being the Director of Community Partnerships and later the Interim Chair, Dr. Taniguchi took on the role of a teacher for the first time, offering the core Pharmacy Law and Ethics class to second year Pharm D students.

Outside of the classroom Dr. Taniguchi also served as a mentor and supporter of students. "During my term on UH Hilo's student senate, Dr. Taniguchi's relationships with our state legislators made him a valuable adviser during my visit to the state capitol where UHSA [University of Hawai'i at Hilo Student Association] met with Hawai'i state senators and representatives. His advice helped to make the experience much more rewarding."

**“ Ron is one of the few people who have served as a protagonist, organizer and leader for the College of Pharmacy,” said Dean John Pezzuto. “While soft spoken, his insight and guidance have been indispensable.”**





Staff working with Dr. Taniguchi also found the experience rewarding and enjoyable. “Ron is not only one of the best bosses I’ve ever had, he is my role model,” said Kristy Nakamura who worked as Department Secretary before moving on to become an Admissions Counselor in the Office of Student Services. “Ron has the ability to stroll through his daily activities with a sense of calmness despite the fact that everything could be in turmoil and there’s ten billion and one things to do. Ron never has a bad day...at least he never shows it. He’s a fair, a great listener, and genuinely cares about people. He never puts himself on a pedestal and treats everyone as an equal colleague”.

Lily Pua-Kaipō, the current Department Secretary echoed these remarks. “Ron is a wonderful person... not to mention an AWESOME boss. He’s very approachable, personable, patient, understanding and passionate about his role as interim department chair for Pharmacy Practice. Even with his obligations as Director of Community Partnership, he never swayed when it came to the department’s needs and / or guidance. He’s made my temporary assignment as department secretary manageable and bearable. He’s always made himself available whenever I needed

to talk and he’s come to understand that the role as the department secretary can be very demanding and understands the struggles. He’s very calm, and patient. I couldn’t have asked for a better boss.”

Beyond service to the College of Pharmacy, Dr. Taniguchi has been a leader in the community, holding numerous officer positions and appointments in local and national pharmacy associations including three years as the Executive Director of the Hawai’i Pharmacists Association. Dr. Taniguchi was also honored as Pharmacist of the Year by the Hawai’i Society of Health-system Pharmacists in both 1988 and 1991.

After a distinguished career serving as a leader in the private sector, at the College of Pharmacy, and in the community, Dr. Taniguchi plans to retire at the end of 2011. We know Dr. Taniguchi will continue to contribute to our growth and development after his retirement, but he will be missed on a day-to-day basis.

Dr. Supakit Wongwiwatthanakit captured the essence of Dr. Taniguchi

best. He said, “Ron is the person who always helps the College and others with a substantial and vital contribution behind the scene, not desiring credits or recognition.” He is like the man who attaches many gold leaves to the back of a Buddha statue until those accumulated gold leaves come out to the front. Gold leaf attachment to front-facing part of the statue is seen by everyone, whereas leaves attached to the rear are much less likely to be seen even though their attachment is an equally merit-worthy act.

*[EDITOR’S NOTE: Dr. Ron Taniguchi’s departure at the end of 2011 signifies the end of an era at CoP but certainly not the end of his support. His consistent encouragement and wisdom won’t be there on a regular basis, but he is well known for being the kind of person we can count on for guidance no matter where he is. We wish him well and anticipate many more collaborative years.]*



# Career Fair and Interview Day 2011

*Liz Heffernan, CoP Director of Student Services*

The second annual Career Fair and Interview Day was held on October 21 and 22 and was coordinated by the CoP Office of Student Services (OSS) in partnership with University of Hawaii Alumni Association College of Pharmacy Chapter (UHAA CoP Chapter). The Career Fair, held at the UHH-CoP facilities in Hilo was attended by 30 representatives from Mina Pharmacy, Safeway, Walgreens, Rite Aid, Target, Walmart, CVS, Kmart, the US Navy Officer Program, and Hilo Medical Center.

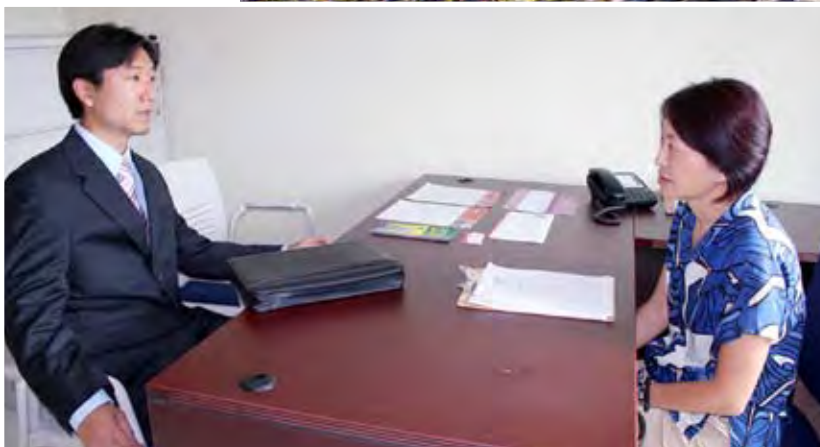
Interview Day took place on October 22, 2011 at Kapiolani Community College in Honolulu at their beautiful dining facility with breathtaking views of the Pacific. Twenty-five representatives were present from Safeway, Walgreens, Target, K-Mart, 5 Minute Pharmacy, CVS, and the US Navy Officer Program conducting interviews for job placement upon graduation for our students in the Class of 2012. Forty-five students participated in two hundred

and forty one interviews.

The company representatives, many of whom traveled to Hawaii from the continental United States, had positive things to say about the CoP student body as noted on their event evaluations. One was impressed by the "high level of interest of our students, many willing and eager to gain experience as a volunteer." Others found our students well-prepared, positive, focused and friendly with outstanding academic achievements and a high level of professionalism.

The partnership between UHAA CoP Chapter and the CoP Office

of Student Services was positive and productive. The UHAA CoP Chapter gained more exposure to our student body thereby assisting with developing their membership base. The UHH CoP Office of Student Services appreciated the support received from the UHAA CoP Chapter which included administrative duties and greeting students and company representatives. Thanks so much to Ana Barrenechea, Char Cockett, Daryl Masanda, Kristy Nakamura, Paula Zeszotarski, Dana-Lynn Koomoa-Lange and the CoP Ambassadors for all of their help with these events.



## Career Fair



Representatives from several potential employers talked to students during Career Day.

## Interview Day



Representing the alumni chapter at Interview Day in Honolulu was Dr. Roy Goo, Alumni Chapter Vice-president and Assistant Professor in Pharmacy Practice and Dr. Joy Matsuyama, Alumni Chapter Board of Directors. Interview Day photos by Dr. Jessica Toyama (class of 2011).

# CoP students to travel to Thailand for rotations in March thanks to agreement

Students from the College of Pharmacy at the University of Hawai'i at Hilo will gain professional experience in Thailand beginning this school year because of an agreement with Faculty of Pharmacy, Chulalongkorn University in Bangkok.

The program is known as "U.S.-THAI Student Pharmacists and Pharmacists Exchange Program." It was established to promote global health through the exchange of international experiences in elective courses in Advanced Pharmacy Practice Experience (APPE) and human resource development in higher education programs.

Supakit Wongwiwatthananut, Associate Professor of Pharmacy Practice, drafted the Memorandum of Understanding with Chulalongkorn University that was signed in June.



"I began this process in January 2010 with the support of Dr. Carolyn Ma, and then was encouraged by Dr. Ron Taniguchi and Dr. Lara Gomez, who helped edit the final document. Chris Iha also helped to communicate with the UH legal counsel and UH procedures in making this MOU happen," said Dr. Wongwiwatthananut, who also is a registered pharmacist in Hawai'i, Illinois and Thailand. "To be in the top 25 pharmacy schools, we need to have an international rotation/clerkship for our students and/or faculty to collaborate in terms of teaching and research with faculty/practitioners internationally as well."

After gaining support of the department and Dean Pezzuto, Dr.

Wongwiwatthananut met with Dean Pintip Pongpech of Faculty of Pharmacy Chulalongkorn University, Dr. Narat Kasettrat and Dr. Thitima Wattanavijitkul, who are the former and current Head of the Department of Pharmacy Practice at Chulalongkorn University. They indicated to him they would be happy to welcome UH Hilo students come to practice over there as an International Elective APPE.

"Not only are we happy to have the involvement of students from the University of Hawai'i at Hilo, we are hoping to send staff and pharmacy practitioner (preceptors of the school) to get more training at your contemporary pharmacy practice facilities," Drs. Kasettrat and Wattanavijitkul said.

The first two students from the class 2012 will have rotation/clerkship between March 26 - May 4, 2012. Two students from the class of 2013 will

work in Bangkok from November to December, 2012.

They will be visiting and practicing in several healthcare sites such as the Ministry of Public Health (i.e., Thai FDA, Pharmacy Consumer Protection agency), a private hospital, a government hospital and community pharmacy. During their visits, students will have a chance to communicate with some patients who are native speakers of English as well as Thais. Then, they will prepare the presentation and discuss with health professions and faculty supervisors.

"I believe this is a very good opportunity and would be beneficial to the CoP and especially to our students to gain international perspectives of Thailand public health, roles and responsibilities of pharmacists in various settings and interprofessional relationships," Dr. Wongwiwatthananut said. "From what I have experienced with the faculty at Chulalongkorn University, our students will have great opportunities to compare the structure/system of the pharmacy profession and the healthcare system between the US and Thailand."

## High school students visit CoP for forensics instruction

Students from the Hawai'i Preparatory Academy attended a lecture on forensics from Dr. Edward Fisher, Associate Dean for Academic Affairs, on the CoP campus Nov. 1. Shown with Dr. Fisher (center front) are (on the left going up) Tatiana Shoniber, Allison Waldbeser, J.R. Akau, Holden Pattengill, HPA sports therapist Scott Oshiro and forensics teacher Kristal Blacksmith. (on right going up) Zackary Greenbaum, Madison Bartlett, Maji Leander, Robert Souza, and Sean Domingo.



**U**H Hilo pharmacy students now have an opportunity to gain another kind of experience during their third-year of study: veterinary medicine.

Every week, Dr. Julie Luiz Adrian accompanies three students at a time to Aloha Veterinary Center in Hilo so they can earn credit for two days of experiential training. Dr. Adrian holds a doctorate in veterinary medicine and is assistant professor of pharmacy practice/veterinary pharmacy.

"The purpose of this experience is to give exposure to and awareness of veterinary medicine," said Dr. Adrian, who has been a practicing veterinarian before coming to academia. "I enjoy sharing our veterinary world with pharmacy students. They're totally excited about it, especially when they see something they've never seen before."

During this veterinary experience, or "rotation," third-year pharmacy students learn how drugs are used in veterinary practice, become acquainted with veterinary procedures, and gain an understanding of how veterinarians interact with pharmacists.

"Many of the same drugs used in humans are used in animals, just in different doses, possibly in different forms," she said. "We may need to compound a drug that is tailored for someone who is 150 pounds, and dilute it down to an appropriate dose for an animal so small you weigh it in grams. The opposite is true for animals weighing over one thousand pounds."

Because animals can't understand about drugs and owners often times have difficulty administering them to their pets, veterinarians often need to come up with creative ways to get them to comply with prescriptions. Compounding pharmacists are often consulted to adjust the way the drug is delivered, and may have to help the veterinarian decide whether the drug will be effective if administered orally or in other forms, such as through the skin, or transdermally.

The compounding pharmacist also can help make some medications taste better for our furry or feathered friends. Dr. Adrian said they often use

## Veterinary Science boosts pharmacy training



*Dr. Julie Luiz Adrian (left) shows third-year students Wenbo Liu, Torrey Ikeda and Daphne Lu how to examine teeth on James, a chocolate lab at Aloha Veterinary Clinic.*

flavoring with drugs to convince the animal to take it, such as tuna flavor for cats, or tooty-fruity flavor for birds.

"Students are observing rather than handling, and I understand situations involving blood or intestines are not for everyone," said Dr. Adrian. "They have an opportunity to watch surgeries in an area adjacent to the surgical suite. Spays and neutering can take place every week; however, there are always surprises. Some of our students had a chance to see an obstruction, foreign body removal that turned out to be a macadamia nut and another group observed a splenectomy. You never know what is going to walk through that door."

Key to the experience is to make sure everything is a learning opportunity. As in human hospital rotations, students are expected to become acquainted with one or two cases and write a synopsis using a SOAP template that includes:

S: subjective information; O: objective information; A: assessment of the problem(s); and P: plan or treatment.

"I appreciated the opportunity to see how things we have learned involving humans in pharmacy practice can be used to benefit animals as well," said J. Ryan Abeyta,

a third-year PharmD student.

"This unique experience is a great opportunity for student pharmacists to see the similarities and differences between human and veterinary medicine. I especially appreciate the ability veterinarians have to treat patients that can't verbally tell you how they feel or describe their symptoms."

After each rotation, the students have a debriefing with Dr. Adrian to talk about the drugs used, food-animal drug withdrawal periods, extra-label drug usage, etc. They are instructed to treat the animals with respect and empathy, and to maintain professionalism and confidentiality as they would at a human facility.

Dr. Trevor Rodrigues, DVM and owner of Aloha Veterinary Center, is supportive of the student pharmacists. He often works with compounding pharmacist Marq Simms at Longs Drugs on Ponahawai St. in Hilo to create alternate methods of delivering drugs to animals.

"People are always shocked to hear we're using human medicine for animals," Dr. Rodrigues said. "But the bottom line is we're all mammals. Some of us are just furrer and hairier than others."

## Promising nanotechnology-based delivery system for treatment of asthma

Dr. Mahavir Chougule

**M**ahavir Chougule, Assistant Professor, Pharmaceutical Sciences, received a \$35,000 grant from the Hawai'i Community Foundation for a research project entitled "Targeted Nanocarriers of siRNA for the Treatment of Asthma."

One of the major research focuses in our lab is to find the newer effective and safer therapeutics options for treatment of asthma using novel drug delivery approaches. Asthma is a complex disease that requires long-term and multiple therapies. Approximately 20 million Americans and more than 100,000 Hawai'i residents are suffering from asthma. Although, the asthma mortality rate has declined over the past 10 years, in Hawai'i it remains above the national average. Currently available treatment options such as anti-histamines or steroids are nonspecific and therefore, more targeted approaches are needed for effective manage the asthma. A recent national asthma survey found that the asthma healthcare is suboptimal and that the disease remains poorly controlled, despite continued advances in asthma therapies. Therefore, there is compelling need to develop more effective treatment strategies for improved outcome in the treatment of asthma patients.

Over the past few years small interfering RNA (siRNA) delivery systems for the treatment of diseases including asthma have generated tremendous interest owing to their therapeutic efficacy. However, the clinical utility has been limited due to their *in vivo* rapid degradation. To overcome this obstacle, we are evaluating

the innovative encapsulation and delivery mechanisms using gelatin nanocarriers. STAT6 is specifically expressed in activated T helper-2 cells and functions as a transcription factor that directs gene transcription events that drive the initial phases of allergic responses. The importance of STAT6 in asthma was underscored by studies in STAT6-deficient mice showing their inability to mount T helper-2 responses upon allergen sensitization and airway challenges, leading to abrogation of airway eosinophilia and hyper-responsiveness compared with wild-type animals.

The use of STAT6 as a target gene in the treatment of asthma using siRNA delivery system offers great potential and requires experimental investigation. We are developing the cationic gelatin nanocarriers for the delivery of STAT6-siRNA for evaluation under *in vitro* and *in vivo* mouse asthma model.

Our project was funded by Hawai'i Community Foundation and expressed a promise for treatment of

asthma as stated in award letter: "we are excited about your project and believe it is the kind of work that can help to make a difference in Hawai'i." This is a collaborative research project with Dr. Peter R. Hoffmann, Associate Professor at the John A. Burns School of Medicine, University of Hawai'i at Manoa. Dr. Hoffmann will evaluate the efficacy of developed nanocarrier delivery system in Dr. Chougule's lab using mouse model of asthma.

The advantage of using cationic gelatin nanocarriers for asthma is their selective uptake by electrochemical interaction with negatively charged cell membrane and thus will deliver the siRNA in targeted fashion at the disease site resulting in effective management of asthma. Our *in vivo* studies will evaluate the targeting and therapeutic efficacy of STAT6-siRNA loaded gelatin nanocarriers in an asthma mouse model. We believe that our pharmacological approaches and *in vivo* animal studies will form the framework for prospective future clinical investigations in humans. In addition, our research is also focused on delivery of siRNA in a targeted fashion for treatment of lung and breast cancer.

We strongly believe that the results from these studies can also be used to deliver other siRNA agents using nanotechnology based delivery systems for the treatment of pulmonary disorders and cancer.





# Marketing competition nets students experience, cash

A team of third-year College of Pharmacy students won \$2,000 in the fall semester's marketing case competition held Oct. 20, sponsored by Target Corporation.

The winning group was Aaron Lani, Veronica Cummings, Cheryl Lopez, Alison Kobayashi, Chris Lai Hipp and Victor Lin. The name of their winning project was "Operation Integrate - Target your Health + Wellness."

They were one of 15 groups from Dr. Mok Chong's course that focuses on exposing future pharmacists to business practices. Their assignment was to develop a store-wide comprehensive "Wellness Strategy" for Target.

Other teams in the top three were Gina Chan, Quynh Doan, Christine Han, Jessica Ku, Mylan Phan, and May Yu who presented "Target Your Heart Campaign" and Christopher Ayson, Margaret Kang, Andy Nguyen, Rosa Quan, Nicole Schauer and Reece Uyeno, with a campaign called "Live Well. Shop Target."

Dr. Chong anticipates Target will submit the plan to corporate headquarters. Target also provided store-branded items for all of the students, including reusable shopping bags, mints, a Target dog beanie baby dressed in a pharmacist's coat as well as recruiting materials.



Participants at the marketing case competition were:

Front row: Margaret Shiba, Senior Development Director, UH Foundation, Aaron Lani, Veronica Cummings, Cheryl Lopez, Alison Kobayashi, Dr. Mok Chong and Dr. Ron Taniguchi  
Back row: Chris Lai Hipp, Michelle Dogey, Onna Poeter, Bonnie Brownstein, Luke Roberts, Justin Jones and Victor Lin



## HMSA

Dr. Ron Fujimoto, D.O. (left) HMSA Medical Director and Kristine Nishimura, HMSA Manager of Clinical Pharmacy Services (second from right) visited the CoP campus in April 2011 to deliver a guest lecture. Their visit presented the opportunity to recognize the completion of the final year of a \$75,506 grant from the HMSA Foundation. The three-year grant provided student pharmacists in the inaugural three classes with handheld personal computer devices (PDAs), which enable them to load software tools that can assist with diagnostic and therapeutic decision-making. Also shown are the coordinating team for the final year: Dr. Forrest Batz, Assistant Professor in Pharmacy Practice; Christine Lucas, now a third-year student pharmacist; Dr. Ron Taniguchi, Director of Community Partnerships; and Amy Knehans, CoP Pharmacy/Health Sciences Librarian. Others on the team but missing in the photo are now third-year student pharmacists Nicole Schauer, Prabu Segaran and Victor Lin; and Nadine Hara, CoP Budget Officer. (Photo by Shannon Amidon Castille)

# CoP Student Organization Roundup

## Class of 2013

In the past year, the CoP Class of 2013 has continued to be active in our college and community. On top of participation in numerous health fairs throughout the islands, the Class of 2013 led the way in organizing and fundraising for the CoP in annual community events such as the Hilo Heart Walk and Relay for Life. The Class of 2013 also directed efforts to build a float and represented the CoP in the traditional Merrie Monarch Parade. Many members of the Class of 2013 are also leaders in the college's professional student groups allowing us to remain involved in various student-led projects such as guest speakers series, tutoring, community outreach in local schools, and other volunteer opportunities. Through it all, we hope to serve as an example for subsequent classes to follow and to continue to push the envelope of the impact pharmacy students can have in our island communities.

## NCPA 1

NCPA, the National Community Pharmacist Association, has had an exceptionally busy and successful semester. They kicked off the semester with a fundraiser and also hosted extraordinary guest speakers. Dr. Nguyen and Dr. Inciardi educated students on the pharmacokinetics and the role of a pharmacist in home health care system. In early October, Nicole Tabandera, President Elect, and Keshia Yorong, Secretary, attended the annual NCPA convention in Nashville, Tennessee. Here they learned about how to open an independent pharmacy and received training on constructing a business plan. Upon

their return NCPA participated in the College of Pharmacy Health Fair, educating and consulting the community about current health issues. To wrap up the semester the organization participated in KTA Wellness events and launched a food drive, collecting canned food and money which was donated entirely to the Salvation Army.

## Phi Delta Chi

The Gamma Theta Chapter of Phi Delta Chi, Professional Pharmacy Fraternity, has been very busy this past year. This chapter was rewarded for their efforts by their national office with the 100% Achievement Award from our National Office. Some things we have done include our first annual Miloli'i Health Fair in April. Miloli'i, the last fishing village in Hawai'i, provided an opportunity for the fraternity to explore more of the island of Hawai'i while giving back to the local community and spread awareness of the College of Pharmacy. Students providing free screenings of various disease states to all who attended. With the success and impact we had on the community, we have been invited to continue this project in the upcoming year. We have also continued our annual Canned Food Drive at Safeway donating items and proceeds to the Hawai'i Food Basket. We are currently in the process of initiating pledges of

the Gamma class, a group that we are certain will continue to make Gamma Theta a successful chapter of Phi Delta Chi in the years to come. We plan to continue to make our Chapter stand out amongst all other Chapters in the Pacific region as well as give back to the community while strengthening relationships between Brothers.

## AMCP

AMCP (Academy of Managed Care Pharmacy) is a new student organization at the CoP that is part of a national organization designed to allow its members to develop strategies to improve healthy outcomes with sound management principles. Officers and committee chairmen have been working very diligently this semester. There are currently 21 members of AMCP. During the semester we created a sun block product that contains zinc oxide. The product, Bettah Blocker was showcased at the 2nd Annual College of Pharmacy Health Fair in October. We are actively teaching high school students in the community about prescription and OTC (Over The Counter) drug abuse. So far we have pre and post surveys from over 400 high school students in which we are measuring their knowledge about drug abuse. In October, AMCP was involved with the DEA (Drug Enforcement Agency) efforts to collect unwanted and expired prescription



AMCP student chapter

drugs. This experience strengthened our awareness and importance of being advocates for our patients.

### HSSHP

This semester, the Hawai'i Student Society of Health-System Pharmacists (HSSHP) have been active in creating opportunities for all of its' members to become successful clinical pharmacists through activities such as health fairs, professional development workshops, and community service. In September, HSSHP teamed up with Hilo Medical Center (HMC) to provide glucose screening and medical management at Ladies Night Out, an event held by Hui Malama Ola Na'oiwi. HSSHP also co-hosted the HMC health fair at Prince Kuhio Plaza conducting free blood pressure, glucose, and cholesterol screenings as well as offering medication management to the community. Professional development workshops were held bi-monthly, overseen by faculty members, to apply our knowledge from the classroom and utilize our critical thinking skills to solve various real life case studies. Future events include representing the college at the annual American Society of Health-System Pharmacists (ASHP) Midyear meeting in December where students present posters that they have been researching throughout the semester and compete in the Clinical Skills competition.

Christopher I. Lai Hipp, Class of 2013 and HSSHP Chapter President, won the ASHP Student Leadership Award and was recognized at the annual meeting. Mr. Lai Hipp has served as a founding member of the student chapter and has been involved in health-system pharmacy practice as a clinical pharmacy intern at a large integrated health system. He is also achieving academic success in pursuing his Pharm.D. and masters degree in Tropical Medicine & Pharmacology.

### APhA

During the 2011–2012 school year, the Hawai'i Chapter of APhA-ASP has been busy with a variety of events. The largest event of the year was, as always, the October College of Pharmacy Health Fair, planned and coordinated with all of the local student organizations. Moreover, we have partnered with AMCP for Generation Rx, sending student pharmacists to local high schools to educate them about the dangers of prescription drug abuse. Continuing the community outreach activities, our chapter has also been educating local students about the profession of pharmacy and what it takes to get into pharmacy school.

UHH-CoP students from the APhA student chapter also received recognition at the APhA conference in Seattle in March 2011 for placing in the top 10 in the 2010 APhA-ASP PharmFlix Public Service Announcement Video

Contest. The theme was "Know Your MEDICINE, Know Your PHARMACIST." The chapter was recognized at the APhA-ASP Awards Ceremony. This was a national competition in which 123 APhA chapters were invited to compete in.

### Class of 2014

The Class of 2014 has been active this year both in fostering a sense of community within our class and finding ways to contribute to the community around us. We made 50 blankets for Project Linus, held movie nights at the modular classrooms, a pumpkin carving event, and are organizing sports events in the interest of enriching the experience of school for our class. In addition, we have held two car wash fundraisers and are selling College of Pharmacy merchandise to raise money for future activities, class yearbooks, and graduation.



### Students show aloha to guest at seminar series

*Dr. Ralph Lipp (left), Vice President, Pharmaceutical Sciences R&D at Eli Lilly & Co. in Indianapolis was presented a lei from CoP PhD students Micah Glasgow and Susanne Youngren. Dr. Lipp, a guest of Dr. Ken Morris, Professor of Pharmaceutical Sciences, lectured at the AAPS-UHH Student Chapter Seminar Series Nov. 7. The title of his talk was "How to Assess and Improve the Developability of New Chemical Entities."*

# College of Pharmacy Extended 'Ohana: Meet Terry Ten Eyck

*Terry Ten Eyck conducts her business venture, Hang Ten Cupcakes, in Volcano.*

What does a professional woman with two degrees, two kids and a husband who is a professor in the College of Pharmacy do when she moves to Hilo from New York City?

Chances are none of the top-ten guesses would be “bake cupcakes.” But that’s exactly what Terry Ten Eyck decided to do. Her company, Hang Ten Cupcakes, is getting a foothold on Hilo’s sweet tooth traffic by selling at Hilo Farmers Market most Saturdays. On Sunday mornings, she takes a couple dozen of them to the Volcano Farmers Market at Cooper Center on Wright Road in Volcano Village.

“I love baking and I wanted to have fun,” said Ms. Ten Eyck, who moved here in June with her two

daughters to join her husband, Dr. Gary Ten Eyck, who teaches pharmaceutical sciences.

“I thought it was a great idea because there were no cupcake shops in Hilo, something you could see on every corner in other cities,” Dr. Ten Eyck said. He moved to Hilo in 2009 and waited for his family to join him while their older daughter finished high school in New York.

Now 19-year-old Sarah is a freshman at UH Hilo and has been designated Chief Marketing Officer while 15-year-old Lily, a freshman at Hilo High School, is Chief Operating Officer and helps with baking.

Baking is in their blood, it seems. Ms. Ten Eyck’s grandfather was a baker in Connecticut and in the Czech

Republic. Her only experience with baking was taking a few classes on decorating and baking cupcakes.

Hang Ten Cupcakes offer basic chocolate and vanilla, coffee and carrot cake treats, and they have added lilliko`i and mango to their repertoire. Cupcakes sell for \$2 each or three for \$5, and often sell out.

With a bachelor’s degree in Decision Science and Computers and a master’s in Public Accountancy, she ought to be able to handle the bookkeeping.

In New York she was the manager of general and restricted accounting in the Controller’s Division at New York University and was a licensed certified public accountant. She is looking into transferring her license to Hawai’i so she can take on accounting and tax service work, both for businesses and personal use.

She also took a class in marine sciences and belongs to the Hilo Bay Chapter of Business Networking International.

For now and the foreseeable future, she’s baking and selling cupcakes. She will be glad to do catering, parties and special orders and can be reached at [hangtencupcakes@gmail.com](mailto:hangtencupcakes@gmail.com).

## Holidays at CoP



*The Pezzuto family once again opened their home to more than 100 CoP 'ohana at Thanksgiving. In December, faculty and staff enjoyed a holiday potluck on campus.*

# Faculty Briefs

**André Bachmann**, Associate Professor and Chair, Pharmaceutical Sciences, spoke about *DFMO/Eflornithine: A FDA-approved Trypanosoma Drug with a New Purpose in the Treatment of Neuroblastoma* at The Neuroblastoma and Medulloblastoma Translational Research Symposium in Grand Rapids, Michigan on June 23. The symposium featured presentations by international experts, as well as families and advocates, and addressed all aspects of neuroblastoma, from biology of the disease to research in targeted new therapeutics and treatment.



He gave the keynote lecture on "Polyamine research: from plants to cancer" at the Polyamine Gordon Research Seminar (GRS) on June 18 in Waterville Valley, N.H. and presented "Novel polyamine inhibitor drug combinations and advancement of DFMO to a neuroblastoma clinical trial" to the Gordon Research Conference on Polyamines on June 20.

Dr. Bachmann served as a study section participant to review U54 grants at the National Institutes of Health (NIH) in Washington D.C. June 29-July 1.

Dr. Bachmann also gave presentations entitled "ODC in pediatric neuroblastoma: Advancement of DFMO to a FDA-approved phase I clinical trial" at the National Cancer Institute Pediatric Oncology Branch in June and at UC Davis Cancer Center in Sacramento in October.

New publications include: 1) "Syntheses and cytotoxicity of syringolin B-based proteasome inhibitors," in the journal *Tetrahedron* with coauthors Tannya R. Ibarra-Rivera, John Opoku-Ansah (also a second-year PharmD student at UH Hilo), Sudhakar Ambadi and Michael C. Pirrung and 2) "Syringolin B-inspired proteasome inhibitor analogue TIR-203 exhibits enhanced biological activity in multiple myeloma and neuroblastoma," in *Pharmaceutical Biology* with coauthors John Opoku-Ansah, Tannya R. Ibarra-Rivera and Michael C. Pirrung.



**Susan Jarvi**, Associate Professor, Pharmaceutical Sciences, presented co-authored posters on "Major histocompatibility complex (*Mhc*) class II gene diversity and tolerance to avian malaria in Hawai'ian honeycreepers (Drepanidinae)" at the American Association of Immunology Meeting held in San Francisco, CA, and "Co-

evolution, co-infection and pathogen diversity in the Hawai'ian avian disease system" at the Evolution of Life on Pacific Islands and Reefs: Past, Present and Future symposium, UHM East-West Center on O'ahu. Both were held in May. She also presented a co-authored talk on "Impacts of *Avipoxvirus* co-infection on diversity of *Plasmodium relictum*

in the Hawai'ian avian disease system" at the International Meeting on Malaria and Related Haemosporidian Parasites of Wildlife, Shepherdstown, WV, and was an invited participant in the International Rat Lungworm Workshop on O'ahu. Both were held in August.

**Dean John Pezzuto** published 1) "Pharmaceutical Biology: A retrospective" in *Pharmaceutical Biology*, October 2011 [Epub ahead of print] with coauthor C. Lewandowski. 2) "Design, synthesis, and biological evaluation of callophycin A and analogues as potential chemopreventive and anticancer agents" along with co-authors L. Shen, E.J. Park, T.P. Kondratyuk, D. Guendisich, L. Marler, A.D. Wright and D. Sun, in *Biorganic and Medicinal Chemistry*, November 2011 [Epub September 16, 2011] and 3) "Suppression of Tumor Necrosis Factor- $\alpha$ -Induced Nuclear Factor  $\kappa$ B Activation and Aromatase Activity by Capsaicin and Its Analog Capsazepine" in *Journal of Medicinal Food*, November 2011 [Epub June 11, 2011] Co-authors were S. Luqman, A. Meena, L. Marler, T.P. Kondratyuk.



**Dianqing Sun**, Assistant Professor, Pharmaceutical Sciences, published a paper entitled "Design, Synthesis, and Biological Evaluation of Callophycin A and Analogues as Potential Chemopreventive and Anticancer Agents" in *Bioorganic & Medicinal Chemistry*. The other coauthors are L. Shen, E.-J. Park, T.P. Kondratyuk, D.

Guendisich, L. Marler, J.M. Pezzuto, and A.D. Wright. Dr. Sun also coauthored a paper entitled "The Structure Activity Relationship of Urea Derivatives as Anti-Tuberculosis Agents" in *Bioorganic & Medicinal Chemistry*.

**Paula Zeszotarski**, Assessment Coordinator, attended the 20th annual Indiana University Purdue University Indianapolis (IUPUI) Assessment Institute in November. The conference is for faculty, student affairs professionals, and administrators to learn new techniques, approaches, and ideas in a variety of outcomes assessment areas, including general education and major fields as well as civic engagement, student development, and electronic portfolios



## Postdoc Briefs



**Dovi Kelman**, post-doctoral associate, received the ASM (American Society of Microbiology) Travel Award that provided funds to cover the travel costs, meeting registration and annual membership fees to attend the April 2011 American Society of Microbiology (ASM) Hawai'i Branch Annual Meeting at

Manoa Valley, O'ahu.

# ALUMNI at WORK

## Alumni Association Update from Jessica Toyama, Class of 2011 and Secretary, University of Hawai'i at Hilo College of Pharmacy Alumni Association

Our last chapter meeting was held on Wednesday, October 19 at the Gold Bond Building in Honolulu. Thank you to those who attended or were able to phone-in. Here's some exciting announcements and upcoming events:

### 2011-2012 UHH CoP Alumni Scholarship

We are pleased to announce our first UHH CoP Alumni Scholarship recipient, Class of 2013's Stephanie Lam. Stephanie Lam was born and raised in Ewa Beach, Hawai'i. She graduated from Pearl City High School and completed her undergraduate studies at Oregon State University where she earned a Bachelor of Science degree in General Science (Pre-pharmacy). Since beginning her studies at the University of Hawai'i at Hilo College of Pharmacy, Stephanie has played an active role in community events such as the UHH College of Pharmacy Annual Health Fair and the National Kidney Foundation's Diabetes Prevention and Kidney Health Awareness Program. Stephanie is also a member of the professional organizations APhA and ASHP and is currently acting as secretary on APhA's executive board. Stephanie will be graduating with the Class of 2013, plans to pursue a pharmacy residency program, and eventually establish her career in Hawai'i where she will have the opportunity to serve and give back to the community.



*Adrienne Au (left) and Veneta Tsonev are PGY1 Pharmacy Practice Residents at Edward Hines, Jr. VA Hospital and Palos Community Hospital, respectively. They both attended the Illinois Council of Health-System Pharmacists (IHP) Annual Meeting in September, where they participated in their residency showcase. Similar to the residency showcase at the Midyear Clinical Meeting, they provided information on their residency programs to pharmacy students and prospective candidates.*

## Alumni Association Scholarship Fundraiser update from Elwin Goo, President, University of Hawai'i at Hilo College of Pharmacy Alumni Association

Association members are reaching out to all of its members to join together in supporting its scholarship. Members are being asked to contribute \$100 or more to the scholarship fund. Alumni and friends of the UHH COP may make an online contribute to the UHH COP Alumni Association Scholarship Fund at: [www.uhfoundation.org/GivetoUHHPharmacy](http://www.uhfoundation.org/GivetoUHHPharmacy)

Checks can be made payable to "UH Foundation", note "UHH COP Scholarship", and mailed to: UH Foundation/Office of Development, UH Hilo, 200 West Kawili St., Hilo, HI 96720.

The COP Alumni Association established an annual scholarship in order to assist pharmacy students demonstrating leadership, dedication to community service and an interest in promoting alumni association

activities. This past September, our association awarded its first scholarship of \$1,000 to Stephanie Lam from the class of 2013.

The UHH COP Alumni Chapter awards a scholarship annually to students currently enrolled in the professional pharmacy program who meet the following criteria:

- Recipients must be enrolled full-time in the UHH College of Pharmacy and be in their 2nd, 3r or 4th year of professional study.
- Academic merit as demonstrated by a minimum GPA of 3.0.
- Recipients should demonstrate a strong interest in participating in UHH COP Alumni Association activities, as determined by the College.
- Demonstrate leadership and community service that promotes the UH Hilo College of Pharmacy.

Scholarship application opens each year during the first week of January and closes on March 1. Awards will be made for the following academic year. For more information, students may contact: Liz Heffernan, Director of Student Services.

To locate the application visit: <http://hilo.hawaii.edu/financialaid/> Select the link for: UH Hilo On-line Scholarship Application

### UHH CoP Alumni Website

Check out our new website: <http://uhalumni.org/s/1220/index.aspx?sid=1220&gid=1&pgid=829>

Or go to [uhalumni.org](http://uhalumni.org) and click on "Chapters".

### JOBS UPDATE:

Rochelle Oledzki is working as a CVS staff pharmacist in Hammond, Indiana.

[Editor's Note to Alumni: Kāwili La'au readers want to know what you're doing. Please send updates to [morrismm@hawaii.edu](mailto:morrismm@hawaii.edu)]



## Rotation Report: Lauren Brunke

**M**y name is Lauren Brunke and I am a fourth year pharmacy student. I returned home to Indiana after the 2011 spring semester in order to complete all of my advanced rotations. I am having a wonderful time, not only reuniting with family and friends, but also enhancing my pharmaceutical knowledge and skills.

I am currently living in Indianapolis and doing rotations at a variety of locations, including CVS/Pharmacy, Eli Lilly & Company, and

Methodist Hospital. I have enjoyed all of them so far; however, Eli Lilly & Company has been one of my favorites.

I spent my time with U.S. Regulatory Affairs – Advertising and Promotions, whose main focus is to ensure that all promotional pieces developed by the company and its partners adhere to FDA regulations. It was very interesting working with medical, legal, and marketing teams in order to develop fair and balanced labeling for a variety of pharmaceutical products. I gained a strong

understanding of their policies and the ways in which the FDA monitors their compliance.

Also, the rotation revealed the different departments within the company and the various pharmacy careers available. These experiences and more have strengthened my desire to work in the pharmaceutical industry. I hope the rest of my advanced rotations are just as rewarding.

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## Pre-Pharmacy Club Project



*Kelli Yamane and Ryan Higa take part in the Pre-Pharmacy's cleanup project November 13. The Pre-Pharmacy Club has adopted a two-mile stretch of highway near Mountainview as part of the State of Hawaii's Department of Transportation Adopt-A-Highway project. The project calls for volunteers to adopt a portion of a state highway for a minimum of two years, pick up litter on that highway at least four times a year, and provide safety training for volunteers before each cleanup. Photos by Kelli Yamane and Hi`iaka Kahalewai.*



## CoP faculty wins prestigious award

*Dr. Carolyn Ma (center), Associate Professor, Department of Pharmacy Practice, received the Bowl of Hygeia award from the Hawaii Pharmacists Association (HPhA) at their annual meeting October 13. The award from the American Pharmacists Association Foundation, is presented annually by participating state pharmacist associations. Established in 1958, the Bowl of Hygeia Award recognizes pharmacists who possess outstanding records of civic leadership in their communities and encourages pharmacists to take active roles in the affairs of their respective communities. Dr. Ma is shown with Dr. Jeani Jow (left), HPhA President and Dr. Ron Taniguchi, CoP Director of Community Partnerships.*



*Roy Goo, assistant professor, Department of Pharmacy Practice, was presented the "The Distinguished Young Pharmacist Award" at the annual HPhA meeting.*

## Focus on UH Hilo

*Dr. Andre Bachmann (left), Associate Professor and Chair of Pharmaceutical Sciences, discussed his research with Ken Hupp on the cable television program "Focus on UH Hilo" Nov. 18.*





## Preceptor Perspective:



### Student pharmacists enter fast-paced world of emergency medicine

**Eric Gilliam, PharmD**, a CoP preceptor at Queens Hospital, was awarded the Most Innovative Pharmacy Practice award from the HawaiEi Pharmacists Association (HPhA) at their annual meeting October 13. These are his words.

The Emergency Department (ED) at Queen's Medical Center has a reputation of being a fast-paced, overcrowded, and stressful patient care setting. Many patients must be triaged promptly, evaluated rapidly, and treated quickly. Historically, pharmacy has not had much role within the ED, as the need for rapid treatment has outpaced the hospital pharmacy's ability to provide prompt service. As a result, the ED is an area at great risk for significant medication errors. This is now changing as health systems focus on medication error reduction and cost savings while the profession of pharmacy continues to expand into new specialties. Despite the need for collaboration between ED and pharmacy, fewer than 8 percent of EDs throughout the country have incorporated clinical pharmacy services.

For the past two years, The Queen's Medical Center (QMC) pharmacy department has dedicated pharmacists to practice in the ED ten hours daily seven days each week. As ED clinical pharmacists, we specialize in the treatment of acute diseases such as strokes and cardiopulmonary resuscitation. We provide expert drug knowledge, expedite drug delivery, and assist the ED team with bedside patient care. Additionally we serve on committees to educate providers, oversee drug utilization policies, and advocate for practice changes, all of which improve medication safety and patient care in the ED. Depending on the health system, an ED pharmacist may also work along side toxicologist, disaster management, and pre-hospital medical services, as well as many other specialties.

Fourth-year Doctor of Pharmacy Candidates also contribute to patient care while rotating through the ED. In addition to learning about acute care medicine, students interview patients for medication adverse effects, document detailed patient medication histories, and provide discharge medication counseling. These activities have a direct impact on patient care. Similar to the ED pharmacist, students also collaborate with a varied multidisciplinary team including specialties ranging from hospitalists and surgeons to paramedics and phlebotomist.

The ED has many challenges for a pharmacist and therefore many opportunities to contribute to patient care.

Research has demonstrated the presence of an ED clinical pharmacist significantly reduces medication errors as well as improving clinical outcomes and reducing costs to the hospital. The specialty of emergency medicine pharmacy practice is still young. As we developed this specialty, we identify new and exciting opportunities to improve patient care and further the profession of pharmacy.

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## Preceptor Spotlight:



### Melvin Chow, Shiigi Drug

CoP preceptor Melvin Chow, Pharmacy Manager of Shiigi Drug in Hilo, was honored with a Health Mart Diabetes Care Excellence Award for going above and beyond the call of duty to provide exemplary education, guidance and service to people managing diabetes. Chow is one of 10 pharmacists across the country to receive the prestigious award from Health Mart, a national network of more than 2,900 independently owned pharmacies.

Earlier this year, Shiigi Drug was named the top Medication Therapy Management Center in Region 25, representing Hawai'i by Outcomes Pharmaceutical Health Care.

For more than 30 years, Chow has worked closely with local residents to provide personalized support, including diabetes management, care and counseling. As an independent pharmacist, Chow stresses the importance of developing relationships with customers. When performing diabetic shoe sizing, Chow turns the process into a consultation, asking questions to make sure customers are diligent about blood glucose testings and other key medical indicators.

"The best part about my job is empowering my patients to better manage their diabetes," the pharmacy manager said. "I don't consider it work when I'm talking and interacting with my customers. It's something I can do forever."

Chow is recognized in the community as a mentor for the next generation of pharmacists.

"When I was a student, I had a hard time talking to customers and it was a skill that I learned over time. I encourage my students to engage with customers because high quality patient care is what community pharmacy is about," Chow said.