2010 White Coat Ceremony
CoP to lead Rural Health Center

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One student’s reflections on her Saipan rotation

Cover photo by Robbyn Peck. On the cover Michelle Kim, CoP Class of 2014, holds her niece, Mia Kim-Tomono, almost 3. Michelle received traditional Hawaiian leis from family and friends at the October 17 White Coat Ceremony.
When I first came to the Big Island as Founding Dean of the College of Pharmacy at UH Hilo, the College was a blank canvas.

I can remember quite well walking into the lecture room in Wentworth Hall and greeting the first class of pharmacy students. When I asked for questions one of the first was: What will happen to us if this college is not successful?

The question actually surprised me. To me, this was analogous to asking, what will happen to us if the sun doesn’t rise tomorrow? Or what would happen if a meteor came down from the heavens and struck the Big Island tomorrow?

But I suppose the question was logical from that student’s point of view. He was sitting on a wooden chair that could have fallen apart at any second. We had experienced an earthquake, a near miss with a hurricane, and a tsunami warning. We didn’t have any track record to rely upon. But I told him we were not going to plan for the doomsday scenario. I told him we were going to be successful. I knew I’d come to the right place, in part, because of something that happened a few days previous.

It’s never easy to leave someone you care about, and when we left our teenage son in Waimea at Hawai‘i Preparatory Academy, it stands to reason there would be a moment of wonder and reflection upon this parting. As we stood outside the school heavy with the weight of our decision, a brilliant rainbow appeared. I knew this decision was right and good. And then, a second rainbow appeared above the first. Affirmation.

Our College of Pharmacy has been like that moment: a constant unveiling of color and promise. As we look forward to the graduation of our first pharmacy class this May we can see in these students that the path we’ve chosen as a College is certain and steady. These first alumni of the CoP will take their professional places in the world carrying not only the intellectual tools and emotional fortitude that come from completing a challenging curriculum, but their memories will contain more than a little of the `ohana we’ve created here.

In Kāwili Lā‘au, we share that with you.

On these pages you will learn about our newly established Center for Rural Health, which will serve as a hub of a large-scale, interdisciplinary effort to improve rural health care in Hawai‘i and the Pacific Basin. This issue also features our world-class research, our recent red-carpet Health Fair and the annual White Coat Ceremony. You’ll see our students’ enthusiasm as they attended our first Career Fair, and the next day, interviews at the Honolulu Country Club. We invite you to see why we believe we’ll become a top-25 pharmacy school. Just turn the page.

John M. Pezzuto
Professor and Dean
The College of Pharmacy (CoP) will house a newly formed center at UH Hilo that will be the hub of a large-scale, interdisciplinary effort to improve rural health care in Hawai‘i and the Pacific.

The Center for Rural Health Science will draw together pharmacists, physicians, nurses and other health care providers to solve rural health problems through means of research, education, community service and policy change. The center is off to a running start since it will build on $20 million in current grant funding.

Dean John M. Pezzuto noted that CoP is uniquely positioned to make the most out of this rural health initiative because of several grants received targeting rural health issues, including the $16 million federal Beacon Community grant. He noted “We are extremely pleased to support this new center, and I can guarantee the strength and talent of the College of Pharmacy will assure its success.”

“There are many preventative strategies we can implement that will improve the health of our citizens,” Dean Pezzuto said. “Equally important are health information technology, care re-design and payment reform, all of which will be part of the Beacon project. This new center will not shift the focus from the Beacon Community, but will provide new resources to help us support it. We are energized at being named to house the center, and encouraged to have UH Hilo’s support in committing to better health care.”

Chancellor Donald Straney introduced the new center to a packed auditorium at the Class of 2014’s White Coat Ceremony Oct. 17 at the University’s Performing Arts Center. He said the College of Pharmacy is a natural location for such a center.

“The College of Pharmacy currently serves as the nucleus for building a center of excellence in health care, delivery and development at UH Hilo and has the resources, the expertise and the partners to succeed,” Chancellor Straney added. “This is an important way for UH Hilo to contribute to improving the health status of our region.”

The founding director will be Dr. Karen Pellegrin, CoP’s director of strategic planning and continuing education, and principal investigator for the Beacon Community grant.

“It is a great honor to serve as founding director of the Center for Rural Health Science, and it ties in so beautifully with several of our current projects,” Dr. Pellegrin said. “This is a new initiative, but with current funding and a solid staffing base, we will hit the ground running. I have no doubt we will help to improve the way we think about and practice health care. I know the citizens of Hawai‘i will see real benefits from our work.”

Dr. Pellegrin envisions a center that solves problems, rather than one that just studies them. Many CoP current projects are proof of that philosophy, and will have opportunities to grow thanks to the new center, she said.

For example, more than 500 senior citizens in rural areas throughout Hawaii have received medication safety training through one of her projects funded through the United States Department of Agriculture. Another project in CoP brings trained pharmacists to Hawai‘i to complete a rural health residency program to prepare them to practice in rural communities.

“We are going to have the privilege of bringing together many talented, educated, smart people who have the potential to make life better for people in rural communities everywhere,” Dr. Pellegrin said. “We need to get started.”
An Oath of Devotion

The 90-student class of 2014 celebrated their choice of profession by participating in this year’s White Coat Ceremony on October 17 at the UH Hilo Performing Arts Center. This ceremony, a rite of passage for new pharmacy students, seeks to affirm their commitment to professionalism, respect, integrity and caring.

To a packed auditorium of family, friends, community members and peers, Dean John Pezzuto encouraged students toward hard work and diligence. “You should find our curriculum challenging, but if you are dedicated to your studies you should thrive,” he said. “There are many people on your team. Some you see everyday and some you may never see, but we are all here to assure your success.”

That team includes UH Hilo Chancellor Donald Straney, who reminded students that although the profession to which they seek membership is centuries old, by the time “you retire, you will be helping people in ways that we can’t even imagine today.”

Pat DeLeon, Senator Inouye’s chief-of-staff was also present to hearten students. “The world of health care provider is the world that you students are entering. You have to have vision and dedication and constantly give back to society.”

“Shadi Obeidi, first-year pharmacy student and White Coat Ceremony participant said the ceremony was a milestone. “The ceremony told us that we have reached a point in our lives we will never forget.”

All of us worked hard to get in pharmacy school, and now that we’re actually here we are all looking forward to advancing into the profession of pharmacy.”

For Obeidi, the most memorable part of the ceremony was the presence of `ohana or family. “As student pharmacists moving forward together, we will share both the difficulties and the celebrations of our journey. As a family, we will help one another as the years pass so that by graduation we’ll have formed lifetime friendships.”

The ceremony included remarks from Associate Dean Dr. Edward Fisher, Mayor Billy Kenoi, Dr. Lucy Bucci of Hawai‘i Island Family Medicine, and Bryan D. Drost of CVS Caremark. A congratulatory letter from U. S. Senator Daniel Akaka was read.

Promise of Devotion:
New Class Takes Oath

An Oath of Devotion

The UH Hilo Pharmacy Class of 2014
Dean Presents First Annual APEX Awards

A highlight of this year’s White Coat Ceremony involved the bestowment of the college’s first annual awards for the Advancement of Pharmacy Excellence (APEX). The awards were granted to three long-time CoP supporters: Dr. Jerry Johnson, Chancellor Emeritus Rose Tseng and Pat Deleon.

The APEX winners were selected because of their outstanding contributions to the CoP. Dean Pezzuto presented the koa plaques, and offered the following praise for the winners:

“Dr. Jerry Johnson coordinated much of the planning for this college. He rallied community support. I dare say if he were not the chair of the search committee for a dean, I would not be here today.”

“Pat DeLeon has brought to bear the power of the federal government in nurturing this college. Congressional support has been instrumental in allowing us to create a college that is head and shoulders above the many mediocre programs springing up throughout the country.”

“Dr. Rose Tseng has amazing energy, drive and vision. Throughout the community, the campus, and the UH system, Rose focused her energy on creating this program.”

White Coat Ceremony Celebration

Faculty and students from the College of Hawaiian Language chant a welcome

Koon Ting, Tracey Nakama and Millie Fong celebrate with sweets

Roxanne Sewake and Heather Tanaka

“This is your chance to be a part of change.”

Pat DeLeon, Senator Inouye’s Chief of Staff

photos by Robbyn Peck

Dean Pezzuto and Dr. Jerry Johnson

Dean Pezzuto and Pat DeLeon

Dean Pezzuto and Dr. Rose Tseng
ASP, said the students want to make a difference to the community and he believes the Health Fair has made important strides toward that goal. "Without the collaborative efforts of all the classes, pre-pharmacy students, faculty and staff, KTA superstores, as well as the many other organizations that were involved, this event would not have been as successful. With everyone's help we have achieved excellence for our College, our community and most importantly, our patients." Chun added that he believes that this level of commitment from so many will ensure that his College become one of the top 25 pharmacy schools in the nation.

Mimi Pezzuto, Pharmacy faculty and advisor to the sponsoring student organization, said that this year’s Health Fair was particularly special because "We have a full complement of four classes to participate. We’re very proud of the expertise and service of our students.”

Community members Elaine Murakami and Mary Chan agreed. The two took advantage of this year's educational booths and health screenings at the fair. "I like this," said Murakami. "The atmosphere is so relaxed, and the presentation is very good.”

Chan applauded the fair, especially for "those in the community who can’t regularly visit their doctors.” Patrick DeLeon, chief-of-staff for Senator Inouye, was also present for the Health Fair. He admired the students' efforts on behalf of the community. "This is an example of Senator Inouye’s vision – a high quality education with such enthusiastic students.”

Students felt that this year’s Health Fair was another demonstration of the level of care the CoP family hopes to bring to its host community and beyond. "The Health Fair showcased the blend of different kinds of individuals,” said Susan Phan, originally from Vancouver, B.C., and CoP 2013 class member. “You could certainly feel our distinct Hawaiian spirit and aloha.”

A Who’s Who gathering of Hawaii’s political leadership was on hand on Saturday, October 16 to help the students, staff, faculty, and administration put on a highly successful second annual College of Pharmacy Health Fair. Held in honor of American Pharmacists Month, the three-hour event was sponsored by the College of Pharmacy’s chapter of the American Pharmacists Association Academy of Student Pharmacists. (APhA-ASP). More than 150 guests attended, a clear indication of the College’s growing importance to the Big Island, the State of Hawa‘i, and the nation.

Present at the Health Fair were Hawaii’s U.S. Senators Daniel Inouye and Daniel Akaka as well as soon-to-be elected Governor Neil Abercrombie and Lieutenant Governor Brian Schatz.

John Pezzuto, Dean of the College, reflected on the significance of the occasion: “We’ve come a long way from our simple beginnings just four years ago,” he said. "At our Health Fair we were honored by the presence of Senator Dan Inouye and his wife Irene Hirano, Senator Dan Akaka, incoming governor Neil Abercrombie, and Brian Shatz.

Having them witness the enthusiasm of our students and faculty is reason enough to celebrate. But seeing them demonstrate their commitment to out growing College with their presence speaks volumes about both our College’s success and its potential.”

Aaron Chun, a third-year pharmacy student from Hilo and president of the APhA-ASP, said the students want to make a difference to the community and he believes the Health Fair has made important strides toward that goal. “Without the collaborative efforts of all the classes, pre-pharmacy students, faculty and staff, KTA superstores, as well as the many other organizations that were involved, this event would not have been as successful. With everyone’s help we have achieved excellence for our College, our community and most importantly, our patients.

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Sen. Daniel Akaka gives the shaka.
One of the best things about working at our new and growing College is the ability to both propose new ideas and execute them with relative ease. If an idea is well thought out and serves the greater vision of the College, there often are no immovable mountains in your way stopping you from creating the transformation you desire.

I remember quite clearly the first year working in the CoP admissions office. With over 1000 applicants a year, we received what seemed like endless transcripts, PharmCAS applications, supplemental application, letters of reference, PCAT score reports, interview score sheets, and updated application materials, all which needed to be filed, organized, put somewhere logical and pulled out again and again for the Admission Committee review. Often during that first year I had the thought “there has to be a better way.”

Luckily, instead of just thinking I decided to take action. With the support of the PharmCAS application service and Academic Management System’s PharmAdmit software and tech support team, I was able to design a process that met the unique needs of our College. I am very proud to say that we have just embarked on our second paperless application cycle and we are never looking back. Currently, the UH Hilo CoP Admissions process is 99% paperless.

Student applications and application updates are sent to us each Monday from PharmCAS via an electronic download into PharmAdmit. This only takes a few minutes. Secure electronic applicant files can be instantaneously accessed and reviewed, even during committee meetings. Self designed reports are a click away and without performing data entry less human error is involved.

What could be better? The process is efficient, it saves resources, and has greater accuracy. We are able to communicate with our applicants quicker and easier with automatic, personalized email correspondence which lets them know exactly where they are in the process. This summer at the AACP meeting in Seattle, PharmCAS announced that by 2012, PharmCAS will be officially paperless and will no longer send hard copy applications to schools. Ninety out of the 115 Colleges of Pharmacy in the United States use PharmCAS and as such last year PharmCAS received over 17,330 applications. Since one applicant may submit their application to more than one school, PharmCAS sent out 86,350 applications (most via hardcopy).

As a speaker on the “Paperless Admissions Processes” panel during the AACP meeting this summer, I was able to share the benefits of transitioning from paper to paperless with many other schools. Hopefully, the discussion eased apprehensions, generated positive ideas and inspired nationwide change.
What happens after graduation?

To help pharmacy students answer this question the College’s first Pharmacy Career Fair was held on October 22 on the UH Hilo Main Campus Edwin H. Mookini Library Lanai. The event buzzed with student excitement for their ever-expanding professional possibilities, as it offered a glimpse of practical, real-world opportunity.

Twenty-four pharmacy and business representatives were present to share information with the College’s students. Participating businesses included Amerisource Bergen, KTA, CVS Caremark, PharMerica, Kmart, Safeway, Target, Waianae Professional Pharmacy, Walgreens, Walmart, and Hilo Medical Center. In appreciation, the pharmacy representatives were treated to a breakfast hosted by Dean Pezzuto.

He thanked the participants and said, “Today, with your help, our students can learn about pharmacy internships and career possibilities. The College appreciates your presence and participation. I hope our students leave as lasting an impression on you as they have on our faculty and staff. Likewise, we are confident that some significant professional relationships will be formed today.”

Deanne Kaopua of CVS Caremark offered her best advice to pharmacy students seeking employment: “They should be open to all opportunities that happen to come their way.”

Nelson Nako, 2009 Preceptor of the Year and lead pharmacist at Hilo Medical Center enjoyed visiting with students he’d come to know. “We meet every first-year student in the program, and it’s great to see them again.”

Ambrish Patel, class of 2011, agreed. He said, smiling, that the event “was a good way to meet my classmates as professionals. We’ve been out on rotations so it’s been a while since we’ve seen one another.”

Patel added that the Career Fair was evidence of how much the College itself cares for its students. “This demonstrates yet again that they want us to be successful.”

Liz Heffernan, Director of Student Services and Career Fair organizer, stated that she’d heard significant positive feedback about the debut event. “The representatives really enjoyed Dean Pezzuto’s breakfast discussion and appreciated learning more about our College’s future path.”

Top: Two CoP students garner information from Walgreens Representatives Nancy Huang and Heidi Muniz
Right: Deanne Kaopua, CVS Caremark Representative, answers questions for Ambrish Patel, Class of 2011
Below: Onna Poeter, visiting from Target, offers insights to Janell Matsukawa, Class of 2014
Opposite: Pharmacy Representatives and CoP students mingled at the CoP Career Fair on the Lanai of the Edwin H. Mookini Library at UH Hilo
Interview Day in Honolulu

The College of Pharmacy first Interview Day was held at the Honolulu Country Club on Oahu on October 23. Thirty-nine students from the Class of 2011 participated in some of their first professional career interviews. "On this day 205 interviews were scheduled, 13 companies and 32 representatives attended," said Liz Heffernan, Director of Student Services. "I hope many, many job offers are made as the result of this occasion."

Jessica Toyama took advantage of the opportunity. She said, "I speak on behalf of my peers when I say that we are extremely grateful to Liz for coordinating the College of Pharmacy’s Interview Day. Her continuous dedication, support and hard work is deeply appreciated."

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CoP Building Design Update

Dean John Pezzuto examines a model of the room setup for the building that will become the permanent home of the University of Hawai‘i at Hilo College of Pharmacy. The model, submitted to faculty and staff for comment by WCIT Architecture of Honolulu, is the first tangible step toward designing the building. The permanent building will be located at the corner of Komohana and Nowelo Streets, in close proximity to CoP’s temporary headquarters on South A‘ohoku Place. The site will bring together teaching, research, study, administrative and faculty office spaces that are currently distributed across seven different sites on the UH Hilo campus and the Hilo community. The planning and design of the building is funded by $5.5 million provided by the state of Hawai‘i. UH Hilo is in the process of securing funding for construction of the building, which has an anticipated cost of $66 million.

Kerri Okamura: A Pharmacist Giving Back

Kerri Okamura is on a mission. The Director of Pharmacy Operations for KTA and four-year College of Pharmacy Preceptor is determined to make sure that graduates get a first-hand understanding of the world of community pharmacy and its patients.

Twice a week, for six-week periods, her pharmacy hosts two CoP students. While they are with her she and the other members of the KTA pharmacy staff demonstrate the daily operations of an independent pharmacy.

“When students are here they see many aspects of retail pharmacy – from stocking over-the-counter medicines to billing and reconciliation of accounts,” she explained. “Pharmacy is not strictly counselling patients. There are many steps involved to run a business.”

But she wants to teach her CoP students more than those dollars-and-cents processes. Through her example she hopes to instill a sense of caring for patients and their well-being. And in Okamura, that concern is obvious.

A quick walk with her from her office upstairs to the store pharmacy on the main floor shows what she models for her students. She greets several shoppers and calls them by name. She listens. Her smile is catching. Her affection for the citizens of her home island is plain.

“That wouldn’t come as a surprise to those who know her. She grew up in Mountain View and attended Waiakea Elementary, Intermediate and High schools. Her family is fourth generation Big Island Japanese. She is a PTA volunteer at Ernest B. DeSilva Elementary School, where she has chaired the annual Fun Run for the past four years. This year she helped to start up a 4-H club for her daughter and her daughter’s friends. The duty she feels to her patients grows from these deep Big Island roots.

“I feel an obligation to help our community,” she explained. “I think everyone should try to make the place they live in better, whether that means making our community healthier or improving its welfare in another way.”

Lara Gomez, CoP faculty and Clinical Education Coordinator, believes that Okamura will be successful with pharmacy students. "Kerri is truly passionate about the pharmacy profession, and she goes out of her way to provide services to her patients. She inspires students by encouraging them to attend flu clinics and health fairs and to engage in community service."

Students placed with Okamura in the KTA Pharmacy recognize her efforts. Chris Kamei, class of 2013, said "During and after the clinics we attended with Kerri, I always felt like I had done something good for someone else. That is a wonderful feeling for a pharmacy student.”

Bredan Katahara, second-year student, said that working with Okamura had opened his eyes to pharmacists’ extended role in the community. “Pharmacists can help improve the health, understanding, and awareness of many people, not just our patients, but those whose lives they touch,” he said.

But Okamura isn’t only a teacher. According to her, she is also, in a way, a student. “This semester I’ve had several fourth year students and I was very impressed with their clinical skills. It has been interesting to learn about their studies. The students will be my peers one day.”

Kerri Okamura received her B.S. in Pharmacy from Purdue University in 1995 and returned immediately to the Big Island where she has worked every year but one at the KTA Pharmacy. She has served as Staff Pharmacist, Pharmacy Manager and is currently the Director of Pharmacy Operations. In recognition of her superb mentorship and outstanding contributions, the College of Pharmacy designated her as an inaugural Preceptor of the Year in 2009.

16 Kāwili Lā‘au Winter 2010

Winter 2010 Kāwili Lā‘au 17
The University of Hawaii at Hilo’s College of Pharmacy has joined forces with the University of Hawaii at Manoa to strengthen a project that will receive $9 million in federal funding over three years. The project, funded by the National Institute of Health (NIH) allows the collaboration to continue expanding and improving biomedical research in Hawaii.

The funding comes from NIH’s National Center for Research Resources (NCRR) project called the IDeA Networks of Biomedical Research Excellence (INBRE) program, which began in 2001. At that time, a $6 million grant helped establish The Biomedical Research Infrastructure Network (BRIN) at UH Manoa.

The previous focus upon epidemiological research was replaced with an emphasis upon natural products and neuroscience research to create INBRE II. “This funding will help invigorate and strengthen biomedical research capacity not only for the College of Pharmacy but for the entire state,” said John M. Pezzuto, Dean of the College of Pharmacy. Pezzuto joins Eric Holmes, Director of Research Operations, and David Haymer, Professor of Cell and Molecular Biology, both from the UH Manoa John A. Burns School of Medicine, to lead the collaborative research program centered on new research themes. Administrative, Bioinformatics, Research, and Training and Education centers on the project are based in Honolulu. In Hilo, Pezzuto will direct the UH Hilo College of Pharmacy Research Innovation Core (COPRI), which will interact with the broader Research Core and Training & Education Core.

“By seeking broad institutional participation, including UH Hilo College of Pharmacy, we have bolstered our ability to offer exciting opportunities for researchers while building upon existing multi-disciplinary research expertise and infrastructure throughout the State of Hawaii,” said Holmes, who also is Principal Investigator for the INBRE II project. “We are confident that our new leadership, along with the clearly delineated cores will carry the INBRE program to new heights.”

This leadership team has assembled researchers, mentors, and other collaborators to address basic science research areas as they build upon the established multi-disciplinary network, provide support at participating institutions, offer research opportunities that serve as a “pipeline” for students, and enhance science and technology knowledge of the state’s workforce.

“Mentoring plans will allow each investigator to blossom in their career as they expand their knowledge and experience in scientific research,” said Haymer, who will coordinate the Research program. “In turn, each investigator will increase their exposure to novel, innovative projects while striving to obtain independent funding status.”

Among the 14 junior investigators spread between 4 institutions in the state are 7 COPRI junior investigators based in the College of Pharmacy. They have worked with their mentors to develop research proposals in the following areas:

**Dr. Ghee Tan’s** project will look for possible applications in drug development to fight malaria. Her laboratory work will optimize the safety and efficacy of potent antimalarial lead compounds through the synthesis of derivatives.

**Dr. Daniela Guendisch’s** project will focus on diverse diseases in the central nervous system (CNS). She will synthesize new compounds using natural products as so-called lead compounds and will test them for the ability to interact with nicotinic receptors, which are involved in diverse CNS diseases.

**Dr. Susan Jarvi** will study disease tolerance as evidenced through a recent explosion of low elevation native Hawaiian bird populations despite high prevalence of Plasmodium infection. Her goal is to characterize and begin to define potentially novel mechanisms involved in tolerance to malaria in this relatively simple, geographically-isolated, natural disease system.

**Dr. Leng Chee Chang** will be looking for ways to reverse the progression of cancerous tumors. Her research will search for inhibitors called Raf kinases from microbial natural products including Streptomyces species and endophytic fungi.

**Dr. Aaron Jacobs’** research will focus on a cellular process called autophagy that is implicated in many disease states, including cancer and neurodegeneration. His project examines the role of the enzyme diacylglycerol kinase iota and monitors its effect in a cancer model.

**Dr. Eugene A. Konorev’s** project will assess the effects of doxorubicin, an antitumor drug known to cause cardiomyopathy and congestive heart failure. Inhibition of angiogenesis, or new vessel formation, in the heart is believed to contribute to the development of heart failure. Work in his laboratory will examine the mechanisms of inhibition of angiogenesis by doxorubicin.

**Dr. Diaqing Sun’s** project aims to discover and develop antibiotics for use in tuberculosis, as well as to find potential drugs to treat malaria. Work in his laboratory will utilize a natural product library approach to discover and develop novel anti-infective agents.

Coming in the Spring **KL** issue: more stories featuring INBRE research progress!
Crystal research focuses on improving drug quality

Dr. Ken Morris, CoP Pharmaceutical Sciences faculty, is widely recognized for his contributions to modernizing dosage form development in the pharmaceutical industry. Two of his current projects involve the examination of pharmaceutical material properties.

One involves the study of the narrow therapeutic index drug, levothyroxine. He first considered this project ten years ago.

The study’s goal is to develop formulations for drugs like the thyroid hormone levothyroxine so that they remain both stable and effective.

“The reason I think this is so important is because the side effects, if the dose is incorrect, are devastating for people,” he said. “A very minor change can make this drug ineffective or even toxic.”

Levothyroxine is difficult to manage, in part, because of its massive dose.

“A normal dose for some drugs is 300 milligrams. But the levothyroxine dose is a thousand times lower than this dose — and that is at the high end,” he added.

Also important is economy of scale. New formulations require practical usage by large-scale manufacturers.

Dr. Morris explained, “Right now, even if you identify the correct dose the other danger is that this drug is easily degradable. We must be able to stabilize it when we bring it to a tabletting plant.”

The levothyroxine study is a prime example of CoP intercollegial collaboration. Its principal investigator is Dr. Mazen Hamad, Assistant Professor of Chemistry, and affiliated Pharmaceutical Sciences faculty.

He said this project has exciting possibilities.

“What’s key is that we have a really good chance at solving this long-standing problem,” he said. “We may discover why this drug degrades, and if we understand the molecular mechanism, then we can propose ways to stabilize the drug. The implications are we can extend the shelf life of the drug product, put a safer product on the market, and potentially lower the cost of the medication.”

Dr. Hamad added, “This drug has been on the market since 1955. Since then, there have been many recalls of the drug product because of problems with incorrect potency.”

CoP students are the immediate beneficiaries of this project.

“The students are growing crystals, doing the analysis, and then placing the crystals under stability conditions and following their degradation using chromatography,” said Dr. Morris.

A second project, which seeks to determine the properties of crystals to aid in creating better tablets, is a National Science Foundation funded project.

“Depending on how easily crystals deform under pressure they’ll create tablets that will stay together or not,” explained Dr. Morris. “So the project is designed to characterize and predict how easily crystals change shape under pressure.”

Using X-ray diffraction in a unique way, researchers can look at the changes in spacing or distances between molecules when they are compressed or as they are subjected to pressure.

“This is the first time anyone has combined compression and X-ray to determine the strength of drug crystals,” said Dr. Rahul Haware, postdoctoral fellow working in the laboratory of Dr. Morris.

Once the deformation information is garnered then “we use advance computational tools to eventually bring these measurements together in a predictive model,” said Dr. Morris.

To date, the NSF-funded study has examined the deformation of acetaminophen, aspirin and sucrose crystals. Work with levothyroxine could lead to completely unique therapeutic outcomes.

Hana Hou! takes notice

If you’ve traveled off island recently you may have seen a familiar CoP face in the pages of Hana Hou!, the award-winning magazine of Hawaiian Airlines.

Mimi Pezzuto, Pharmacy Practice Instructor, graced the pages of the October/November issue. Her research, involving historic prescription logs from the 1890s to the 1940s, which were donated to the CoP by Hilo’s Wessel family, garnered a glossy full-page article.

“The whole experience was very nice. It was really fun being photographed by Olivier Koning, and the reporter David Thompson became quite interested in the story,” she remembered.

“All my students have seen the article,” said Pezzuto in her sunlit office one recent December morning. “I’ve received calls from friends on Oahu and all over the Big Island.”

But the story has generated interest from strangers as well.

“Someone tracked me down from Honolulu. Her grandmother came here in the 1890s. The person is very interested in epidemics in Hawaii,” said Mrs. Pezzuto.

I’ve also been contacted by a scientist studying the effects of VOG. He sent me different eruption dates and he postulated that when VOG was greater there would be more prescriptions of a certain type,” she said.

Mrs. Pezzuto hopes to broaden curiosity about the pharmaceutical archive. “What I really want people to know is that these books belong to the people of Hilo. They are not meant to be under glass.”

Practicing what she believes, she has taken the books into the schools with visits to St. Joseph School and Kamehameha High. “It’s wonderful to see the kids touch the pages. Their fingertips are touching a part of their history.”

In fact, an important part of Hawaiian history is contained within the pages of one of the 10-volume collection. “One prescription is written completely in Hawaiian. This may be one-of-a-kind. There aren’t others like it to be found,” she said.

Another exciting log entry has a reference to BP, British Pharmacopoeia. Pezzuto sent the entry to her mentor at Purdue.

“He is in his 90s and the drug in there was one he’s never seen before.”

“These books are a spectacular record of the evolution from compounded drugs to manufactured drugs,” she said, her enthusiasm showing.

“The possibilities are endless.”
Pharmacy students present marketing plans in competition

A team of third-year College of Pharmacy (CoP) students won almost $2,000 in the fall semester’s marketing case competition Nov. 19, which featured a product that will make medication management more efficient. CoP faculty, Hawai‘i- and California-based Target officials served as judges. Winning students were Bernie Cheng, Megan Ching, Richelle Hirata, Jeff Retter and Jessie Wong. They were one of 20 teams of 89 students from Dr. Mok Chong’s course that focuses on exposing future pharmacists to business practices. “This exercise teaches students how things run in the real world and shows them how they can make it happen,” said Dr. Chong, who is an assistant professor in the Department of Pharmacy Practice. Several students have said they don’t understand why they would have to learn the marketing concepts as part of the PharmD curriculum; and could not understand how this can be important for a pharmacist. I tell them that many pharmacists who are now practicing pharmacy in various settings tell me that they wished they had the opportunity to learn this skill when they were in school. They now realize that such a course can prepare them to be more efficient and marketable in the pharmacy marketplace.”

Teams were assembled using a personality profile used by many Fortune 500 companies, Dr. Chong said. Marketing teams presented their proposals in four groups. The judges in each group selected the best proposal for a final round of presentations in front of all the judges and the entire class. The winning team devised a marketing plan to sell a product called “ClearGuide” that is designed to help patients take their medications more regularly. According to the marketing plan, “ClearGuide” will add value to services already offered by providing personalized drug information to customers, along with directions for use, a photo of the medication and description of major side effects. “Not only is [our product] a valuable resource for Target Pharmacy guests, it is also a useful counseling tool for Target pharmacists,” the plan states. “These pharmacists can use it to illustrate the dosing schedule for each individual medication and point out any special precautions that guests should be aware.”

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.

Winning third-year students celebrate with Target store representatives after the marketing case competition at UH Hilo College of Pharmacy Nov. 19. From left, Luke Roberts, Pharmacy manager, Kona Target; Roger Thomas, manager, Kona Target; students Jeff Retter, Jessie Wong; Michelle Dogey, Target Pharmacy Business Partner for Los Angeles and Hawaii; Farah Madhat, Target Group Pharmacy Leader in San Francisco; Onna Poeter, Target Pharmacy Campus Recruiter from Newark, Calif. and students Megan Ching, Richelle Hirata and Bernie Cheng.

College of Pharmacy

Dean John M. Pezzuto was the keynote speaker at the first international scientific conference of “Resveratrol and Health.” The conference was held in Helsingør, Denmark, during the period of Sept. 13-16. There were 160 attendees. Dean Pezzuto is well known for the discovery of resveratrol, a bioactive component in grapes and wine that is believed to help prevent cancer. “The USA is still the main market for resveratrol today but the trend is getting truly global,” said Sami Sassi, product manager for Resveratrol at Fluxome, who organized the conference together with Roskilde University and Danish Society of Biochemistry and Molecular Biology. “Resveratrol has gotten a lot of media focus lately that has helped to increase consumer awareness. We believe it’s important now to get all the scientific evidence collected and communicated, to get the data behind the headlines.”

The goal of the conference was to collect and summarize the latest scientific work conducted with resveratrol. Lectures were presented for 2½ days and this was followed by a private session to discuss progress and future directions. Papers from the meeting will be the latest update in the area of resveratrol research globally and include a recommendation for directing ongoing scientific research and the use of resveratrol. The reports will be published as a volume in Annals of the New York Academy of Science. “We felt that this year was the optimal time to gather the relevant scientists in the resveratrol field,” said meeting organizer Ole Vang, Associate Professor, Department of Science, Systems and Models, Roskilde University. “We have received positive feedback from the participants, who said they liked to get news on ongoing experiments in the field and to meet people they had worked with on projects but hadn’t yet met.”

Dean Pezzuto’s paper is entitled “The Phenomenon of Resveratrol: Redefining the Virtues of Promiscuity.” “The discovery that resveratrol shows surprisingly broad spectrum activity has led to many additional research efforts,” Dean Pezzuto said. “Spurred by our original report, there are now around 3,500 papers concerning some aspect of resveratrol action. Even though chemical structure of resveratrol is relatively simple, the molecule is unusually promiscuous and specific mechanisms remain elusive. The intensity of interest is phenomenal.”
Rotary Club Honors Dean Pezzuto for Efforts in Health Field

Dean John Pezzuto was honored by the Rotary Club of South Hilo with an award for his outstanding efforts in the health field on October 5 at a luncheon at the Hilo Hawaiian Hotel. The award celebrates Dean Pezzuto’s community-minded efforts while building the four-year-old College of Pharmacy.

“It is difficult to express what a great pleasure it was to receive this award,” said Pezzuto. “I am very grateful for this honor, for the support of our Hilo community and specifically the faith and goodwill of the Rotary Club of South Hilo.”

“Tobe recognized for by this group is a deeply heartening,” he added. “This award means that our College’s efforts to be a good citizen have been noticed, as well as our progress toward becoming a top 25 pharmacy school.”

Cathy Hashimoto, Community Manager of Development for the American Cancer Society, said. “The four-way test is like our mission test: is it the truth, will it be fair to all concerned, will it build goodwill and better friendships and will it be beneficial to all concerned.”

Hashimoto pointed out the importance of the College of Pharmacy to Hilo. “Having such a growing college has been a boost not only for the economy but for what we stand for in Hilo.”

“It is refreshing to see what such spirit gives not only to the College,” she said, “but to Hilo, the Big Island and beyond.”

Dean Pezzuto accepts the Rotary Club award from Randy Kurohara, past club president and Neil Erikson, current club president.
Student Organization Seeks Deeper Understanding of Community Pharmacies

COOP students have formed a student chapter of the National Community Pharmacists Association (NCPA). This organization seeks to encourage, foster, and recognize an interest in community pharmacy ownership and entrepreneurship among the future leaders of their profession.

Ron Taniguchi, faculty advisor for the chapter said that though a small chapter existed last year, this year the group has high hopes for expansion. “Independent pharmacies make sense for rural communities,” he said. “Those communities would prefer to see a pharmacist from their area, someone they know and feel they can trust.”

Peter Jo, class of 2012, serves as President this year. He said that membership has more than doubled. “Last year we only had 12 members but this year we have 30.”

Membership size did not deter students last year from accomplishing several milestones. “NCPA participated in the Health Fair last year,” said Jo. “We had booths that educated patients on formulary and drug coverage. Secondly, our Thanksgiving food drive garnered 500 cans and we received a $1,000 check towards the food drive from John Erickson, owner of the Puna Pharmacy.”

Cody Walker, last year’s Vice-President and current member, said the NCPA fit perfectly with his personal goals. “I am particularly interested in owning my own pharmacy because of the freedom it allows pharmacists to best operate for his community. I hope to create an environment where patients know that you are there for them.”

Photo: Cody Walker (P4), Christine Lucas (P2), John Erickson (Puna Pharmacy owner), Anqi Liu (P2) and Peter Jo (P3).


Special Note: Student Prabu Segaran accepted the 100% Achievement Award on behalf of the Gamma Theta chapter of Phi Delta Chi at the Leadership Development Seminar in Madison, WI in August. Quite an accomplishment for a chapter in its founding year!

Ron Taniguchi, Director of Community Partnerships and Acting Chair, Pharmacy Practice, was appointed to a statewide task force to conduct a study to determine the feasibility of lowering the age at which vaccinations may be administered by pharmacists; assess the feasibility of requiring every pharmacy to have the capacity to transmit and maintain prescription information electronically. The task force also is assigned the responsibility to develop a plan for pharmacy participation in the Hawaii Health Information Exchange. The task force will submit a report of its findings and recommendations to the legislature no later than 20 days prior to the convening of the regular session of 2011.

UH Hilo Chancellor Don Straney (left in photos) was given a tour of the temporary modular facilities for the College of Pharmacy on September 24, when he met with researchers, including Dr. Eugene Konorev, Assistant Professor in Pharmaceutical Sciences. He also met with Dr. Karen Pellegrin (center in right photo), Director of Strategic Planning and Continuing Education and Dean John Pezzuto.

UH Hilo Chancellor Don Straney (left in photos) was given a tour of the temporary modular facilities for the College of Pharmacy on September 24, when he met with researchers, including Dr. Eugene Konorev, Assistant Professor in Pharmaceutical Sciences. He also met with Dr. Karen Pellegrin (center in right photo), Director of Strategic Planning and Continuing Education and Dean John Pezzuto.
Pharmacy students at the University of Hawai‘i at Hilo received financial support for the 2010-2011 academic year from scholarships totaling almost $85,000.

Scholarships are awarded based on criteria determined by the donors and university, and include merit, financial need and career aspirations.

“Competition for these scholarships is strong because of the caliber of our students,” said Edward Fisher, associate dean for academic affairs in the College of Pharmacy. “We’re pleased to show due respect to these winners and are grateful to the many generous donors for helping our students achieve their dream of earning a doctorate in pharmacy.”

The College of Pharmacy students winning awards are:
Scholarships
(continued)

Scholarship benefactors and students:


**Good Neighbor Pharmacy Scholarships:** Bernie Cheng, Eiko “Amy” Harvey.

**Grace Mizuko Miyawaki Pharmacy Scholarship:** Tiffany Pualei Santore.

**Haga Family Endowed Scholarship:** Melissa Yoneda, Nelson Nakatsu.

**J.M. Long Foundation Scholarships:** Irene Chaisri, Cassie L. Kim, Christopher I. Lai Hipp, Daniel K. Loo, Cheryl M. Lopez, Angelina M. Lovell, Ana Park, Shanele S. Shimabuku, Megan C. Venegas.

**National Association of Chain Drug Stores Foundation Pharmacy Partners Scholarship:** Amber Schwarz.

**Safeway Scholarships:** Ceslee Fukuhara, Richelle Hirata.

**Target Scholarships:** Angelina Eustaquio, Jack Fernandez, RaeAnne Fuller, Tanya Moore, Victor Lin.

**UHH Achievement Scholarships:** Bernie Cheng, Natalie Codianne, Carol Lynn Goo, Richelle Hirata, Ryan Mashiyama, Casey Ogata, Jason A. Okazaki, Rochelle Oledzki, Prabu Segaran, Jessica Toyama, Henry Tran, Wendy Yamasaki-Herring, Marina Yeh.

**Walgreen’s Diversity Scholarship:** Jennifer Zbylski.

**Wal-Mart Scholarship:** Elissa Kahahane.

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Every day I learn new and interesting things about medicine which reinforces my desire to become a pharmacist and help people. It’s exciting to be a part of a new school, and it’s amazing to see how far we’ve come in such a few short years. The faculty and staff are top notch, and I can really tell that they care about the students. I have no doubt in my mind that we will fulfill Dean Pezzuto’s vision of becoming a top-25 pharmacy school in America. I know that one day I will be just as proud of graduating from the UH-Hilo College of Pharmacy as I am of Stanford.

Victor Lin, Class of 2013

UH Hilo Scholarship Banquet Speaker

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The University of Hawai‘i Foundation, a nonprofit organization, raises private funds to support the University of Hawai‘i System. Their mission is to unite our donors’ passions with the University of Hawai‘i’s aspirations to benefit the people of Hawai‘i and beyond. They do this by raising private philanthropic support, managing private investments and nurturing donor and alumni relationships. Please visit www.uhfoundation.org. For more information about scholarships and giving to the College of Pharmacy, call Margaret Shiba, Senior Director of Development at UH Hilo, 808-933-0829 or Margaret.shiba@uhfoundation.org.
by Jennifer Zbylski, Class of 2011

For our advanced pharmacy practice experiential, together with Stan Nikitin, I was chosen to do an outreach at PHI Pharmacy on the island of Saipan. Even before arriving on Saipan, the short layover on Guam stood out in my mind. I was caught off guard by the bilingual signage over the airport, and shocked that I wasn’t aware of another official language on these islands besides English. That’s when it first hit me: I was really somewhere culturally unique.

We were welcomed everywhere in our travels. In both Guam and Saipan we encountered people eager and anxious to welcome us and offer assistance however we might need.

All too often as a “trailblazer” pharmacy student I’ve felt out of place, underfoot, or as a nuisance, but Saipan felt comfortable, like a familiar small town. Everyone seemed to know everyone else. For example, our preceptor at PHI Pharmacy, Bruce Cohen, set us up with a great deal on a room at Chalan Kanoa Beach Hotel. In turn the hotel helped us find a great deal on a Budget rental car for our stay.

When we arrived at PHI, again we felt the joys of local hospitality. The staff was eager to assist us with learning their procedures, and our presence was greatly appreciated. By the second week of rotation, we began participating in free community health screenings. We were already giving back to the community that had marked a place in my heart for being so welcoming and kind.

The first day we tested blood pressure and blood glucose for about twenty folks, including individuals we’d already met around town! By the fifth week of rotation, sixty folks came to our screening where services have been expanded to include offers of medication reconciliation, and creation of personalized glucose and blood pressure portfolios. We were flattered by the invitation to offer these services at “Pinktober,” a benefit concert for breast cancer at the Hard Rock Café in Garapan. In such a small community with such great need for health care services, our free screenings operation is important for Saipan.

The natural beauty of Saipan is unmatched, with spectacular hikes, swims, dives, but even with all the wild loveliness, the kindness and generosity of the people here remains unmatched in my eyes. Consider this letter an offer of gratitude to everyone involved at the UHH College of Pharmacy and PHI Pharmacy for making this outreach possible, and deeply rewarding.