Recognition

Our sincere mahalo to all those who engaged in this project, including: Ana Sofia Barrenechea, Marc Burba, Shannon Amidon Castille, Judith Fox-Goldstein, Lara Gomez, Liz Heffernan, Chris Iha, Alyson Kakugawa-Leong, Kristy Nakamura and John Oshima. Thanks to Margaret Shiba for edits on fund raising. This account is dedicated to the UH Hilo College of Pharmacy Class of 2011. The College will always owe them a debt of gratitude for their commitment, trust and pioneering spirit. 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.
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### Foreword

**A MATURING VISION**

Patrick H. DeLeon  
*Chief of Staff for U.S. Senator Daniel K. Inouye (1973-2011)*

The graduation of the first class of the College of Pharmacy in May of 2011 represented a highly significant step in the maturation of the University of Hawai’i at Hilo. Equally importantly, it served as a visual reminder of what is possible for those with similar aspirations for each of the educational institutions on Hawai’i’s neighboring islands. For years the campus on the Big Island of Hawai’i was viewed by many who were genuinely interested in furthering higher education as little more than a refuge for those in academia who, for whatever reasons, simply could not “fit in” at the Manoa flagship campus. For many neighbor islands residents it was difficult, if not impossible, to believe that their children might someday have access to the same quality of education or employment that existed on O’ahu. The barriers inherent in being an island state with its geographical isolation, the ever-escalating cost of transportation, and the historical absence of critical role models who could inspire their children to seek opportunities which would come only as a result of higher education, for example aspiring to a career...
as a health care practitioner or a scientist in one of the ever-expanding STEM fields, were believed to be simply too monumental to overcome. Within the University of Hawai‘i system at large, there was the general perception that whenever one of the non-Oahu campuses proposed to grant an advanced degree, there would be an uphill struggle to obtain the support of the Board of Regents, unless specifically endorsed by the Manoa faculty.

Notwithstanding, enlightened national educational leaders, including U.S. Senator Daniel K. Inouye and then-Chancellor Rose Tseng, knew that with patience, persistence, and targeted resources a bright future was definitely possible for all of the citizens of Hawai‘i. Throughout our nation’s history, education has always been the key to a robust and prosperous future. With it comes not only access to critical employment skills, but also an important global perspective for how society is fundamentally changing and most recently, an appreciation for the exciting technological opportunities that will define the 21st century. Ensuring that all of Hawai‘i’s citizens would have ready access to quality education and thus meaningful employment has been a personal priority for Senator Inouye ever since he was first elected to public office. Over the years, he has worked tirelessly to establish special programs targeting the unique needs of rural Hawai‘i and historically underserved populations, including Native Hawaiians, Native American Pacific Islanders, and with his late colleague Senator Ted Stevens, Alaskan Natives.

It should not be surprising, therefore, that in the early 1990’s, these two consummate public servants strategically collaborated to propose a new vision for the University of Hawai‘i at Hilo and to systematically raise the educational expectations of those concerned with the “quality of life” on the neighbor islands. During Chancellor Tseng’s 12 year tenure the number of students enrolled on the campus increased over 50% (from 2,600 to over 4,000) while she added 10 new baccalaureate degrees. Hilo went from granting no graduate degrees to having six master degree and two doctoral degree programs – now having awarded approximately 600 advanced degrees. Working together, they established the College of Hawaiian Languages, ‘Imiloa (the astronomy center of Hawai‘i), and the College of Pharmacy. Each of these initiatives is extraordinarily important for the State by ensuring that appropriate recognition would be accorded to the rich cultural heritage of Native Hawaiians, including their historical contribution to holistic health care and scientific inquiry.

I am especially pleased that those involved in implementing the College of Pharmacy have made a concerted effort to reach out to the indigenous peoples of Alaska and the Pacific Basin region. They understood (particularly Professor Jerry Johnson) that to ultimately succeed, it would be necessary for the University’s students and faculty, as well as the Hilo community at large, to appreciate what their future could be with a first class educational institution on the Big Island of Hawai‘i. It is vitally important that Hilo’s leadership remains committed to its responsibility to serve as a visual role model for the neighbor islands and the Pacific Basin, as well as for indigenous peoples throughout the world. The 2011 graduating class personifies that vision. Aloha.
Introduction

Hawai‘i pulls you in as though the gravitational force is stronger here. Many are beckoned only to find it is wilder than they are willing to accept. Many more, such as those who built the College of Pharmacy at the University of Hawai‘i, make it their home.

From the nucleus of a concept emerged 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. These professionals would be able not only to work alongside other health care personnel but will fill in the gaps left by an overworked, understaffed system.

There’s no question that the evolution of pharmaceutical drugs has shaped much of life in the 21st century. There’s barely a family or an individual throughout the country and most of the world who doesn’t rely on some mixture of chemicals to improve their health. An apothecary, a druggist, or as we say in the Hawaiian language, a kāwili lā‘au, has traditionally been part of the health-care chain to dispense the drugs. But the role of the pharmacist is much greater than counting tablets. They have become part of the team of doctors, nurses, and therapists who advise, identify and help manage medications that would otherwise be unwieldy for many patients.
In the first few years of the 21st century, while the groundwork was being laid for the College of Pharmacy (CoP) in Hawai‘i, statistics showed a shortage of pharmacists in the U.S. Almost every state in the U.S. except Alaska and Hawai‘i supported colleges of pharmacy to help eliminate this disparity. Yet Hawai‘i had the potential to serve about one-fifth of the planet and act as a bridge between super powers of the world in Asia and the U.S. It was logical to put a training center in this part of the world. But how?

This document shows the steps, the hurdles, the mountains that were moved during the first 11 years of growing the College of Pharmacy in Hawai‘i. When the process began, Hawai‘i had been a state for nearly half a century and the University of Hawai‘i at Hilo had been a four-year institution for 30 years. There were processes established by that time that had to be adjusted. This is a chronicle of that development.

**Talking Story: Personal Perspectives**

“The conception of the College of Pharmacy came from the Island, with a higher religious power helping along the way.” -- Patrick DeLeon, Chief of Staff for Senator Daniel K. Inouye

By all reports, the credit for spurring the University of Hawai‘i to start a College of Pharmacy on the Big Island goes to Senator Daniel K. Inouye, the senior U.S. Senator from Hawai‘i, and his inimitable chief of staff, Patrick “Pat” DeLeon. In 2000, Senator Inouye was 76 years old and had been a U.S. Senator for Hawai‘i since 1963. At a time when many people leave new ideas to the younger generation, Inouye was still working to bring the islands of his state together. Every island in Hawai‘i has its own potential and unique characteristics to contribute to the university system. Each neighbor island will harbor centers of excellence; this was Senator Inouye’s vision. He believed every island should have its own specialty.

**A Personal Perspective from Senator Daniel K. Inouye**

In a letter to the Accreditation Council for Pharmacy Education (ACPE) Board of Directors:

May 6, 2011

Board of Directors
Accreditation Council for Pharmacy Education
20 North Clark Street, Suite 2500
Chicago, Illinois 60602

Dear Sirs:

I was very pleased to learn of your accreditation site visit to the College of Pharmacy at the University of Hawaii at Hilo this past month. Next week, their first class of 84 students will receive their Doctor of Pharmacy degree, and I fully expect that they will soon be providing outstanding care throughout the State of Hawaii, the Pacific Basin Region, and particularly, on our Neighbor Islands. I am very proud of the University’s accomplishment, and having been personally involved in the planning for this college from the very beginning, I wanted to share with you some of my thoughts on its genesis and future.

Back in January 1984, I hosted a field hearing in Hawaii of the Appropriations subcommittee with jurisdiction over the Departments of Labor, Health and Human Services, and Education. One of the issues we addressed was the extraordinary need for high quality health care throughout the Pacific Basin region and throughout the Neighbor Islands of Hawaii. Rural America has special challenges. From my earliest days in the Territorial legislature, I have urged the Governor to make a special effort to ensure the citizens of all of our islands would have direct access to their services, and particularly, that the University of Hawaii would eventually establish four year campuses on every island, as well as provide the opportunity for graduates to pursue advanced degrees in a wide range of fields, including the health professions, science, engineering, law, and most recently Hawaiian language. Without daily contact with dedicated academic role models, very few of our youth, regardless of how smart they may actually be, will ever aspire to any of these careers. This is particularly true in isolated, rural communities.

Over the years, we have made steady progress in fulfilling this vision, and admittedly, we still have a long way to go. I know from personal discussions with a number of parents that the College of Pharmacy has already made a real difference.
A PERSONAL PERSPECTIVE FROM PATRICK H. DeLEON

It was up to Senator Inouye’s chief of staff, Pat DeLeon, to make it work. A past president of the American Psychological Association, Pat lived in Hilo in the 1960’s when he was a Peace Corps volunteer. He had worked with Senator Inouye since the Watergate hearings in 1972, and understood the deep feelings behind his desire to nurture all neighbor islands. So when one of the first things he encountered was resistance from the main campus of the University at Manoa, where he found administrators who believed the College should be located on the island of O‘ahu, he was not surprised.

“Manoa was always getting richer and the other campuses poorer, but the wealth needed to be spread around. There had always been a tremendous resistance between University of Hawai‘i Manoa and University of Hawai‘i at Hilo; faculty did not always get along. The challenge was getting the Board of Regents to recognize this and move away from being centered around UH Manoa, The College of Pharmacy certainly met the challenge. Senator Inouye feels tremendous responsibility to help native Hawaiians, and his goal was to carry on activities that would bring all the Islands together. It was time for the neighbor or at times called ‘the outer islands,’ to be integrated. Senator Inouye’s projects, such as the College of Pharmacy, would bring the
scattered islands together. When each island has its foundation, Hawai‘i becomes one state.”

Senator Inouye was focused on bringing better healthcare to the neighbor islands’ rural population. A College of Pharmacy on the Big Island was a perfect opportunity to help make this happen. People often do not have the vision or belief that things are going to happen, but Senator Inouye does and things happen.

The Big Island is known for its natural resources, especially its indigenous plants. The pharmaceutical science agenda of the college would emphasize natural products. It would be poised in the perfect position to become the center of pharmaceutical research where combined contributions of Western science, Eastern traditions and Pacific Island heritage would cultivate a unique and effective approach to the healing arts and subsequent pharmaceutical advancements. Geography is a mammoth piece of what it is about.

“All of the variables just fit. The new college would give people opportunities. The healthcare environment of the 21st century is increasingly interdisciplinary in nature, with each professional developing collaborative relationship with the other professions. The college built a foundation and we will keep building on it.

The college is a success for many reasons, but from the beginning it was all the right people at the right time. Senator Inouye did not create it to not have it succeed.”

In 2010, Pat DeLeon was presented with one of the first Advancement in Pharmacy Excellence (APEx) awards from the College of Pharmacy.

A Personal Perspective from Hawai‘i State Representative Jerry L. Chang
(from White Coat Ceremony remarks)

“Before the 2002 legislative session, two members of the Hawai‘i Pharmacist Association met in my office to discuss the idea, and coincidentally both of them are named Ron: Dr. Ron Taniguchi who now works for the School of Pharmacy and an old friend, Ron Okamura.

Chancellor Rose Tseng and Gerald DeMello also made me aware that they were in the process of planning a program in pharmacy that will serve Hawai‘i and the Pacific Basin, and has received federal funding thanks to Senator Dan Inouye’s office in the amount of $350,000 in 2002, and an additional $1 million for 2003 to develop this program.

Pat DeLeon from Senator Inouye’s office had a real passion to fulfill this vision and was assigned the task of spearheading this project on the Federal level.

On the local level, Dr. Tseng took Dr. Jerry Johnson out of the classroom and assigned him the responsibility of shepherding and being the spokesperson for this project not only through the legislature but through all the intricate processes with the Board of Regents, the UH System, the health community, and the Big Island community.

In the 2004 Session, I introduced a House Concurrent Resolution requesting that the University of Hawai‘i at Hilo and the Department of Business, Economic Development
and Tourism study the feasibility of implementing a School of Pharmacy at the University of Hawai‘i at Hilo. [See Testimony Presented before the House Committee on Higher Education in Appendix C]

After the passage of the completed study, and approval from the UH System and Board of Regents, the program started with Federal and State funding. The College of Pharmacy was established in 2007.

A search committee for a new Dean was started and we were very fortunate that they selected an experienced and well-qualified person in Dean John Pezzuto.

The Legislature appropriated $6 million for the completed modules. In 2009, the Legislature approved $5.5 million for plans and design for a permanent facility, which will be located at the corner of Komohana and Nowelo Streets.

Currently the college is housed in six different locations throughout Hilo. With enrollment of 350 students and 68 faculty and staff and the first school in the State to be recognized by the Accreditation Council for Pharmacy Education, the college deserves to have their own building. That is our top priority.

A Personal Perspective from Ron T. Taniguchi

In October 2000, Kaiser Permanente’s pharmacy leadership team extended an invitation to Senator Inouye for an update on how their progressive and comprehensive pharmaceutical care program is delivered. Pat DeLeon attended on the Senator’s behalf and during the course of discussions introduced the notion that Hawai‘i should have its own pharmacy school and that it should be located in Hilo. A member of Kaiser’s leadership team was Ron Taniguchi, who would later become the College of Pharmacy’s Director of Community Partnerships and interim chair of the Department of Pharmacy Practice. Dr. Taniguchi had known Pat from many lobbying visits to Capitol Hill during the previous 16 years for professional legislative positions supported by The American Society of Health-System Pharmacists (ASHP) and American Pharmacists Association (APhA). With the encouragement from the Senator’s office, Dr. Taniguchi scheduled a meeting one month later in November with the Chancellor of the University of Hawai‘i at Hilo, Rose Tseng, to introduce the idea and assure her of the support from the pharmacists in Hawai‘i.
A Personal Perspective from Rose L. Tseng

“...collaboration to make it happen, from the campus to the systems office to the Board of Regents (BOR) to legislature to the governor.”

The College of Pharmacy was going to help combine Senator Inouye’s desire to help native Hawaiians with UH Hilo Chancellor Rose Tseng’s goal of training more scientists, especially local scientists who are women and other underserved groups. Dr. Tseng always had a passion for the sciences. She was professor, department chair and then Dean of the College of Applied Sciences and Arts at San Jose State University. She served as a nutrition education consultant for the United Nations. Dr. Tseng majored in architectural engineering and chemistry at National Cheng Kung University in Taiwan and earned a BS in chemistry at Kansas State University. She earned an MS and a PhD in nutritional sciences, with minors in biochemistry and physiology, at the University of California at Berkeley.

She said she also realized the critical role that UH Hilo plays in the development of the island, state and Pacific region. Always a believer that UH Hilo should use Hawai’i resources to benefit the state, when asked why the College of Pharmacy was going to be in Hilo, Dr. Tseng said, “Why not in Hilo. We have the dedication, commitment and potential to attract the best applicants, teachers and researchers.

The Island of Hawai’i is a healing island, a good fit for a new College of Pharmacy.”

The most serious pharmacist shortages are in the rural areas, and the practice of pharmacy is significantly different in rural communities compared to urban practice. The location of the College of Pharmacy in Hilo, rather than Honolulu, maximized the likelihood that its graduates will be prepared for and willing to practice in rural settings.

A College of Pharmacy in Hilo would also complete the UH systems triad of medicine, nursing and pharmacy. There was a serious nationwide shortage of pharmacists and this shortage was present in Hawai’i as well. The local pharmacists were concerned about the shortage.

Hawai’i was one of only six states without a school or college of pharmacy, and the pharmacist shortage made it extremely difficult for Hawai’i students to gain admission to state pharmacy colleges on the mainland. With the standard of licensure for pharmacists requiring the Doctor of Pharmacy degree, PharmD, it was important to the quality of health care in Hawai’i that local population have access to this level of education. The proposed College of Pharmacy was intended to address this need.

“The College of Pharmacy is the result of immense community dedication and collaboration. But it was U.S. Senator Daniel Inouye, whose vision, enthusiasm and persistence helped persuade his Congressional colleagues to fund this venture.”
The Chancellor had been involved in developing physical and occupational therapy and nutrition programs. She was a health professional leader in California, and she maintains that it was not her background that got the college going but the community’s need for it. She said she felt if she did not advocate for this, no one else would. The college was a part of the vision she had for UH Hilo by offering a broad range of liberal arts and professional programs, while taking advantage of the natural learning laboratory of the island. It is a good profession using applied sciences.

By 2001, University of Hawai‘i at Hilo officials were able to see the pharmacist shortage brewing in the health care industry, and Dr. Tseng started looking in earnest for a project leader. With the huge pharmacy shortage throughout the country and in Hawai‘i, a new college, the only one in the state, would help prevent the situation from becoming a crisis. Dr. Tseng felt it was an exciting new chapter in the development of the university and that one day it will be considered a landmark event. Dr. Tseng met with several supportive pharmacists from the Hawai‘i Pharmacists Association, including Dr. Ron Taniguchi, as well as deans who had just started new schools, and she started to become familiar with the accreditation process. She continued to meet with Senator Inouye to discuss future grants.

For the first time ever, she felt, prestigious high schools would want to send students to UH Hilo. To generate that kind of support, UH Hilo would need help from the community. That’s where Director of University Relations Gerald De Mello would be invaluable. Dr. Tseng appointed Dr. Jerry Johnson to the task. “Dr. Johnson carried out the job superbly. Fast forward after several years of hard work we were able to establish the college with the UH System and legislature blessings. Finally, she was able to help recruit the best leader who was to become the inaugural dean, Dr. John Pezzuto.”

In 2010, Dr. Tseng received one of the inaugural Advancement in Pharmacy Excellence awards from CoP.

A Personal Perspective from Gerald L. De Mello

“My dream is to see an island transformed from a plantation economy to one that is known for higher education.”

“The idea of pharmacy was one that we felt couldn’t be more thrilling.” Gerald De Mello was a leader of the grass roots movement for pharmacy. The state needed more professionals committed to health care. He knew that the pharmacy program would give national distinction in many ways to the islands, community, and would add vitality to the University. The college had the possibility of taking the long-sought goal of redefining the basis of economics in Hilo to depend on a knowledge institution that helps move the town, the island and the state forward.

At that time Mr. De Mello was working for The Western Interstate Commission for Higher Education (WICHE), a regional organization created by the Western Regional Education Compact. Adopted in the 1950s by Western states, Hawai‘i joined in 1959. WICHE was created to facilitate resource sharing among the higher education systems of the West.

“At that point, if students wanted a degree in pharmacy, they would have to leave the islands. This rang true for many other healthcare professions, but pharmacy was proven to be in highest demand.”
There were six initiatives: pharmacy, veterinary medicine, physical therapy, nursing, osteopathic medicine, and occupational therapy. Hawai’i had a certain amount of slots for these programs in other states. Two programs in demand were pharmacy and physical therapy. Mr. Demello knew the island had to strengthen education in order to be self-sustaining because it was no longer a plantation economy; the demise of sugar crops devastated the region.

“The Big Island delegation has always been consistent and stays together when it comes to education and we definitely want to stay together. It would definitely have an economic impact. That was exciting. Pharmacy gives back to UH. We are in our infancy in Pharmacy but research funds have increased and make even more of a tremendous difference. PhD in pharmacy and any creative ideas will bring pharmacy and any other health programs together. East meets west; there are natural products here in Hawai’i that we can look at (Kukui nut with sap for cold sores). My job, at least locally, was getting resolutions in state government that would provide us with the will of the legislature. Working with the county to build sentiment will then bring dollars.”

Senator Daniel Inouye, Mayor Harry Kim, Representative Jerry Chang and Representative Dwight Takamine, they could all see this was something Hawai’i needed. Senator Daniel Inouye indicated his strong support for the creation of the College of Pharmacy at UH-Hilo. Mayor Kim also expressed strong support for the College of Pharmacy, he was very involved. State Representative Jerry Chang as Chair of the Higher Education, asked for equity among campuses of the University’s system. He pledged that he would gather sufficient support from his fellow legislators to assure that funding for the new school, if needed, will be provided. Mr. Demello was behind the scenes, orchestrating efforts at the grassroots level. Dr. Tseng had the academic focus and energized the faculty and Jerry Johnson ("pivotal point") weaved it all together.

“We were all a team.” The University of Hawai’i at Hilo Faculty Congress endorsed the establishment of the College of Pharmacy at its February 2004 meeting. At the Chancellor’s level they explored the big picture, and were willing to risk the direction for the University in terms of applied science as well as research.

“Parents would call for veterinary medicine and physical therapy, and we could see their raw emotion. Internal efforts were challenging, but externally we knew the spirit of community was going to make this happen for Hawai’i, the people wanted this to take place. We knew pharmacy would have a great economic impact for the Big Island and Hawai’i and would be pivotal for bringing other healthcare programs to UH Hilo. The exciting thing is that they also will develop the cultural connection and help the University grow internationally. Hawai’i is in a position to be the hub, to cultivate a niche in health care. We can also bring the Pacific and Alaska together.”
A Personal Perspective from
Jerry L. Johnson

When Dr. Tseng approached Dr. Jerry Johnson with the idea to develop the new College of Pharmacy, his reaction was, “I’m a psychologist, what do I know about pharmacy?” He had been Dean of the College of Arts and Sciences at UH Hilo until 2000, having been on the faculty in the Department of Psychology since 1971. He had just returned from a sabbatical and enjoyed a rich external life to academia. An avid surfer and paddler, Dr. Johnson led a five-year battle to save the Honoli‘i surfing area in Hilo from a hydropower development that would have destroyed the surfing break, culminating in a victory before the Hawai‘i State Supreme court. He completed an Iron Man Triathlon for his 40th birthday. Yet he was about to really prove his stamina when he accepted the challenge to get the College of Pharmacy started in Hilo. With one half-time clerical person, Dr. Johnson started a challenge that would last more than five years.

“It took a lot for me to get on board. We needed a process. My interest evolved.”

Part of the spark that lit his fire was his interaction with Senator Inouye’s chief of staff, Pat DeLeon, who also was a psychologist and former President of the American Psychological Association. “Pat and I hit it off right away because he thinks psychologists can do everything. He had his fingers in so many pies, and did an amazing job of planting seeds and seeing things sprout. And I knew that Senator Inouye had a history of helping UH Hilo. A lot of things happened here because of the Senator. Building Imiloa is an example. There was also a big grant from the National Institute for Occupational Safety and Health, and many other projects that he had promoted at UH Hilo. Pat shared with us the Senator’s perspective that he wanted to see health care and health care expertise dispersed throughout the state, not just centrally located on O‘ahu. He wanted to promote and stimulate better rural health care in Hawai‘i. He believed that creating a College of Pharmacy here in a rural setting, training people in a rural setting, would help them identify with rural health care, rather than focusing only on urban Oahu.”

The Senator wanted the College on the island of Hawai‘i. He and Pat DeLeon were very clear from the beginning that this was to be a Hilo-based operation, which created interesting political issues.

“People at UH Manoa weren’t interested in the beginning, but when they realized that it was actually going to happen, they tried to get it moved over there. Pat had some very candid conversations with the President where he said things like, ‘This money is Hilo money, leave it alone’ and ‘You’re getting other money, back off.’

“A lot of things were happening concurrently here. I was writing the grants to get the planning money, and we
were looking at the university approval process for a new college. Previously, new programs had come out of existing programs. This was just falling out of the sky. So the normal kinds of stimulus and internal support to make it happen weren’t in place. We had to figure out how to interpret the system to get approvals to plan a program. We actually did some magic on that part.”

Dr. Johnson felt he was chosen to lead this project because he had been a dean and department chair, and had been in Hilo long enough to know the players. He knew the system and how it worked, had worked with the legislature, and had a sense of the overview of what it would take.

Pat DeLeon came to Hilo for a meeting with Dr. Tseng to talk about the college, and when he asked, “What do you need to plan a College of Pharmacy?” the off-the-cuff answer from both Chancellor and Project Leader was $1 million. Senator Inouye’s office offered $850,000, which was procured through a grant proposal. They all realized the impetus to make this a reality and not just a concept was that initial grant of $850,000, in 2002, as well as similar follow-up grants. They couldn’t have proceeded without the money.

“Initially, I had to figure it out. Ok, I said yes, what am I going to do with this? I got together with Dr. Taniguchi, and it was clear the first thing that had to happen would be a needs assessment to find out whether we needed this College of Pharmacy. If there’s no need, why go through the machinations of trying to create a great big college? It was clear there was nobody in the University system with this kind of background, not in Hilo, and not at Manoa. There was no expertise in academic pharmacy. But this was a very elaborate project.”

“The Senator’s charge to us was not only to plan a college of pharmacy, but also to assess and address the pharmacy education needs of the US-Affiliated Pacific Island communities as well. Concurrently with the planning for the College of Pharmacy, we conducted a needs assessment throughout the US-Affiliated Pacific region. Most pharmacy services were being provided by pharmacy technicians who had little or no formal training. In cooperation with the University of Alaska at Anchorage we offered a pharmacy technician training program via distance learning to the area. Kathy Baldwin from the University of Alaska Anchorage, was developing a pharmacy technician curriculum for rural Alaska, so we partnered with them to offer a well received program to Pacific Island pharmacy technicians as well. Dr. Robert Chi, Director of Instructional Technology at UH Hilo, worked with Kathy to prepare the computers and software necessary for distance learning delivery, and worked with us to develop the infrastructure to deliver the program. The combination of Alaska native and Pacific Island students made for some very interesting courses. It was important to me that while spending all of this planning money we actually accomplish something else along the way. The pharmacy technician program provided valuable training to communities that had no other access to pharmacy education.”

“When we did the needs assessment, we would ask, ‘do you have jobs available?’ and the consistent answers were, ‘yes, we need more pharmacists,’ ‘we’ve got people working overtime,’ ‘I’m the owner, I don’t want to work all these hours,’ and ‘we have a shortage of pharmacists.’ The basic needs assessment let us know that, yes, there’s a need. That’s the first thing people want to know. This is expensive, and before we spend all that money, we needed to demonstrate the need for the college.”

They compiled all the national data, all the long-term
trend data on projected health care needs. There were lot of open jobs in Hawai‘i, and there would be for the foreseeable future. There was no pharmacy training available in the Pacific region, so this is the natural place to do it.

About that time, Pat DeLeon linked Drs. Johnson and Taniguchi with Dr. Lucinda Maine, who was the executive officer at the American Pharmacists Association. The pair from Hilo met Dr. Maine in Washington, D.C., and she became a critical advisor, giving them names of people they could call on for expertise in the field. Pat DeLeon became good friends with Dr. Maine, and that interaction started with developing a College of Pharmacy in Hawai‘i.

“When I started compiling all the national data, all the long-term trend data, it was Lucinda who I could call and she'd send me the most recent reports. And she could plug us in to other people in the field; people like Dean Bill Riffe, from the University of Florida and Arthur Nelson, founding Dean of the School of Pharmacy at Texas Tech University Health Sciences Center. After the needs assessment, we had to figure out how to make it real. We didn't have anybody here who knew how to create a good college of pharmacy. There was a private pharmacy school trying to get started in Honolulu that was running into trouble because it hadn't gone through the steps for accreditation. Clearly, we needed some expertise in academic pharmacy.

“So we needed a good consultant to help us. One of the most important tasks was a feasibility study. But we also intended to use the consultant for all kinds of other things like going to legislative meetings, testifying in front of the Board of Regents or helping build credibility with the local health care community. We needed someone whose expertise would be clear to the local pharmacy community and the decision makers in the university and political arenas. We talked to a number of people who might be a potential consultant, interviewed several, and discovered there is a cadre of boilerplate pharmacy consultants out there who are usually former deans of colleges of pharmacy. Lucinda was really important to us as a reality check, as a person with expertise who was on our side, and who would give us the straight scoop on these folks. And that was incredibly important.”

“But the crucial role that Senator Inouye played was in creating a process that gave me control over how to spend the money; and with the support of the Chancellor, I had complete freedom. So I worked out a contract with Arthur Nelson to do a feasibility study for the college of pharmacy for UH Hilo. Arthur's experience with accreditation gained him access to make sure they had all the current information and knew what they were doing.”

For example, they knew ahead of time that the standards for accreditation were scheduled to change, so the document Dr. Nelson prepared was oriented toward the new accreditation standards. His feasibility study showed not only that this was feasible, but also how to win support for the program.

“And we did that. We went to all the neighboring islands, visited all the hospitals and met with pharmacy directors, and met with the key community people, identified by Ron, on each island. Every place we went we took Arthur, who met with them as part of this process. At the same time that he was collecting data on how feasible this was, we had a chance to let them see how professionally it was being done.

“This was especially important as everyone could see the private college on Oahu was self-destructing. Dr. Nelson was able to anticipate various aspects of academia that needed to
be addressed.

“Academia has its own little world, and Arthur was able to help us couch all this in an academic context, which was really helpful. He was also very sensitive to the ripple effect within the College of Arts and Sciences, which at that point was really all UH Hilo was. This was something I was concerned with early on. He knew this was going to be an 800-lb. gorilla, so we could talk about these issues from the point of view of what it means to a small college to have this very big, very expensive, very visible operation and how people were going to react to it.”

The group had meetings with the department chairs and talked about what kind impact there might be and what kind of needs there were. They showed in the feasibility study where it was clear that there would be a direct impact, such as in some of the natural science areas. And from the beginning, they set aside some money for the natural sciences labs, and set aside money to hire an extra biologist, an extra chemist, an extra library position.

“We tried to anticipate and put out fires in areas where there could be problems in the college. Arthur was a great ally in that; we could talk about those things in ways that nobody else had any experience to talk about them. He recognized there would be an impact, and didn’t want to throw things in that would destroy the college. Arthur Nelson always said what he was going to give us was a workable template for how it could be done; but he acknowledged that it would be the founding Dean and Faculty who would create the final product.”

The feasibility study contained an economic impact study, conducted by David Hammes, UH Hilo professor of economics. He conducted a basic multiplier effect study to look at the effects on the community, and it was large. That helped get the local Hilo community involved. Drs. Johnson and Taniguchi started going to meetings with the key players in the community, the organizations and the people who had influence, aided by Gerald De Mello, and they explained they were trying to build a broader base so the community of Hilo would be supportive. After the feasibility study was done, they’d planted all the seeds, got the ball rolling, and finally had a document that said it’s feasible to have a college of pharmacy, how much it would cost, how many students, how many faculty, and what kinds of space would be necessary.

“We hired an architect to do an initial layout for a building. At that point, we’re at step one again in some ways. It took us all this time to create what we’re going to propose. I knew we still needed the expertise of Arthur or someone like him when we talked to the regents, the president, faculty, legislators, and the community. We had to have a credible presentation, and Arthur was a key to that for us. I do believe without Arthur’s credibility, we would not have pulled it off. He was that crucial to what we did. He gave us academic and scholarly credibility. We were covering other areas of credibility with people in the pharmacy profession, such as Drs. Ron Okamura, Kathy Hirano, Joy Matsuyama, and we had plenty of local people involved in other parts of the process.”

Concurrently, in addition to trying to ease the program into the university so it didn’t run into immediate roadblocks, Drs. Johnson and Taniguchi met with the local pharmacy professionals. They met with the local advisory group that continued throughout the years, including Drs. Joy Matsuyama and Kathy Hirano. Dr. Johnson was going to the Hawai’i Pharmaceutical Association meetings and
announced the intention to start a College of Pharmacy at the University of Hawai‘i at Hilo. They started going to some of the meetings in hospitals to try to get some good will and support, and met with the Vice President of Hawai‘i Medical Service Association (HMSA). At the same time, they knew they had to keep the legislators on board.

“In Hawai‘i, the informal steps can mean more than the formal steps to get things done. The history of this process goes back as far as the creation of UH Hilo as a baccalaureate institution. The only way we could keep all the money from going to Manoa was to go straight to the legislature and get them to earmark money to the state budget. So we had meetings with our Big Island legislators to let them know what we were doing. They were very supportive, asking ‘what can we do to help?’ especially Jerry Chang and Russell Kokubun, who were very positive. We started planting seeds in the legislature to let them know this would be coming. And then we got an offer to sponsor a resolution encouraging UH Hilo to explore the notion of starting a College of Pharmacy. I wrote a resolution that Rose presented to the legislature that showed UH Hilo supported a College of Pharmacy. And that passed. It got us on the table in the legislature early in the game. The politicians were all forewarned and, at that point, the University administration was also informed.”

Since they were making progress with the planning of the college and had made contact with a wide range of people both within and outside of the university, it became important to have a means of keeping people informed of their progress. Dr. Robert Chi from the Office of Campus Technology developed a website to provide current information about the development of the college. He included information about UH Hilo, the Big Island of Hawai‘i and the Hilo community that would be of interest to prospective students, faculty and staff.

Now the issue became how do they make it work? Within the university, Dr. Johnson had to go to the system academic affairs committee to explain what they were doing. He also met with then-Vice President David McClain, who later became president and ultimately became a supporter despite adding the additional hurdle of requiring the school to be self-supporting.

“We had to convince them there was a local need, there’s a national need, and that UH Hilo can do it. I had to pitch it a certain way to get past some of the rivalries and competition within the system that were boiling that could’ve undermined it. I wouldn’t say I got their support at that time, I’d say I got their attention. There were some fascinating interchanges along the way with system politics. All were players in the game, and early on they were just contacts. But we figured it was important to make contact early on, so they hear about it from us, not somebody else, and they have a better idea of the reality of what’s coming. We tried to get everybody informed. That was just my style. If something’s brewing, go take care of it, don’t play games with it.”

After all the politics of getting campus approval and legislative support, it was time to take it formally to the University Of Hawai‘i Board Of Regents. At the October 2004 Board of Regents meeting in Hilo, Drs. Johnson and Tseng presented a proposal to the board, showed massive community support and flooded the meeting with testimonials from Hawai‘i health care professionals and pharmacists, and Big Island leaders.
“We put on a controlled dog and pony show in an emotional, two-part process that showed we had done our homework and that people wanted it and supported it. One UH Manoa administrator found me after the meeting and said ‘That wasn’t fair!’ I simply smiled. There was no way they could deny it after that. The Board saw it was time.”

Once Board of Regents approval was achieved, Dr. Johnson’s job wasn’t quite done. He needed to find someone to lead the college so he could pass on the gauntlet. His goal was to get the Dean hired. At that point, he decided he’d done pretty much all he had signed up to do and needed to get out of the way because it was time to let it go.

“John Pezzuto has been more than we could have hoped for as a dean, and has taken our planning efforts to a new level. With the graduation of the first class in May, I couldn’t be happier with how it turned out.” In 2010, Johnson was presented with one of the first Advancement in Pharmacy Excellence (APEx) awards from the College of Pharmacy.

**Appointment of a Founding Dean**

During the time period when the UH Hilo CoP was created, the steps required to ultimately achieve full accreditation were clearly delineated by the Accreditation Council for Pharmacy Education (ACPE). For example, directives read “The application for pre-candidate status should include: assurances that the degree program will be provided by a college or school of pharmacy; the higher-education authorities of the state or states of operation have granted their approval; the institution either has or is seeking institutional accreditation; and a dean is in place.” Of the 30 standards that needed to be addressed, as well as the many forms and assurances that needed to be provided, one of the key indications of a serious commitment was the appointment of a dean.

Interestingly, the appointment of a dean to a new college of pharmacy bears little resemblance to appointment at an existing college. Of course there is the ACPE regulation, and no progress toward accreditation is possible prior to the appointment, but the impact is much more profound. The ultimate job more closely resembled that of an artist or a sculptor or an architect. The client has certain ideas and requirements, and there are various guidelines and constraints. Nonetheless, in the beginning at UH Hilo, the slate was essentially blank. The canvas was clear. The landscape was barren. The ultimate challenge of the dean
would be to shape the college and establish an ideology. As is the case with an artist, sculptor or architect, the end product would be tangibly unique based on the talent and intuition of the selected individual. The College of Pharmacy had been conceived but existed in an embryonic state. The growth and development, the nurturing and grooming, everything that remained to establish the vibrancy, integrity and longevity of the entity, was held in abeyance.

At the start of the 21st century, hiring and interviewing and all of the ancillary paraphernalia associated with public university recruitments were highly regimented and largely secretive. Candidates rights needed to be preserved yet the labyrinth of Human Resources regulations were supposedly geared toward finding the “best” individual while at the same time being comprehensive and unbiased. Some specific details of the hiring and recruitment process at UH Hilo could be recounted, but this potentially risky discussion will be avoided since only the outcome is of major relevance. It is sufficient to note there was significant interest in the position and the assignment of Dr. Jerry Johnson as chair of the search committee was of considerable importance.

The end result of the search process is not a mystery. We all know John M. Pezzuto was appointed as founding dean of the College of Pharmacy, but the genesis of the selection is less well known. To consider the events involving UH Hilo in context, some background is required. Dr. Pezzuto was born in a small rural town in southern New Jersey – population, 800. The first of four children, major ambitions included hunting and fishing. With adolescence, this evolved to dating and parties. But it was clear from the moment of birth that a college education lay in the future, and the traits of hard work, self-respect, honesty, integrity, and independence, those that come with life in rural America, shaped his character. Guidance counseling was not a strength of his community, but fate led him to Rutgers University-The State University of New Jersey, majoring in chemistry. Chemistry was considered a good major for a male human being, although a future career in the discipline was much more nebulous. Nonetheless, he joined the ranks of first generation college graduates.

Through another twist of fate during undergraduate studies, he gained a strong interest in biochemistry. This led to graduate work at the University of Medicine and Dentistry of New Jersey and the first real exposure to urban America since the institution is located in Newark but, more importantly, in close proximity to Manhattan. It was in this environment where he learned the true meaning of independent thinking and self-motivation, and a realization of the amount of effort required for success in academia. It led him to postdoctoral work at Massachusetts Institute of Technology (MIT), another world altogether. Routine exposure to Nobel Prize-winning scientists was invigorating, but the reality was more along the lines of routine 80 hour work weeks. A tough decision came when his mentor, Dr. Sidney M. Hecht, decided to accept an endowed chair at the University of Virginia. Dr. Pezzuto fit in well with the demeanor of MIT, and exciting opportunities for staying were available, but a decision was made to move to Charlottesville. Of course it was not known at the time, but this was the turning point that ultimately led him to Hawai‘i.

At University of Virginia (UVA), work continued at an unabated pace, manuscripts continued to be published in top-tier journals, but two important transformations occurred. For the first time, he fully appreciated the science
and depth of natural product research. Throughout the rest of his career, this became a focal point and passion. Second, as a result of this experience and revelation, his next move was to a tenure-track position at the College of Pharmacy at the University of Illinois at Chicago (UIC). This, indeed, was his first real exposure to the world of academic pharmacy. But it went much further, since it was in Chicago where he met Mimi, his future wife and, as fate would have it, his mentor in the discipline of professional pharmacy.

Over the next 20 years, Dr. Pezzuto led a distinguished career at UIC. He rose through the ranks in a timely manner and was ultimately designated Distinguished University Professor. He published hundreds of papers, mentored scores of students and postdoctoral associates, and received many awards and honors. Among other administrative positions, he served as a department chair and associate dean; he maintained close ties with and held an academic appointment in the College of Medicine. It was research, however, that coupled him to Hawai‘i. Members of the Cancer Research Center of Hawai‘i, husband and wife team Greg Patterson and Sue Mooberry, invited him to serve as an external consultant for a program project grant application that was submitted to the National Cancer Institute. This led to the first trip to Hawai‘i and his first exposure to the UH culture. The grant application was well received but not funded. Shortly thereafter, Greg and Sue moved to Texas, but Dr. Pezzuto was invited to serve on the External Advisory Board of the Cancer Research Center of Hawai‘i. This service involved annual visits to Honolulu and the Manoa campus.

On the career front, change was in the wind. The College of Pharmacy at UIC was highly ranked and had arguably become the leading center of natural product research in the world. Unexpectedly, however, Dr. Pezzuto was nominated to serve as Dean of the College of Pharmacy, Nursing and Health Sciences at Purdue University. It was a trying decision, but he ultimately accepted this position, primarily motivated by the potential of serving a greater good. The College of Pharmacy at Purdue University was highly ranked and distinguished; a true center of excellence. The times were very dynamic; there was a great spirit of change and growth and pride. A can-do attitude prevailed throughout the campus. The College continued to strive and retained a high ranking under the leadership of Dr. Pezzuto. At the same time, he maintained his research program, albeit on a smaller scale, and continued to serve as an external advisor for the Cancer Research Center of Hawai‘i.

Interestingly, during one of the annual site visits of the External Advisory Board, Dr. Pezzuto was called aside by then UH President David McClain. The President quipped that there was some discussion about starting a new college of pharmacy on the Hilo campus, in part due to the rural setting and the greater need for rural health care. He asked if Dr. Pezzuto, as dean of pharmacy at Purdue University, thought the college could be successful in Hilo. If people were asked what they liked about Dr. Pezzuto, they might say he was direct and honest. If asked what they disliked about Dr. Pezzuto, they might say he was direct and honest. In light of this personality, he told the President there obviously was a need for a college of
pharmacy in Hawai‘i, and the college could do just fine in Hilo. Why not? But he also informed the President it was not necessary to be in a rural setting to focus on rural healthcare, and a new college could do just fine on the Manoa campus as well. The conversation was short but poignant. At that point in time, little did he know what the future would hold. 

Some months later, Dr. Pezzuto received a call from Jerry Johnson informing him he had been nominated for the position of founding dean of the UH Hilo College of Pharmacy. Having had ties with Hawai‘i for many years, the call was not a complete surprise. After giving the matter some thought, though, Dr. Pezzuto asked if he could be considered on an exclusive basis. After all, he was dean of a top ranked school, and what if Hawai‘i didn’t like him? Or hire someone considered by peers as having poor qualifications? Could he come back to Purdue and say he was rejected by a school that didn’t even exist? It would not sit well with a group of people who “bled black and gold” and frequently cited clichés such as Purdue Pride. Dr. Johnson pointed out that an exclusive approach would not be possible given the HR constrains of a state system. Dr. Pezzuto graciously thanked him, and volunteered to help in any way, but declined becoming a candidate for the position. 

Yet some months later, Johnson called again, and reminded Dr. Pezzuto about the idea of advising the college. He asked him to come for a visit and so it was. During the lengthy flight, Dr. Pezzuto reviewed the documents that were assembled in preparing for a new college. During the visit to Hilo, he met with many individuals, but most notably with the Chancellor’s Cabinet. In a characteristic way, he asked with some degree of sarcasm if he could see the remaining documents. Of course he had seen all of the documents, but the elements of research and scholarship were absent. A lively discussion ensued and, by the end, a very positive can-do attitude prevailed. If we are going to create the only college of pharmacy in the State of Hawai‘i, and in the Pacific Region as a whole, why not create a college that can aspire to greatness? In her usual way, Dr. Tseng was extraordinarily positive and engaging; it was a surprising meeting that started a new way of thinking – maybe we could actually do something very special here? 

Next, Dr. Johnson, who was shepherding Dr. Pezzuto around, said it was time to go to Honolulu and meet some stakeholders. There were several meetings but the most notable was a dinner reception held at a restaurant called Hiroshi’s. The profession of pharmacy was well represented. The enthusiasm for creating and supporting a new college was inspirational. A private school was still in existence, but it was clear to everyone it was destined to fail. But could we do it right at UH Hilo? Could we transform the profession of pharmacy in Hawai‘i and the Pacific? And later in the
evening, a few people started calling Dr. Pezzuto dean, and it felt right. It was clear that one person would have a strong influence on shaping a new college. It was also clear people had not been thinking about the topics discussed over the past few days – those of excellence and scholarship and creating a college that could achieve top ranking - but now the excitement was building and it seemed the deal was done. Yes, Dr. Pezzuto could stay at Purdue, and maintain a top ranking, but wasn't the challenge of starting this school of even greater importance? Of equal importance, Mimi Pezzuto shared in the enthusiasm for the move.

After a while, a letter of offer arrived. Some limitations were clear. For example, even though Dr. Pezzuto had held tenure in Big Ten schools since 1985, UH would not offer tenure without going through the entire tenure and promotion process. Beyond that dubious feature, the letter contained no details or meaningful commitments, in part due to the lack of resources to commit, in part due to the lack of experience in negotiating such matters, and in part due to the self-imposed constrains of the UH System. In any case, the offer was rejected with thanks and best wishes for future success.

This easily could have been the end of the matter except for the open-minded and gallant persistence of Vice Chancellor Steve Hora. He worked through an offer as best he could, to the point of being less than satisfactory but good enough to take a leap of faith. After all, the initiative was just too important not to take a chance. Hora proved to be a great ally and resource; his insight and dedication to the college was especially critical in the formative years. Of course the enthusiasm of Dr. Tseng was intransigent.

And so the Pezzuto family found themselves on the Big Island of Hawai‘i during the summer of 2006. The goal, as repeatedly emphasized by many but especially Pat DeLeon, was to admit a class of student pharmacists by August of 2007. Pat knew that once a class was admitted the college would be firmly grounded, but until that time, the fate was still equivocal. Dr. Pezzuto sometimes used the analogy of walking along the beach and saying “I think I will swim to Maui now.” That’s possible. Why not? Swimming through the ocean all night long, with no land in sight for days or months, might lead to some doubt. But it never occurred to Dr. Pezzuto that failing was an option; the first class would be admitted within a year.

A few initial hurdles crept up early in the process. It seems the organizational structure of the college still required approval of the Board of Regents, and after that, authority to grant a degree. Fortunately, the Board was very supportive, and these steps were completed by November. The college needed to define its character, and the artisanship and local knowledge of Dyanne Affonso was very helpful in this process. A curriculum needed to be elaborated and Anita Ciarleglio was up for the challenge. David Slatkin, a long time friend and founder of two colleges of pharmacy, helped with accreditation standards, and Bill Boman, a faculty member at Midwestern University, provided some information regarding student laboratories. Carolyn Ma worked through experiential education while Lisa Seese, one of the first new hires, focused on filling a class. It was not possible to participate in the centralized application service the first year (PharmCAS), but Dr. Lucinda Maine, the President and CEO of the American Association of Colleges for Pharmacy, was continuously supportive. Other influences in attracting a class were former associates at University of Illinois at
Chicago and Purdue, especially Tom TenHoeve and Holly Mason, who brought the new college to the attention of hundreds of students on their alternate lists. Mimi Pezzuto was not employed by the college but she was instrumental in many of these critical issues, especially student recruitment and interviews. Local dilemmas, such as scheduling classrooms on the main campus, were shepherded by Steve Hora. Dan Brown was instrumental in faculty and staff recruitment, and many others, such as registrar Cathy Zenz and human resource director Kerwin Iwamoto, stepped up and were instrumental in helping out.

Of special note was the cooperation of David McClain in exercising presidential authority. While establishing the first professional college on the UH Hilo campus, several critical changes were required that could not be managed at the local level. His help and support was crucial.

Finally, the incredible commitment of the inaugural class was perhaps the greatest contribution of all. On one hand, a college cannot be launched without a class. On the other, instruction cannot be started without ACPE accreditation, and that determination would not be made until June 2007. But the inaugural class took a leap of faith and, in the end, proved to be a stellar group of pioneers who helped the college every step of the way.

During these months, all of the intricate details of launching the new program were orchestrated and managed minute-by-minute and day-by-day. A common joke of the time was Dr. Pezzuto was working out of his car, which wasn’t too far from the truth. One of the first tangible signs of success was approval of a substantive change application submitted to the Western Association of Schools and Colleges, the regional accrediting body for UH Hilo. As time marched on, all of the remaining gaps were filled and, fortunately, the all-critical site visit of the Accreditation Council for Pharmacy Education was held at the latest possible date, April 2007. By that time the original cohort of faculty and staff were already on site or willing to come to Hilo for the site visit. The site visit team was chaired by George Spratto, former associate dean at Purdue University, current dean at the University of West Virginia, and soon to become president of the ACPE Board of Directors. In short, the site visit was successful, many questions were asked and answered, and each of the applicable 30 standards was met. In 2007, Dean Pezzuto attended the Board of Directors meeting in Chicago. pre-candidate status was granted and, to everyone’s relief, the students were informed classes would begin in August.

Shortly after UH Hilo CoP applied for pre-candidate status, ACPE regulations changed such that a dean would need to be in place at least two years prior to matriculating the first class of student pharmacists. This regulation was not in place at the time Dr. Pezzuto was recruited at UH Hilo. In retrospect, however, bearing in mind the herculean nature of the tasks that needed to be completed during the period of June 2006 to April 2007, this change is logical. Many of the aspects of starting a new college are pro forma, but past experiences were critical to implement these components. Many other features were unanticipated, such as creating a new academic calendar, and growing pains of this nature were commonplace and no doubt will be continuous for many years to come.

Nonetheless, the excitement and enthusiasm experienced at the first dinner held at Hiroshi’s restaurant was borne out to be the spirit that drove the creation of
the college. UH Hilo had proven its ability to launch a new professional college. The essence of the college was uniquely Hawaiian, but if anything, there were signs of the heritage from top-ranked Big Ten pharmacy programs. Many milestones remained to be crossed but a solid foundation had been laid with all of the proper characteristics of scholarship and high level academic and professional pharmacy. This college was not born to be mediocre. It was designed to improve health in Hawai’i and throughout the Pacific, and to fulfill a mission of greatness over the decades to come.

**Time Line**

1998 - Concept introduced by Hawai’i Pharmacy Leaders. Plans for a college of pharmacy in Hawai’i were first envisioned in the late 1990s, when U.S. Senator Daniel Inouye expressed his dream for UH Hilo to be a “center of excellence” throughout the state. Creating a college of pharmacy offered this opportunity and would be the first professional doctoral program on the Hilo campus.

2000 - First discussion of creating a college of pharmacy began between the local pharmacists and University of Hawai’i at Hilo.

2001 - Senator Inouye secures funding support to develop a comprehensive long-term strategy for establishment of a clinical pharmacy program at UH Hilo.

2002 - Pharmacy clinical training grant funded through Health Resources and Services Administration spearheaded by Senator Inouye.

2003, November - Memo from Jerry Johnson to Chancellor for permission to plan the pharmacy program.

2003 - Feasibility study conducted by an external consultant

2004, January - Submission to University of Hawai’i System for request to plan a PharmD program at UH Hilo


2004, February - The UH Hilo Congress sponsors a forum for the UH Hilo community to consider and present opinion on UH Hilo college of pharmacy. The room was filled with students, faculty, Hilo business people, doctors, lawyers, political representatives, UH President David McClain and the Board of Regents. 5:10 p.m. and the vote is decided, in front of all the supporters from within the room, to approve
the new College of Pharmacy. A roar of approval of the decision is greeted with cheers. Regent Patricia Lee said, “If anybody can make this College of Pharmacy work, Hilo can.”

2004, March - Testimony Presented Before the House Committee on Higher Education by Rose Y. Tseng Chancellor, University of Hawai‘i at Hilo to encouraging a College of Pharmacy at the University of Hawai‘i at Hilo.

2004, April - Lawmakers authorized UH Hilo to receive $18.4 million for planning, design, construction and equipment for a Pharmacy building.


2004, September - Plans to create a new college of pharmacy at UH Hilo were postponed when the Board of Regents raised concerns over financing the project. The first state’s college of pharmacy called for a startup budget of 20.4 million as well as an annual $2 million subsidy from the state. At that time, the proposed pharmacy school which would open in 2007, would enroll 66 students, 75 percent would be from Hawai‘i.

2004, October - BOR approves the reorganization to establish College of Pharmacy at UH Hilo and positions and hiring of a Dean in October.

2004 - Search for dean approved by State Legislature and University of Hawai‘i Board of Regents (Honolulu Advertiser. Posted on October 23, 2004, By Beverly Creamer. David McClain named interim UH president)

2005, October - Regents meeting Dr. Tseng requested that the Committee approve the creation of a College of Pharmacy at the University of Hawai‘i at Hilo and that they be authorized to recruit for a Dean for the College.

2006 - State Legislative funding allocated for initial core team.

2006 - University of Hawai‘i Board of Regents approved organizational structure.

2006 - University of Hawai‘i Board of Regents approved degree program and curriculum.

2006, February - University of Hawai‘i at Hilo College of Pharmacy was received into Affiliate institutional membership in American Association of Colleges of Pharmacy (AACP).

2006 - WASC Substantive Change Committee reviews proposal from UH Hilo to offer PharmD program.

2006, June - John M. Pezzuto appointed as Founding Dean.

2006, July - Hilo College of Pharmacy has received institutional membership in AACP.

2007 - Despite many obstacles, the UH Hilo College of Pharmacy was launched.

2007, May - ACPE site visit.

2007, June - Accreditation Council for Pharmacy Education approved PharmD program at UH Hilo for pre-candidate accreditation status. With this designation, UH Hilo becomes the first school recognized by ACPE to offer the Doctor of Pharmacy degree in the State.

2007, August - Inaugural class enrolls and begins program.


2007, October - Approved design and construction of temporary facilities to house the University of Hawai‘i at Hilo College of Pharmacy.

2007 Fall - $75,506 grant from the HMSA Foundation was granted to purchase personal digital assistants, or PDAs, to load clinical software tools that can assist with diagnostic and therapeutic questions.

2008, April - Inaugural class marches in Merrie Monarch Parade.

2008, May - The inaugural Class of 2011 completed its first year in the PharmD program, and produced 38 Dean’s List honorees for the spring 2008 semester.

2008, June - College of Pharmacy was awarded Candidate Accreditation Status during the June Executive Board Meeting of the Accreditation Council for Pharmacy Education.

2008, July - Accreditation was affirmed by the Western Association of Schools and Colleges (WASC), faculty and staff grew to nearly 40.
2008, August - Class of 2012 enrolls and begins program.

2008, August - UH Hilo College of Pharmacy (CoP) received $766,363 grant for rural science program.

2008, September - Strategic Planning begins. Dr. Karen Pellegrin, Director Strategic Planning, forms strategic planning committees. Final draft is finished by Spring 2009.


2009, February - The College of Pharmacy at the University of Hawai‘i at Hilo met with the College of Pharmacy Advisory Council for Development.

2009, February - Economic Impact Statement done and reports that by the time its inaugural class graduates in 2011, the University of Hawai‘i at Hilo College of Pharmacy will stimulate more than $50.2 million per year in economic activity in the state.

2009, May - College of Pharmacy teams with University of Guam in pre-pharmacy agreement.

2009, May - UH Hilo College of Pharmacy receives approval to provide continuing medical education.

2009, May - UH Hilo College of Pharmacy and Nursing program to aid aging populations by partnering with the Hawai‘i County’s Aging and Disability Resource Center.

2009, May - During second annual lu‘au, College of Pharmacy unveils logo designed by student.

2009, June - ACPE affirms the college’s candidate accreditation status during its June Board of Directors meeting.

2009, June - UH Hilo College of Pharmacy visits American Samoa to help at a hospital and spread the word about the profession.

2009, July - Highlights of appropriations from the 2009 Legislature include $5.5 million for plans and design of the University of Hawai‘i at Hilo’s College of Pharmacy.

2009, August - Class of 2013 enrolls and begins program.

2009, October - College of Pharmacy receives $951,000 grant from the U.S. Department of Education, which includes plans to be the first in the country to offer a dual degree with a Nurse Practitioner Specialty and Doctorate in Pharmacy (DNP/PharmD)

2009, October - College of Pharmacy celebrates new building in traditional Hawaiian blessing ceremony.


2009, October - University of Hawai‘i at Hilo College of Pharmacy has first health fair.

2009, October - The grand opening celebration of the Hawai‘i Island Family Health Center, multidisciplinary training site a partner of the College of Pharmacy.

2009, October - Governor Linda Lingle released $6 million for design and construction of permanent buildings for the new UH Hilo College of Pharmacy; calls CoP a “shining beacon.”

2010, January - College of Pharmacy hosts first blood drive. The blood drive supported the Blood Bank of Hawai‘i.

2010, March - ACPE site visit

2010, April - Academic Achievement Dinner honors top 20% of students in the Classes of 2011 and 2012. Sponsored by Target.

2010, April - Bids opened for College of Pharmacy Interim Facility Phase 1B. The project consisted of constructing a complete addition to Building A, complete addition to Building B, and a complete new Building C.
2010, May - UH Hilo College of Pharmacy awarded $16 million Beacon Grant for health care pilot project.

2010, May - College of Pharmacy inaugural class began APPE rotations.

2010, July 26 - ACPE approves continuation of candidate status for College of Pharmacy.

2010, August - Class of 2014 enrolls and begins program.

2010, September - UH Hilo College of Pharmacy awarded $1.5 million grant from U.S. Department of Education.

2010, September - College of Pharmacy joins forces with American Samoa Community College to aid future pharmacy students.

2010, October - College of Pharmacy holds Second Annual Health Fair.

2010, October - Class of 2014 White Coat Ceremony.

2010, October - Announced launching of Center for Rural Health Science.

2010, October - UH Hilo’s first pharmacy residents establish themselves on Maui.

2011, January - College of Pharmacy students sponsor blood drive at UH Hilo.

2011, February - Senators Daniel K. Inouye, Jack Reed and Mark Begich introduced the “Pharmacist Student Loan Repayment Eligibility Act of 2011.”

2011, February - UH Board of Regents approves two new degrees at UH Hilo College of Pharmacy.

2011, April - College of Pharmacy establishes alumni group for new graduates.

2011, April - UH Hilo’s College of Pharmacy completes design of permanent home; awaits funding.

2011, May - New PhD program in pharmaceutical sciences ready to roll.

2011, May - Dean luncheon for inaugural class held at Hilo Yacht Club.

2011, May - Graduation Recognition Ceremony for Inaugural Class

2011, May - Inaugural Class graduates.

2011, May - UH Hilo College of Pharmacy granted extension of CME accreditation.

2011, June - University of Hawai‘i at Hilo College of Pharmacy earns full accreditation granted by ACPE.
Development of the College

Faculty and Staff

The College of Pharmacy represented a historic new milestone at UH Hilo. It was a huge undertaking and did not come without some dissent. The development of the college was a bumpy road. One of the biggest challenges was getting all the faculty and staff. When Dean Pezzuto began in June 2006, he had only a few employees and a lot to do before August 2007 when 90 new pharmacy students were scheduled to arrive. In February 2007, Lisa Seese was hired as Director of Student Services. In March 2007, Dyanne Affonso was hired as the Program Director Clinical Pharmacy & Training, and Yolanda Belog was assigned to answer phones and receive incoming applications to the college.

When the Inaugural Class arrived in the fall that year, they were greeted by Dean John M. Pezzuto and his family, Secretary Chris Iha, Associate Dean for Academic Affairs Edward Fisher, Associate Dean for Research Robert P. Borris, Chair of the Department of Pharmaceutical Sciences Anthony Wright, Chair of the Department of Pharmacy Practice Mark P. Okamoto, Assistant Professors Leng Chee Chang, Ghee T. Tan, and Anita E. Ciarleglio, Clinical Coordinator Carolyn Ma and Director of Pre-Pharmacy Susan Jarvi, Information Technology Specialist Avi Fhima, Librarian Amy Knehans, Research & Special Project Coordinator Elizabeth Ryan, and Laboratory Manager Tamara Kondratyuk. These were the
frits that would continue curriculum planning, hiring of faculty and staff, and keeping current on accreditation standards for the next year.

Dr. Fisher recalled how elemental the beginnings were for the first class. “The first week of class there was a hurricane watch and an earthquake,” he said. “UH Hilo was closed for two days, and all of the students came back. We were all impressed.”

“A few days later I was lecturing in Pharmaceutics in Wentworth Hall and one of the students fell through his chair,” he continued. “The chairs were old wooden monstrosities and some actually had yellow danger tape draped across them to prevent anyone from sitting on the huge splinters that were peeling off the seats.”

By 2008 help was on the way. The staff grew from fourteen to twenty-nine. Daniela Gundisch, Eugene Konorev, and Mimi Pezzuto were added to faculty in the Department of Pharmaceutical Sciences and Kenneth Morris became the first full professor with tenure ever to be hired in the UH System; Scott Holuby, Mark Litzinger, and Supakit Wongwiwatthanakanit joined the faculty in the Department of Pharmacy Practice; Karen Pellegrin was hired as Director of Strategic Planning and Continuing Education; Dr. Ron Taniguchi became Director of Community Partnerships; Laura Marler was hired as a Research Technician; Jacquelyn Guilford, a Research Scientist; Ann Hayashi joined the Office for Student Services. Liz Heffernan was hired as Director of Student Services and Gina Patrick became an Academic Advisor; Donna Ohora became an advising specialist; Char Awa Cockett, Jean Cruz, Kristy Nakamura and Tammy Tanaka, all joined the CoP support staff. Maggie Morris was hired as a media consultant, and hired on staff the following year.

In 2009, the CoP ‘ohana grew larger. Aaron Jacobs, Linda Connelly, Gary Ten Eyck and Dianqying Sun became faculty in Pharmaceutical Sciences; Anna Barbato, Forrest Batz, Mok Chong and Lara Gomez joined Pharmacy Practice faculty; Mark Burba was hired to do the newsletter; and Robert Summers served CoP’s Director of Pharmacy Innovation and Facilities Planning.

During the year 2010, more people joined the team. Adding to faculty in pharmacy practice were Julie Ann Luiz Adrian, Benjamin Chavez, Roy Goo, Patricia Jusczak, Yaw Owusu, and Sheri Tokumaru; Andre Bachmann joined faculty as Chair of Pharmaceutical Sciences and Anthony Otsuka and Mahavir Chougule as Pharmaceutical Sciences faculty; Shannon Amidon was hired to help write and design the newsletter; Joy Aito became an Information Technology Specialist; Hi’iaka Kahalewai, a Project Specialist for the STEP Program; Christine Phifer, Advising Specialist; Daryl Masanda joined Student Services as Academic Advisement Specialist, Kristi Nakamura, Admissions Counselor and Kristi Kaniho was hired as Personnel Officer.

The following were hired during the first half of 2011: joining pharmacy practice faculty were Deborah Juarez, Candace Tan and Caitrin Vordtiede; Dana-Lynn Koomoa-Lange became faculty in Pharmaceutical Sciences; Ana Barrenechea was hired as Student Services Specialist; Paula Zeszotarski, Assessment Coordinator; and Jennifer Aguair served as an Assistant Clinical Education Coordinator.

The entire College of Pharmacy was on hand at the Accreditation and Education Conference at the Hilton Waikoloa Hotel in February 2011.
Support

The first point of contact with the College of Pharmacy for many people was with one of the women who made up the team providing support to the new faculty and administration. From the day they started they proved themselves as professionals, knowledgeable not only about the internal workings of an academic institution, but also about the community they served.

The original crew included:

Chris Iha was hired to be secretary to the Dean. In addition to the secretarial work for all those who work in the Dean’s Office, Ms. Iha has worked on special functions, such as the White Coat Ceremony and blessings, as well as on some of the Dean’s projects and college initiatives. She earned her degree in business administration from the University of Colorado at Boulder.

Char Awa Cockett was hired to be the secretary to the Associate Dean for Academic Affairs and worked in all areas related to curriculum, students and faculty, admissions, academic policies, strategic planning, student affairs and professional accreditation. In addition to setting up meetings with students and scheduling travel and reimbursements, Ms. Cockett has worked on special projects including orientation and the White Coat Ceremony, and took minutes for the curriculum and the by-laws committees. Prior to coming to UH Hilo, she was the Island Director for the Girl Scout Council of Hawai‘i for 30 years. She attended Laupahoehoe Elementary and High School from kindergarten to 11th grade and graduated from Hilo High School.

Jean Cruz has been the secretary to the Chair of the Department of Pharmaceutical Sciences. She has ordered lab equipment, taken care of scheduling and getting reimbursement for travel, written memos, and ordered books and office supplies for faculty and post-doctoral associates in the department. Ms. Cruz was born in the hospital where temporary offices for the College of Pharmacy began, and graduated from Hilo High School.

Tammy M. Tanaka was chosen as the secretary to the Associate Dean for Research. She was born and raised in Hilo and graduated from Hilo High School. Ms. Tanaka attended Hawai‘i Community College before transferring to UH Manoa, where she received a bachelor’s degree in mathematics. She was responsible for purchasing and inventorying pharmacy laboratory equipment.

Kristy Nakamura was hired as the secretary for the Department of Pharmacy Practice, and later applied and earned the job as Admissions Counselor. She is a UH Hilo graduate, with a bachelor’s degree in business administration and an economics minor.
**Strategic Plan**

“Through this planning process we understand our unique opportunities. Through execution of these plans we achieve excellence.” – UH Hilo College of Pharmacy Strategic Plan, 2009-2015

According to Accreditation Council for Pharmacy Education standards for full accreditation, colleges of pharmacy must create, implement and maintain a strategic plan. As the UH Hilo College of Pharmacy enrolled its second cohort of pharmacy students, the first formal strategic plan cycle was launched, driven by Dr. Karen Pellegrin, Director of Strategic Planning.

The strategic goals defined focus areas for achieving excellence through 2015, for driving improvement in the quality of healthcare in Hawai‘i and throughout the Pacific Basin. The goals, listed below, were assigned to working groups who, with Dr. Pellegrin’s guidance, developed each section of the strategic plan.

**Research Goals**

- Develop a community research partnership, process, and protocol for understanding the diversity of natural products originating in
Hawai‘i, the Pacific, and around the world and their applications to healing in a culturally respectful way.

- Create a pharmaceutical technology research center for dosage form design and characterization based on the precepts of Quality by Design.
- Build a center of excellence in health services research focused on medication therapy management and outcomes in diseases prevalent among Hawai‘i’s diverse populations.
- Achieve excellence in research on teaching effectiveness and learning outcomes in pharmaceutical education spanning the continuum of lifelong learning and advance the profession.

**Education Goals**

- Establish a general pharmacy practice residency program through existing practice sites to encourage scholarship and academic careers.
- Launch graduate programs to educate students and support the research mission in both academic departments.
- Develop continuing education programs to support lifelong learning for healthcare professionals/clinicians.
- Establish a drug information service to promote quality patient care in Hawai‘i.
- Enhance outreach programs for underserved communities to address healthcare needs.
- Broaden the pool of clinicians able to safely manage medications and improve patient access.

**Human Resources Goals**

- Attract faculty that will be a good fit for the unique environment and opportunities of the UHH CoP.
- Establish an effective mentorship program to develop and retain strong faculty, staff, and preceptors.

**Communication Goals**

- Establish a bidirectional communications hub that ensures all CoP faculty and staff are kept apprised of CoP issues, events, and changes in a timely manner.
- Establish and communicate a CoP brand that promotes a consistent image and message to external stakeholders in a way that enhances our ability to secure adequate financial resources, earn community support, and achieve recognition by our peers.

**Facilities Goals**

- Acquire or build adequate space to support the goals outlined in this strategic plan and planned enrollment growth in numbers of students, faculty, and staff.
- Develop a master facilities plan to support the design of a permanent pharmacy building or campus that will meet the long-range needs of the CoP.

**Finance Goals**

- Establish and implement a tool for conducting financial analyses and projections of consolidated
CoP sources and uses of funds.
- Establish and implement internal financial processes that support alignment with the UH and UHH budget cycle and effective, efficient operations.
- Establish and implement training for CoP faculty and staff to ensure awareness and understanding of budget and finance issues.
- Document the economic impact of the CoP on the State of Hawai’i.

ECONOMIC IMPACT STATEMENT

A prominent UH Hilo economist, Dr. David Hammes, released results from his economic impact study on CoP in February, 2009. Dr. Hammes was well-versed in economic studies, having prepared several for the University of Hawai’i during his 21 years teaching at UH Hilo. He also conducted economic research in a number of areas, including a historical analysis on the formation of the U.S. Federal Reserve. In 2003, he was awarded the Regents’ Medal for Excellence in Teaching.

Dr. Hammes concluded that by the time the inaugural class graduated in 2011, CoP would stimulate more than $50.2 million per year in economic activity in the State. He further stated that the College would support an additional $15 million in earnings by that time.

“If growth continues as planned, our data shows the College of Pharmacy will more than double its current output, making it a significant growth pole within the University as well as within the State,” said Dr. Hammes.

Dr. Hammes collected data for the period between 2008 through 2012. He found that CoP brought in $4.2 million revenue from tuition for the 2008-2009 academic year. There were tuition dollars that would not come to Hawai’i without this program because UH Hilo is the only school in the state that offers a doctorate in pharmacy, or PharmD.

The College attracted students and family from out-of-state who would otherwise not have come here.

“CoP keeps students in-state who would leave to attend PharmD programs elsewhere. It’s also interesting and important to note that wage and salary costs associated with the 27 new faculty and staff jobs currently State-funded within the College are significantly more than funded by the new tuition revenues alone. But beyond tuition revenues, students, faculty and staff were responsible for injecting $7.7 million into the local economy that year through increased spending by visitors, attracting grant and research funds, and on spending for living expenses.” (Dr. Hammes) Dr. Hammes found that direct expenditures of $12 million resulted in a total increase of $22.8 million in increased demand for final goods and services within the State and supports 274 new jobs Statewide. The impact grew as the College expanded.

Every dollar generated by the program was new, and not at the expense of other university or State programs. In addition, each dollar used by the State in salary and wages for CoP attracted a new $3.38 from outside sources, including tuition revenue, student and visitor spending. “If the College grows as planned, this figure will be $4.04 by 2012 and will level out to $3.58”, Dr. Hammes predicted.

“Another way to measure the impact was by measuring the increase in new output per ‘State’ dollar, including the
direct and indirect, or multiplier, effects. This figure is close to $9 for every $1 of State wage and salary funding” Dr. Hammes explained.

When the College completed its growth arc and reached its steady-state number of approximately 350 students in 2011-2012, Dr. Hammes calculated:

- Tuition revenues may more than double to $9.6 million
- Statewide earnings induced over this four-year trajectory may rise from $6.9 million to $15.3 million.
- New job creation across all industries Statewide, including housing, food, utilities, transportation, personal services, etc., may rise from 274 to 610.
- Demand for final goods and services within the State may increase from $22.8 million to $50.2 million.
- Through time, the College attracted more external funding through increased research funding, continuing education and conference bringing in out-of-state funds.

These activities take time to get up and running, but the College certainly had the expertise to accomplish this.

“It's heartening to know of the positive influence we had on the finances of the State during these tenuous economic times. More importantly, however, our continuous growth means we can concentrate on another matter of utmost importance, which is improving the condition of healthcare in Hawai’i and throughout the entire Pacific region.” (Dean Pezzuto)

Key political figures were impressed with the numbers. “The College of Pharmacy facilitates economic development by training health care professionals, conducting research, and forming collaborative partnerships,” noted U.S. Senator Daniel Akaka, D-Hawai’i. “The economic benefits of the College of Pharmacy will continue to increase as enrollment, research, and collaborative efforts grow and develop further.”

Dr. Hammes said most of this increased economic activity was expected to be in Hawai’i County, though CoP has a presence Statewide. Some of the expenditures would be made in the other counties by way of visitor expenditures and research spending.

“I am a big fan of Dean Pezzuto and the College of Pharmacy,” said Hawai’i Mayor William “Billy” Kenoi. “I truly believe it will have a significant, positive long-term educational and economic impact on our community.”
ACPE Milestones

Every College of Pharmacy needs to justify its existence with some cold hard facts. The agency in charge of making sure every pharmacy school tows the line and meets consistent, rigorous standards is the Accreditation Council for Pharmacy Education. The importance of having a pharmacy school that has gone through this process cannot be overstated; an earlier attempt to start a pharmacy school in Hawai‘i failed because it didn’t start the process of accreditation before it admitted students. In order for pharmacists to be licensed in the United States, they must have graduated from an accredited pharmacy degree program.

ACPE is recognized by the US Department of Education as the national agency for the accreditation for the professional degree programs in pharmacy, and is also the national agency for the accreditation of the providers of continuing education. It is a non-governmental agency whose Board of Directors is appointed by the American Association of Colleges of Pharmacy, the American Pharmacists Association, the National Association of Boards of Pharmacy (NABP) (three appointments each), and the American Council on Education (one appointment).

Full accreditation cannot be earned until the first class graduates from the University, so the team of founders knew they had to enroll the College in the accreditation process before the school began. They began the rigorous process and set of standards before the first student was accepted.

The first acknowledgement of an accreditation future occurred in June, 2007, when ACPE’s Board of Directors voted to grant pre-candidate Status to the College, which expected its first class to enroll that fall. New programs with no students must meet eligibility criteria for accreditation, thus are assigned pre-candidate status. This indicates an expectation the school will proceed to the next step.

The next step towards accreditation was Candidate Status, which was granted to UH Hilo the following year, June, 2008. Most importantly for the students who had completed their first year there, this designation assured they would receive the same rights and privileges to apply for licensure as graduates of an accredited program.

The ACPE team, representing faculty and administration from several notable pharmacy schools, practitioners in the field, and the ACPE accreditation staff, conducted the on-site evaluation in Hilo and Honolulu in April that year.

As part of the review, the College of Pharmacy provided a comprehensive self-study of the PharmD program, as well as other related materials. The on-site evaluation consisted of interviews with faculty, staff, community preceptors and students, and an evaluation report was presented to the dean and chancellor upon completion.

The College of Pharmacy received high marks in virtually every aspect of the evaluation report for Candidate status, and showed progress in every area since the first ACPE inspection in early 2007.

According to the report, “The College has a dynamic, long-term mission with broad coverage that was created through group processes that include faculty endorsement.”

The ACPE recognized Dean Pezzuto in the evaluation for “having autonomy and flexibility to utilize financial resources for programmatic needs” and noted the College has been successful in recruiting and hiring faculty with the necessary credentials to develop and deliver the first components of the curriculum.

While there is no designation between Candidate status and Full Accreditation, ACPE conducts a review each of the two years in between so that there is no gap in the process from application to final accreditation. UH Hilo College of Pharmacy’s candidate accreditation status was affirmed during the June 2009 Board of Directors meeting.
COP’s interim report was submitted to ACPE in March that year. In its approval report, the Board cited:

- revision of the admissions interview process and the mix of resident and non-resident students currently enrolled;
- the offering of biannual events for preceptor (professional mentor) support and development and the training to be offered in-person and via podcast;
- that the construction of the modular facility used by the College was underway and that the State Legislature had approved funds for the planning and design for a permanent structure for the College; and
- the introductory pharmacy practice experience rotations were currently in place and that work continued to secure sufficient sites for the Advanced Pharmacy Practice Experiences.

In the final review during Candidate status, ACPE granted one more positive evaluation at its annual June 2010 meeting in Illinois, based on a review of a March visit to Hilo.

This time the reviewers commended Dean Pezzuto for “assembling a strong leadership team and faculty. The degree of attention that has been given to developing all elements of the mission, including research and scholarship, is particularly notable for a new College at this stage of development,” according to the report.

Pre-visit materials met expectations in every category, with special attention recommended mainly in the areas of curriculum and facilities. The College of Pharmacy was housed in temporary facilities on the UH Hilo campus, with plans for a permanent building underway.

“The evaluation team notes the existence of a College mission statement and its consistency with that of the University,” the report stated. “It is notable that the College is now considering the development of other elements of its mission, including continuing pharmacy education, residency programs, graduate programs, and seeking federal funding to support scholarship and research.”

The evaluation team also noted plans to expand health care initiatives in nursing and physical therapy programs, and recommended support should be provided to ensure that the new programs coordinate well and expand opportunities for interprofessional education with the Doctor of Pharmacy program.

The University administration was commended in the report for providing support, noting that “the College enjoys a strong and supportive relationship with the University and University administration.”

**ACPE Awards Full Accreditation**

After five years of intensive reviews, the College of Pharmacy at the University of Hawai‘i at Hilo was granted full accreditation in June, 2011.

At a June 24 meeting, the Board of Directors for the Accreditation Council for Pharmacy Education voted to award UH Hilo College of Pharmacy full accreditation for a period of two years. Continuation will be determined at a future ACPE Board meeting, following a site visit to assess the ongoing progress of the program.

Receiving full accreditation at this time was a close call. “We are able to provide a first rate education for our students, but we will not be able to realize our dream of being a top-ranked col-
Continuing Education Accreditation

Another key step to developing the college was achieving approval to offer continuing medical education (CME) and continuing pharmacy education to physicians and pharmacists. Accreditation was granted by two separate agencies. At an event in Honolulu in May of 2009, the Hawai‘i Medical Association (HMA) CME Facilities Accreditation Committee approved UH Hilo’s College of Pharmacy to offer CME activities to physicians. Two months later, in July, CoP was accredited to offer continuing pharmacy education (CPE) to pharmacists by the Accreditation Council for Pharmacy Education (ACPE).

The College of Pharmacy joined 15 hospitals and one other organization accredited by HMA that provide CME activities on a regular and recurring basis primarily to physicians practicing in the state of Hawai‘i or the Pacific region. HMA is recognized by the National Accreditation Council for Continuing Medical Education as the intrastate accrediting agency for organizations and institutions that provide CME activities for physicians in Hawai‘i.

Accreditation is official recognition that an overall program of CME complies with accepted criteria for planning, implementing, and evaluating CME activities. Accreditation assures the medical community and the public that such activities provide physicians with information that can assist them in maintaining or improving their practice of medicine.
These activities are free of commercial bias and based on valid content, she added. Physicians must complete a required amount of CME activities to retain their licenses.” (Nathalie George, CME coordinator for the Hawai’i Medical Association)

“The gold standard in continuing education in healthcare is improving patient outcomes, which fits perfectly in the College of Pharmacy’s vision to improve the quality of health care in Hawai’i and throughout the Pacific. Our goal is that physicians and pharmacists not only gain knowledge through one of our courses, but change practice in a way that helps patients as a result of it.” (Dr. Pellegrin)

While CME programs sponsored by the College of Pharmacy covered a broad range of topics in medicine and patient care, it emphasized its areas of expertise in medication therapy management. CPE programs sponsored by the College of Pharmacy cover the same broad range of topics in medicine and patient care.

It was a good opportunity to promote interdisciplinary teamwork as physicians and pharmacists took classes together. “But in some cases, we’ll have pharmacy-specific programs, as in our preceptor training which is designed to support the educational needs of the healthcare professionals who contribute to the experiential training of our pharmacy students.” (Dr. Pellegrin)

CPE accreditation was approved by ACPE, the same agency that gave the college full accreditation in 2011. All pharmacists in the United States are required to take pharmacy continuing education classes in order to renew their licenses every two years. In Hawai’i, all licensed pharmacists must complete a minimum of 30 hours of continuing education that has been approved by ACPE during each two-year period.

The college’s CPE program allowed the college to attract pharmacists and their families to Hilo as it developed and maintained stronger ties throughout the country. It helped support the professional growth of pharmacists in the state of Hawai’i and it gives graduates a reason to return.

**Facilities**

Students began taking pharmacy classes in the fall of 2007 before the College of Pharmacy was cleared to design and construct a temporary home. Pharmacy faculty conducted sessions in classrooms and laboratories that belonged to the University’s Biology and Chemistry Departments. For the most part faculty and staff were located in a temporary site at the Institute for Pacific Island Forestry (IPIF) on Nowelo Street. In the Fall of 2007, Governor Linda Lingle released $5.5 million for design and construction of new, temporary facilities. The approval and release of this funding sent a clear signal that the Governor and legislature share and support that vision.

The funding was going to design and build up to four modular buildings on a four-acre parcel in the University Park of Science and Technology next to the College of Tropical Agriculture and Human
Resources (CTAHR) on South Aohoku Place. The new facilities, nicknamed “the modulars” because of their mobile-like appearance, included one classroom, teaching laboratories and offices.

“Building the interim facilities enabled us to continue recruiting top-notch faculty and staff, continue accepting students, and maintain a solid foundation to retain our professional accreditation. The lab space also allowed us to launch research programs, which was important because discovery is critical to our success.” (Dean Pezzuto)

Members of the inaugural class said they received the instruction they need to become successful pharmacists, and saw the new facilities as an important piece of the puzzle. Class president Jessica Toyama said, “Where one learns can have a positive impact on what one learns”.

“We were very pleased to be able to study pharmacy in Hilo. The faculty was fantastic, and the addition of our own facilities helped unite our class and form lifelong relationships that will make a big difference in our careers.” (Jessica Toyama)

New classrooms, laboratories and offices are considered Phase 1, because CoP still needed a permanent site and building. Phase 1 was important because, “it established a solid foundation for the full build out.” (Gerald De Mello)

Phase 1A consisted of the construction of Buildings A, B, and C that included a lecture hall, four break out rooms, three research labs, student services and IT services. But stalled building permits and other logistical setbacks put off the actual construction of the temporary home for two years. In October, 2009, UH Hilo held a traditional Hawaiian Blessing Ceremony in honor of three modular buildings that represent Phase I of the College’s temporary home.

“The facilities were really a significant first step toward answering the state’s need for more professionals that are committed to professional healthcare,” Gerald De Mello said. “The Pharmacy program gives a national distinction in many ways to the island and for our community, and adds vitality to our University and our town. It takes us to our long-sought goal of redefining the basis of economics in Hilo to depend on a knowledge institution that helps move the town, the island and the state forward.”

More than 65 people attended the ceremony, and Dr. Tseng recognized several dignitaries in attendance who have helped the College of Pharmacy, including Rep. Jerry Chang, Senator Daniel Inouye’s chief of staff Pat Deleon, Hilo attorney Roy Nakamoto, retired pharmacist Ron Okamura, member of the Dean’s Advisory Council, Representative Clift Tsuji, Allan Onishi, president of the Japanese Chamber of Commerce and Industry of Hawai’i, Phoebe Lambeth, Rotary Club of South Hilo, and Harvey Tajiri, UH Board of Regent.

“Without the state legislature, we would never have gotten this far. With Dean John Pezzuto’s guidance, the College has already attracted top-notch faculty who really are modern-day pioneers working to make this a health care Mecca of the Pacific. But it takes a community to make this happen.” (Dr. Tseng)

“The modular buildings put the CoP on the map – the campus map”, Dean Pezzuto quipped during the ceremony, noting the new campus map finally showed CoP’s presence on campus. This temporary facility was not a flight of fancy but a necessary component in the quest to become a top-rated
pharmacy school. It was planned that the modular compound will be put to good use in supporting UH Hilo activities long after the College moves into a permanent building.

Danny Akaka Jr., son of U.S. Senator Daniel Akaka, conducted the traditional blessing.

“Use this time to move with the flow and to enjoy what nature gives us,” Akaka said. “It’s a symbol that we’re not alone. We’re surrounded by the beauty of this place and the ancestors who were here before us.” That same month, Governor Lingle announced the release of $5.5 million for planning and design of a permanent building for the College of Pharmacy. The state legislature approved the funding earlier that year.

Excerpt from Class of 2011 President Jessica Toyama’s speech at Blessing Ceremony

It is so nice to see the entire college and community here today as we celebrate yet another milestone in the establishment of our college. My name is Jessica Toyama and I am President of the Inaugural Class of 2011 here at the University of Hawai‘i at Hilo College of Pharmacy.

I’m sure that as students, we are unaware of the numerous resources, the many people, the countless hours and hard work that was necessary in making this acquisition of our new pharmacy building a reality. But what we do know is that until now, we really had no place to call home. There were only two lecture halls on the main campus that could accommodate our class of 90 students. These two lecture halls, on opposite ends of the campus, were also utilized for undergraduate courses and thus classes were often held into the late afternoon due to the limited classroom availability. Words are inadequate and cannot express how appreciative we are to have our very own pharmacy building.

Temporary modular facilities were installed to give the College of Pharmacy a place on campus until permanent facilities could be built.
Furthermore, as the inaugural class of the first college of pharmacy in Hawai‘i and the Pacific, we have the unique opportunity to shape our college. We have already eagerly established a number of student organizations, each of which were student initiated and student driven. But without our own building, we cannot continue to expand and grow. So on behalf of my class, we would like to recognize our legislators, Dr. Tseng, Dean Pezzuto, the faculty, and everyone in the community who have been instrumental in establishing our new home. Please know that we are very grateful for your hard work and generosity, and that we thank all of you for your dedicated efforts to have made the University of Hawai‘i at Hilo College of Pharmacy a good place to learn, and grow, and a place that we can be proud of. Mahalo.

Permanency

“The College of Pharmacy is a shining beacon in the educational system of Hawai‘i and the Pacific and I’m proud to be one of its supporters. The presence of this school means that we can keep students from having to leave our state to get a degree in a field that will improve overall health care and the local economy.” – Governor Linda Lingle

At that point, the College had been admitting students and hiring faculty for three academic years, sharing classrooms and laboratories with other departments at UH Hilo. Teaching, research, study, administrative and faculty office spaces were distributed across seven different sites on the UH Hilo campus and the Hilo community: 34 Rainbow Dr., a former hospital that had been turned into office space; Wainaku Executive Center; the new modules on South ‘Aohoku Place; labs and offices off Mamaki St. near the Pana‘ewa Zoo; lab and offices in the College of Agriculture’s Institute of Pacific Islands Forestry building; Hilo Medical Center and other buildings on the UH Hilo campus.

“A permanent home is absolutely crucial in order for the College of Pharmacy to achieve full accreditation as well as to provide an environment that is conducive to quality educational and research opportunities,” Dr. Tseng said. Phase 1B of the project, funded by a $1 million gift from the J.M. Long Foundation, added 2,880 square feet to Building B in 2011. The project added a lecture hall, used daily, nights and weekends for classes and conferencing, and equipped with networking and distance learning equipment. It also added a section for Student Services to fulfill unmet needs at the College as a site for student advising and counseling; student group meetings, materials storage and activity planning; and hosting of community related projects.

Phase 1C of the building for the temporary facilities was for the construction of another building, Building C, that would house a teaching laboratory and more offices. In order to fund the final phase of the construction, it was necessary to utilize a $3 million revenue bond. Repayment was facilitated by the generous gift from J.M. Long Foundation.

Eleven months after the Blessing for the temporary buildings, which seemed like a fantasy began to take shape in the form of choosing the architects for the permanent building. The University of Hawai‘i named WCIT Architecture of Honolulu to contract to design the college’s permanent home on the UH Hilo campus. WCIT worked with the science and technology branch of SmithGroup to plan the structure intended to anchor the future University Park of Science and Technology.

Because UH Hilo was in the process of redesigning
the entire campus, it was finally decided that the College of Pharmacy would find permanency in close proximity to its temporary headquarters on South A‘ohoku Place. The site, located at the corner of Komohana and Nowelo Streets, must bring together all seven sites of pharmacy teaching, research, study, administrative and faculty office spaces.

“This building will be the visual cornerstone of one entrance to UH Hilo so it needs to reflect our place and pay respect to our location on the Big Island of Hawai‘i,” Gerald De Mello said. “We had every confidence in this team of architects to be able to honor the traditions of our host culture. We expected nothing less than the kind of building that will serve the island ‘ohana as well as provide a base to build a one-of-a-kind, top-rated pharmacy school.”

UH Hilo is in the process of finding funding for construction of the building, which has an anticipated cost of $66 million.

Debra Fitzsimons, Vice Chancellor for Administrative Affairs, said she was delighted to witness the tremendous growth and progress of the College of Pharmacy. “The College of Pharmacy has demonstrated the true potential of our campus in Hilo,” Fitzsimons said. “In addition to serving the health care needs of our citizens, it serves as an economic engine for the community and State. Construction of this facility will allow them to achieve their mission. We are all very proud.”

Vice Chancellor of Academic Affairs Philip Castille said, “In the new College of Pharmacy building, UH Hilo students will have access to high level technology in the classroom like never before. This type of education and research experience can only serve to offer the best preparation for the job market, and we’re excited to be on the forefront of creating one of the best health sciences facilities in the nation.”

Space needs called for a 60,000 gross square feet building that will include two 120-seat lecture halls, 14 study rooms, a compounding/dispensing laboratory, a laboratory for simulation mannequins with an additional six beds to create a mini-patient ward, a working dispensing pharmacy to service student pharmacy needs on campus and to serve as an experiential practice site for Pharmacy students, an Institutional Pharmacy with sterile preparations laboratory, fully equipped research laboratories, a vivarium, and office space for the administration, 50 faculty, postgraduate students, residents and post-doctoral associates.

“We know architecture, we know Hawai‘i,” said Rob Iopa, lead architect on the project and president of WCIT Architecture, an international architecture firm specializing in luxury resort, residential, and mixed-use design and development. “Our partners at SmithGroup draw on more than five decades of laboratory planning and design. We will be looking at trends in health sciences while remaining respectful to the community-at-large. Our group has perfect balance and all of the expertise required to bring this project to fruition.”

SmithGroup designed space for many of the country’s leading research institutions, including General Electric, Eli Lilly, and the new Science & Technology Facility at the National Renewable Research Laboratory in Colorado.
Unveiling

Participants at College of Pharmacy’s retreat in February 2011 were treated to an unveiling of the schematic design for the College’s future permanent home, courtesy of WCIT Architecture of Honolulu.

While many had already seen the drawings of the outside of the building, Rob Iopa was on hand to explain the method behind the plan. Mark Kranz spoke on behalf of SmithGroup, the science and technology branch based in Phoenix working with WCIT to design the state-of-the-art, three-story building.

“After being dispersed in various locations throughout Hilo for the last five years, it’s beyond exciting to see tangible evidence of where we will all be able to work together in one place. This building will be spectacular, and a grand testament to our host culture at one of the entrances to the university. It will be not only beautiful, but practical as we carry out our responsibility to be the hub of health care and discovery at UH Hilo.” (Dean Pezzuto)

A permanent building was a requirement for college to achieve final accreditation from the Accreditation Council for Pharmacy Education once the inaugural class graduated.

The college was confident in the accelerated building plan and it went to the accreditation board. Next was relying on the Legislature and other fundraising to take it to the next step.

The design approach blended environment, place and architecture unique to the needs of the College of Pharmacy yet within the framework of other buildings on campus. According to the schematic design, “The vision for the campus and facilities of the University of Hawai‘i at Hilo College of Pharmacy will combine its Pacific Island heritage with that of Western science, and Eastern customs.”

The architecture firm paid respectful homage to many aspects of the host culture, largely confirmed by the origins of the firm itself. Born and raised in Hilo, Iopa opened his architecture firm in 2000 with three people working out of their home. He wanted to focus on architecture that reflects the Hawaiian culture. The firm won the American Institute of Architects (AIA) Honolulu award for the design of “Ka Haka Ula O Ke‘elikolani” UH Hilo College of Hawaiian Language Building as part of its 2010 Design Awards. They have implemented many cultural elements in the plans for the future CoP building.

“We are contemporary builders, but at the same time there are references for inspiration that we wanted to express. First and foremost, we needed to look at where we were putting the building so we could respond to the site with respect to things like climate, the frequent rain and overcast skies. We also felt it was important to add a ‘piko,’ or a center courtyard with traditional Hawaiian terracing.” (Rob Iopa)

The architects went to great lengths to assure a pleasing appearance from every perspective. Parking will be accessed through the piko, and people will enter the building through a breezeway.

With input from the college faculty, SmithGroup handled the components of the internal space. Their strategy was to create a state of the art facility that would be conducive to research while handling a bustling student environment.
Pre-Pharmacy Program

At the time of this writing, admission to the PharmD program required a minimum of 66 college credits in specific areas.

In late 2006, Dr. Susan Jarvi initiated the development of the UH Hilo Pre-pharmacy program. She was mentored by Dyanne Affonso, who was helping Dr. Jerry Johnson oversee the pharmacy program before John Pezzuto was hired as Dean. UH Hilo welcomed the first 12 students to the program in Spring of 2007. Dr. Jarvi became Director of the Pre-pharmacy in February 2007. The program was designed for students interested in a two-year academic preparatory program that allows them to pursue a Doctor of Pharmacy (PharmD) degree at the College of Pharmacy at UH Hilo. The Pre-pharmacy Orientation Course was a significant component of the Pre-pharmacy Program. Dr. Jarvi developed the program to familiarize students with the necessary academic requirements, introduce students to job opportunities, and the clinical, technical and ethical responsibilities of Pharmacists through interaction with local professionals. The initial course was IS198 and, later, IS201, when it became permanent. By April 2007, it had grown vastly and a proposal was submitted requesting an online course. By 2008, it was adapted into an online course with 167 students.

"Classrooms, breakout rooms, student services, all these need to be a place for student support front and center," Mr. Kranz said. “This will be one of the greatest spaces in Hilo.”
An integral part to the Orientation Course was a Community Outreach Program that provided an opportunity for students to foster partnerships with various organizations in the Hilo community. Each student was to log a total minimum of 20 hours per semester. The students were able to help the community in a way no other program was able to before. They were also able to gain practical experiences.

The development of such a strict rigorous academic science-based program provided a mechanism for enhancement of the sciences throughout the state of Hawai‘i. Over the years, student access increased through enhanced partnerships and distance-learning efforts. The program reached students in American Samoa, Guam, Marshall Islands, Micronesia, Northern Marianas College, Saipan, and Palau. The program grew to 47 students in 2008, 115 in 2009 and 200 in 2010.

In 2008, UH Hilo College of Pharmacy received a U.S. Department of Education grant for approximately $700,000 that allowed for the expansion of the existing pre-pharmacy program. It helped to create a science program for pre-pharmacy students who live in rural and remote areas of Hawai‘i and the Pacific region. Faculty members from the program conducted a tour of the Western Pacific, including Saipan, Guam and Palau where participating institutions greeted them with enthusiasm. While in Guam, they were guests on the “Where We Live” show, and host Peggy Denney featured the Pacific Pre-pharmacy Program from 7:00 to 8:00 p.m. At the time, there were 32 pharmacies, including hospitals, on Guam.

In 2008, the College of Pharmacy welcomed the College of the Marshall Islands to the Pacific Pre-pharmacy program. “The Pacific Pre-pharmacy Program has the potential to influence the economy of the Pacific region,” said College of the Marshall Islands President Wilson Hess, who along with Executive Vice President Margaret (Meg) Malmberg, visited Hilo to find out more about future involvement with the pre-pharmacy program. “Sometimes it’s hard for people in the states to recognize the scale we work with in the Marshall Islands,” Dr. Hess said. “If this program can help even two or three students, it’s going to be a success as we prepare people to work in nursing and pharmacy and the allied healthcare field. That will have a significant impact on the national workforce.”

The team then stopped in Saipan where they met with potential students, the Governor and his staff and Pacific Postsecondary Education Council (PPEC) members. During the visit they went to three high schools to present to interested students – Marianas High School, Saipan Southern High School, Kagman High School. Many students showed interest in the new program.

In May 2009, the College of Pharmacy teamed with University of Guam (UOG) in a pre-pharmacy agreement. This made it possible for undergraduates at the University of Guam who wanted to earn a degree in pharmacy to transfer up to 70 credits to the pre-pharmacy program at the University of Hawai‘i at Hilo through to a memorandum of understanding (MOU) signed by both universities. The agreement between the two universities helped clear the way for course transfer between academic programs and courses at both institutions. It helped UOG students fulfill the Pacific Pre-pharmacy Program requirements and provided advising on both campuses to help students prepare to apply to the College of Pharmacy at UH Hilo. UH Hilo worked collaboratively with other institutions throughout Hawai‘i and the Pacific. It is through such agreements that help UH Hilo lead efforts
to promote science, technology, engineering and math. “This MOU is significant in that it provided a guideline for the cooperative promotion of successful educational experiences for students from both institutions. It also provided pre-pharmacy mentoring and advising from faculty and staff on both campuses, including tutoring and counseling,” Dr. Jarvi said.

In May 2010, pre-pharmacy students got a boost from the College of Pharmacy with the STEP (Steps Towards Excellence in Pharmacy) program, an intensive, three-year scholarly preparatory program to address underserved students’ educational, social and economic needs. Applicants to STEP come from diverse backgrounds and have the goal of becoming a pharmacist. The program provides financial, advisory and mentoring support for up to five undergraduate students per year who plan to continue on at the University to earn a Doctor of Pharmacy degree. “By helping underserved populations, we can reach students who come from an environment that may have inhibited them from ever going to college,” Dr. Jarvi said.

In September, 2010, UH Hilo joined forces with American Samoa Community College (ASCC) to aid future pharmacy students. The University of Hawai‘i at Hilo signed an agreement with ASCC to help students in the Pacific Pre-pharmacy Program to successfully apply to the UH Hilo College of Pharmacy. It was a true collaboration in the sense that it gave American Samoa more opportunities to fill critical shortages in the health care field while strengthening capabilities to improve health in the entire region. The agreement between UH Hilo and ASCC was designed to clear the way for course transfer between academic programs and courses at both institutions, help ASCC students fulfill the Pacific Pre-pharmacy Program requirements to apply to the UH Hilo College of Pharmacy and to provide advising on both campuses.

Dr. Jarvi, and CoP faculty members Drs. Linda Connelly and Gary Ten Eyck, acted as primary advisors to students coming to UH Hilo. In the Fall 2010 the first STEP students were accepted into the program and became members of the College of Pharmacy Class of 2017.
Pre-Pharmacy Faculty and Staff
Dr. Sue Jarvi, Director
Donna Ohora, Advising Assistant
Elise Edwards, Advising Assistant
Mary Albin, Advising Assistant
Dr. Linda Connelly, Faculty Advisor
Dr. Gary TenEyck, Faculty Advisor
Tina Phifer, Advising Assistant
Hi’iaka Kahalewai, Advising Assistant

College of Pharmacy Adds Residents
The first pharmacy residents to get training through the UH Hilo’s College of Pharmacy worked with the staff in Maui Medical Center while helping to achieve national accreditation for the residency program.

Similar to physicians residencies that allow MDs to get postgraduate experience, the pharmacy residency gives pharmacists specific training in health care settings. In this case, the setting was Maui Clinic Pharmacy in Kahului, Maui.

Many students who graduate with a PharmD go right to work in a pharmacy but others look to enroll in pharmacy residency programs, which are often a requirement for employment in hospital pharmacy practice or as a faculty member at a pharmacy school. Several of the inaugural graduates worked in residency programs. Although Maui is the first of the other Hawaiian Islands to benefit from the pharmacy resident program, every effort was made to include all of the neighbor islands in this type of project.

Drs. Sheena Jolson and Amy Baker both went to different states to earn their professional doctorate degrees in pharmacy, or PharmDs, but chose to come to Hawai‘i to get more training after graduation. In 2010, Dr. Jolson earned her PharmD from the University of Arizona in Tucson and Dr. Baker earned hers from the University of New Mexico. Their term for residency in Maui spanned October 2010 to October 2011.
They worked long days, often consulting with four or five patients a day, an hour at a time, conducting follow-up meetings and working with the physicians after the consult, making suggestions for cost-saving alternatives, more appropriate therapy (according to national guidelines), addressing compliance issues and more, called Medication Therapy management (MTM).

The residents also interacted with the community by helping to conduct a USDA-funded project that was seeking to educate seniors on medication safety. They attended national conferences such as the American Society of Health-System Pharmacists Midyear Clinical Meeting in December 2010 in order to stay on top of new developments in pharmacy, and to help them network for their time after the one-year residency is over. Dr. Anita Ciarleglio, Assistant Professor in the Department of Pharmacy Practice, served as their program director in Maui.

“These women are trail blazers. They are redefining community pharmacy. They primarily act as liaison between the community, the hospital and the physician, and provide a continuity of care that just wasn’t there before.” (Dr. Ciarleglio)

Because they established a relationship with the pharmacists -- many people asked for them by name and patients were likely to tell them more. By establishing such relationships with the patients, the pharmacists can provide physicians and nurses with insight that will help in their overall care.

Because of the way insurance demands have changed, these young pharmacists are instrumental in providing outcomes for reimbursement. This is what helps to redefine their role, and gives the pharmacist avenues to better monitor patients. The system needs to change and they helped to make that happen. Medication management and tracking is the future of community pharmacy.

Their time on Maui helped the college of pharmacy move closer to achieving accreditation for the residency program, which in a lot of ways mirrored the accreditation process for the College. Site visits and documentation have all been part of the rigorous proof needed to show the program qualifies to be accredited by the American Society of Health-System Pharmacists and the American Pharmacists Association.

Bill Jones, a pharmacist who was the Pharmacy Residency Director for 23 years at the Southern Arizona Veterans Affairs Health Care System in Tucson, Arizona, guided the college through this accreditation process. The standard for residency accreditation was very demanding. The program was ready for an accreditation site visit in the fall of 2011 and winter of 2012.

The College of Pharmacy and Maui Clinic Pharmacy made great progress in a short time to establish a new residency program. There were many opportunities to work within the community and with patients and physicians that gave the residents immeasurable experience. The Maui Clinic Pharmacy owner, Les Krenk, was an innovator and offered his pharmacy to this first of its kind program in Hawai’i. The residency fit into the vision of expanding pharmacy clinical services into the more rural communities of Hawai’i.

Some of the experiential part of residencies is giving the pharmacists exposure to communities in which they are not familiar. They gain a new level of cultural understanding. Dr. Baker said it’s about respect. “We need to understand different cultures; otherwise we can’t reach our patients. That means learning and accepting the local diet that might include taro, spam, and rice and how we can work within their current lifestyle to better their health.”
After completion of residencies, pharmacists can either choose to practice, pursue another residency, or a fellowship, which would train one to be an independent researcher.

“My goal in everything I do is to help others help themselves,” Dr. Baker said. “I can’t do that through inpatient pharmacy, but I can with the discharge counseling. I feel this is the way I need to go. It’s entrepreneurial, cutting edge, multidisciplinary and collaborative, and there are many, many possibilities that are open.”

Technology in the Classroom

Building a new college of pharmacy from the ground up means that College of Pharmacy faculty and staff were innovators. They were in a true sense, pioneers. They needed to bring highly specialized classroom facility to the Big Island, and do it in four months.

When the project was first mentioned there was a blank slate where the classroom would be built. The first thing that had to be done was to identify the equipment, order it, receive and install it, before classes started. The challenging task was completed by the deadline and the video conferencing room on UH Hilo’s South Aohoku Street is the largest such classroom in the state with 90 seats.

It is a model for what the rest of the UH System will become. The task was accomplished through teamwork. “This project is a truly collaborative project between our College, the University of Hawai’i system, the University of Hawai’i at Hilo and Maui’s University Center. It took lots of thinking outside the box and many carefully orchestrated ‘yeses’ to make it happen.” (Robert Summers)

“Technology of this type is important anywhere, but especially important on our island state Hawai’i. It permits us to enrich our pedagogical mission by having easy access to talent pools off the island,” Dean Pezzuto said.

Royd Lui from the University of Hawai’i System, Candace Wheeler (University Hawai’i at Hilo) and Karen...
Muraoko (Maui University Center) were instrumental in making the project happen. Royd Lui built the bones of the CoP classroom. “Royd’s ability and the fact that he had time to do the installation saved us tens of thousands of dollars.” (Robert Summers)

Not only did the classroom in Hilo require construction, but in order to make a connection work with the “receive” sites on Maui and Oahu upgrades were required there as well. Through the leadership of Karen Muraoka, Director of the Maui University Center, a videoconferencing room was identified in Kihei to be the site for a pharmacy instructor and the site was upgraded from a “receive” site to one able to “send” as well.

The College rented space on Oahu, a suite in the Gold Bond Building at the UH Manoa College of Medicine. A polycom system was purchased for the space from which students from both campuses can benefit.

“The videoconferencing equipment is the most advanced, state-of-the-art equipment that is out there. The system transports high definition video and audio to the ‘receive’ sites. Overall visual quality and resolution are far greater than ever achieved over traditional video conferencing equipment. We knew that graphics in Power Point or any computer generated pages needed to be transmitted as clearly as possible, and now it can be.” (Royd Lui)

There are “receive” sites on both Maui and Oahu. Students in the classroom in Hilo are taught by faculty off-island. Both the students and faculty can see and hear each other. If students have a question, as in a traditional classroom, they raise hands. The lectures taught in the video conferencing classroom are recorded for future review.

That’s a valuable part of this technology, which is having access to lectures 24/7.

Thus, the College of Pharmacy has seamless communication with faculty and staff on Oahu and Maui, and soon, with faculty on Kauai.

**Students and Milestones**

**White Coat Ceremonies**

For first-year pharmacy students at UH Hilo, the White Coat Ceremony may be the first time they can tie their education to their profession. It’s also the first time the class comes together as a group to recognize their common goal. This is an important moment, because the solidarity among the first four classes has been strong. The students are building networks, both social and professional, that will last the rest of their lives. And it all starts that first year.

White Coat Ceremonies have become a tradition at many schools of pharmacy, medicine and other health care professionals throughout the country. The definition of the White Coat Ceremony is that it 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. The APhA states that the presentation of the white coat to new students represents their passage into the pharmacy profession with all the opportunities and responsibilities associated with professionalism. It marks the first time future pharmacists recite the Oath of a Pharmacist in front of their peers, professors, community and families as they publicly declare their intent to become a compassionate and respectable health care professional.

At UH Hilo, the White Coat Ceremony blends Hawaiian tradition into the ceremony. Students were presented with
lush, purple Hawaiian leis as they took the stage to recite the oath. Highlights of the ceremonies have included the performance of chants by students and faculty of UH Hilo's Ka Haka 'Ula O Ke'elikolani College of Hawaiian Language, including a mele emphasizing the value of knowledge and wisdom.

Since October 14, 2007, every class of first year pharmacy students has come together at the Performing Arts Center on UH Hilo campus. They have been joined by Dean Pezzuto, faculty, students and their families as well as various community leaders and dignitaries to formally kick off their four year program.

“This was an exciting day for UH Hilo and especially for these students,” said Chancellor Rose Tseng of the first White Coat Ceremony. “Years from now, when the College of Pharmacy is recognized as one of the finest institutions of its kind anywhere, they’ll be able to look back on this day and realize that they were part of history in the making.”

“Building this College from the ground up has been a rewarding challenge,” said Dean Pezzuto in his 2007 remarks. “As I gaze at this inaugural class, in their professional white coats as they cite the Oath of the Pharmacist, it is very clear that we are transforming the UH Hilo campus and the way healthcare will be practiced in the State of Hawai‘i. Each member of this class is a pioneer. They have already earned our respect and hardiest congratulations.”

The importance of the occasions each year has been underscored by the attendance of national speakers who were essential to the development of the College. One key figure every year was Pat DeLeon, Chief of Staff to U.S. Senator Daniel Inouye, who was instrumental in persuading his congressional colleagues to fund the venture.

“We are delighted to see the tremendous progress of the College of Pharmacy at UH Hilo,” he said at the first White Coat Ceremony in Hilo. “It is our vision that each neighbor island will harbor centers of excellence, and this new College of Pharmacy certainly meets that challenge. On behalf of Senator Inouye, I am pleased to join others in congratulating the faculty and staff, and especially the students, on these great accomplishments.”

In 2010, he was more specific. “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. The ripples that we see on the top of the water are made by forces we can't always see underneath,” he said. “This is your chance to be a part of change.”

In addition to Pat DeLeon and UH Hilo administrators, the students were also addressed by Hawai‘i Island Mayor William “Billy” Kenoi, Hawai‘i State Representative Jerry Chang, Hilo Medical Center Pharmacy Director Dr. Nelson Nako, and Papatya Tankut, Pharmacy Professional Services Vice President from CVS Caremark/Longs Drugs, who sponsored the ceremony. Other community stakeholders who have spoken were Dr. Lucy Bucci of Hawai‘i Island Family Medicine and Bryan D. Drost of CVS Caremark.

Veronica Cummings, class of 2013 from Guam, said it was fitting to hear their stories. “I liked hearing encouragement from the mayor, who pointed out there are going to be hard times but we just need to stick with it,” she said.

Michael Taylor, also class of 2013, who attended Waiakea High School, moved to California and returned to Hilo to attend Pharmacy school, said, "It made us feel like 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"
we’re part of something important to be going through a ceremony that only two other classes have at UH Hilo.”

A sense of belonging is also what many of the faculty hope the ceremony achieves. It is a big step for the students. “It brings home to them that they are one of us, part of the ‘ohana of pharmacists,” she said. “They really feel that closeness with the pomp and circumstances of today, you can see it in their faces.” (Anita Ciarleglio)

Chancellor Rose Tseng spoke at every White Coat Ceremony until she left the office in 2010. Her successor, Dr. Donald O. Straney, took up the tradition of speaking to the Class of 2014. The Chancellor 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.”

Shadi Obeidi, class of 2014, agreed that the ceremony was a milestone. “The ceremony told us that we have reached a point in our lives we will never forget,” he said. “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.”
Students and Milestones

Class of 2011 White Coat Ceremony, held October 14, 2007
A Logo is Born

In Spring of 2009, Jen and Rich Thoma teamed up to formulate a winning design for the College of Pharmacy’s new logo. The winner was announced during the dean’s luau in May.

At the time, Jen Thoma was a third year Pharmacy student. An invitation went out during the previous school year for students, faculty and staff to help establish “a consistent image and message that effectively communicates our mission, vision and values to all stakeholders. The logo should become an indelible symbol of the college.”

Jen asked Rich to lend his skills since he graduated from The Art Institute of Seattle. Jen’s involvement with the school allowed her to help advise him and tailor the logo to the criteria being judged. The winning concept then went to the UH Hilo Graphic Services Department for modifications to help it adhere to the UH Hilo brand.

This is an excerpt of the team’s narrative to the judges, which Jen wrote:

“We’re presenting to you this logo that embodies the energy of the University of Hawai’i’s College of Pharmacy at Hilo. The main image is a stylized version of Kilauea, intermingled with the rod of Asclepius.”

“Kilauea is one of the volcanoes that gave birth to Hawai’i itself, and as an echo of that grand creation, the College of Pharmacy has been born here as well. It is the active volcano in whose shadow the College of Pharmacy
continues to grow through the dedication and fortitude of its staff and students, as does the island of Hawai‘i on which it stands.

“The rod of Asclepius symbolizes the healing arts. Asclepius was a practitioner of medicine in ancient Greek mythology; the serpent or snake entwined around it is an image of healing. The serpent sheds its skin and in doing so, it is reborn and healed. Thus, this symbol has long been regarded as the very image of healing the sick through medicine, the charge now laid upon the new generation of pharmacy students, whom are in very good hands here.”

**Design Criteria**

Criteria for the winning College of Pharmacy logo entry included:

- Effectiveness in communicating the core mission, values and vision of the College of Pharmacy;
- Effectiveness in differentiating the UH Hilo College of Pharmacy from other pharmacy programs.
- Harmony with the UH Hilo and University of Hawai‘i system’s logo/brand.
Student Organizations

The inaugural class had the unique opportunity to shape the college and create traditions for generations to come. They eagerly established the Class of 2011 Student Council, as well as a number of national pharmacy organization student chapters including the American Pharmacists Association, the National Community Pharmacists Association, the American Society of Health-System Pharmacists, and Phi Delta Chi. Each of these organizations was student initiated and student driven by members of the inaugural class with the support from the college and faculty.

Hawai‘i’s U.S. senators have done so much to support the UH Hilo College of Pharmacy. A college delegation took time to thank them in March 2010 during a visit to the nation’s capital. More than two dozen students and several faculty members traveled to Washington for the American Pharmacists Association Annual Meeting and Exposition. In between meetings, workshops and poster presentations, many of the visitors stopped by the offices of U.S. Sens. Daniel Inouye and Daniel Akaka.

The senators were glad to hear about the impact their support has on their home state almost 5,000 miles away. “It was an honor to meet with many of the future pharmacists who are preparing to enter the work force,” Senator Inouye said. “They are bright, eager students and will make us proud. The University of Hawai‘i at Hilo College of Pharmacy is the only school of its kind in Hawai‘i, and I am certain the students I met will be exceptional pharmacists who will consider Hawai‘i’s unique cultural, physical and geographic features while providing patient care and proper medication. “By helping address the nationwide shortage of pharmacists, UH Hilo has the opportunity to help shape the ever changing health-care community in Hawai‘i and around the world,” Senator Akaka echoed those sentiments. “The College of Pharmacy is a vital UH Hilo anchor program which boosts the local economy and gives many Hawai‘i students a chance to study this important profession without leaving our state,” Senator Akaka said.

Third-year student Lisa Hagiwara said she was impressed with Senator Inouye’s warm reception. “The visit went extremely well,” she said. “He was extremely personable and made us feel very welcome. We initially started in the room where the Senate Appropriations Committee meets, and then he took us to his Capitol office. He was very happy to see us. Initially, we talked a bit about the progress of the college so far, the accreditation status and of the future programs including dual degree programs and the physical therapy program. He spoke about how he was influential in the start-up of the college, both in terms of getting the seed money to start it, as well as how it ended up in Hilo. He told us a bit about the medical history of his family and what medications he was on. He also mentioned that he had initially intended to be an orthopedic surgeon, but his injury in World War II led him in another direction.” Hagiwara
also talked with Senator Inouye one-on-one and told him about a personal tie: her
great-aunt and the Senator attended McKinley High School together. “He and my
family go way back,” she said. “He was excited to be reminded of this connection
when I brought it up in the meeting.” She noted that she also has a connection to
Senator Akaka: his wife, Millie, is the niece of Hagiwara’s great grandmother. Several
students also met with U.S. Rep. Mazie Hirono of Hawai’i.

**Student Body Council**

The purpose of the Student Council shall be to unify and coordinate the
activities of the students in order to preserve and maintain the good name and
traditions of the CoP.

**Class Officers**

**Class of 2011**
The Class of 2011 Student Body Council serves to unite and raise student voices and
concerns. The class officers represent as well as serve their fellow classmates through
establishing student committees, taking legislative action, and organizing fundraisers
and social events. We especially embrace the importance of giving back to the
community and thus participate in numerous service projects. As the inaugural
class, we have the unique opportunity to create traditions for future classes and seri-
ous undertake this endeavor with gratitude.

Faculty Advisor: Edward Fisher, PhD
President: Jessica Toyama
Vice President: Adrienne Au
Secretary: Amber Schwarz
Treasurer: Ceslee Fukuhara
Class Delegate: Curtis Start
Activities Coordinators: Cherie Chu & Marisa Schroeder
Historians: Sarah Kaufman & Trenton Teruya
Webmaster: Jennifer Zbylski
Class Liaisons: Ryan Mashiyama (09-11), Erika Miyahira (09-11), Rochelle Oledzki
(08-09), Jason Braithwaite (07-09), Namrata Trivedi (07-08)

**Class of 2012**
The UHH CoP 2012 Student Body Council serves to represent
the collective thoughts and opinions of students at events
held within the University and externally. It is an arena in
which class funds are raised and allocated towards social
and philanthropic causes. A fundamental desire of this or-
ganization is to promote unity and friendship amongst stu-
dents in the College of Pharmacy particularly those in the
Class of 2012.

Faculty Advisor: Anthony Wright, PhD
President: Marisa Kellett
Vice-President: Justin Arias
Treasurer: Meng Fei Lee
Secretary: Daniel Hu
Activities Coordinator: Alexandra Perez & Carol Lynn Goo
Delegate: Ana Park
Webmaster: Daniel Loo
Historian: Stephen Wong
Class Liaison: Paul Kim & Brian Niimi

**Class of 2013**
The UHH College of Pharmacy Class of 2013 Student Body
Government serves as the organizational and representa-
tive body of the UHH College of Pharmacy Class of 2013.
Our primary goals are to foster unity and friendship among
the Class of 2013, coordinate fundraising efforts, host and
promote participation in community service and social
events, and act as a forum for student and faculty concerns.
We hope to carry on the ideals and traditions of the College
of Pharmacy as well as establish new ones for generations
to come.

Faculty Advisor: Ken Morris, PhD
President: Victor Lin
Vice-President: Ryan Abeyta

Together they had pondered how many of the people walking by would become future colleagues of theirs.
Emergence of the University of Hawai’i at Hilo College of Pharmacy

Secretary: Tina McDonald  
Treasurer: Ahmad Musheinesh  
Activities Coordinators: Margaret Kang & Alison Kobayashi  
Historian: Nicole Schauer  
Webmaster: Chris Ayson  
Class Delegate: Christine Lucas  
Class Liaisons: Chris Lai Hipp (09-12) & Prabu Segaran (09-12)

Class of 2014

The University of Hawai’i at Hilo College of Pharmacy (UHHCOP) Student Body Government serves to represent, assist, and advocate for the Class of 2014 at the University of Hawai’i at Hilo’s College of Pharmacy. We aim to maximize the educational experience of the students in our class, manage fundraising efforts for the class, and serve as a connection between the faculty and staff of the college and the student body.

Faculty Advisor: Robert P. Borris, PhD, FLS  
President: Sean Pfundstein  
Vice President: Naoto Oki  
Secretary: Miho Aoki  
Treasurer: Behnam Rostomi  
Historian: Kim Nguyen  
Webmaster: Li Chen  
Activities Coordinators: Keith Acab & Romelynn Lamosao  
Class Delegate: Alan Huang  
Class Liaison: Katie Bass (10-12), James Yi (10-11), Jimmy Stevens (11-12)

The American Pharmacists Association Academy of Student Pharmacists The Hawai’i Chapter is the College of Pharmacy’s first and largest professional student organization. The Chapter is part of a nationwide organization that consists of more than 30,000 student pharmacists from each of the 113 schools and colleges of pharmacy nationwide. The mission of APhA/ASP is to be the collective voice of student pharmacists, to provide opportunities for professional growth, to improve patient care, and to envision and advance the future of pharmacy. Mimi Pezzuto serves as faculty advisor. The UH Hilo officers were President, Aaron Chun; Vice President, Ana Park; President Elect, Marcus Kouma; Treasurer, Matthew Sasaki; Secretary, Daniel Hu; Vice President of Membership, Cheryl Lopez; Patient Care Project Coordinator, Megan Venegas; Historian, Stephen Wong; Webmaster, Jacob Blair; Chapter Advisor, Mimi Pezzuto, RPh, BS.

More than 30 students and faculty represented the College of Pharmacy at the American Pharmacist’s Association (APhA) meeting in Washington.

In the Spring of 2009 a few of the students from the class of 2011 attended their first professional pharmacy meeting and they not knowing what to expect. The first Hawai’i chapter of APhA convened under the sign welcoming the Stars of Pharmacy to the American Pharmacist Association Annual meeting in San Antonio, TX. Together they had pondered how many of the people walking by would become future colleagues of theirs. They were filled with anticipation of all the possibilities to come that weekend. They met many supportive pharmacists as well as some of their teachers’ teachers. “It was amazing to see the support and excitement that pharmacists from around the nation had for our school
and our presence at the meeting.” (Lindsey Aoki Class 2011) During the weekend, Chapters met with their regional members and conducted a caucus in preparation for Sunday’s main event, the House of Delegates. During this event, the Hawai‘i Chapter received its first charter, and it was official.

The students participated in the House business taking part in putting together resolutions and policies that represented their views as students, worked towards furthering and bettering their education, and gave them important tools for the future. A debate took place on universal coverage, Over the Counter (OTC) labeling and public awareness campaigns. These resolutions would be implemented and could affect national changes to health care, governmental policies and even pharmacy practice. “We may not realize our potential to instigate change as individuals, but being a part of APhA gives us strength in numbers to spearhead the change we want to see.” (Lindsey Aoki).

Other events the chapter held are annual health fairs, a program called “Compounding for Kids,” in which they go to local schools and teach students how to compound. They also had the opportunity to meet with Hawai‘i state senators and representatives during the 2010 annual meeting and exposition held in Washington DC. The exposition gave them opportunity to network with those from other schools as well as influence laws that affect the practice of pharmacy.

One of the 10 founding students is Lisa Hagiwara Class 2011. Lisa helped to arrange for Crystal Atwell, a senior manager of student development for APhA based in Washington, D.C., to visit with the students in Hilo to help organize the structure of the group. Crystal was impressed with the knowledge, initiative and drive of the students at UH Hilo. The students received help from the national office in creating the Hilo chapter through ready made presentations and were given resources for professional development. Patient care projects included diabetes screening, immunizations and heartburn awareness. Students also became familiar with patient counseling techniques in an effort to become better patient educators.

The Association also provides students with more opportunities for scholarships from the national chapter’s foundation. After students graduate they can become members of other branches of the APhA, which includes more than 63,000 practicing pharmacists, pharmaceutical scientists, pharmacy students, pharmacy technicians and others interested in advancing the profession.

**National Community Pharmacists Association**

The students were seeking a deeper understanding of Community Pharmacies. In the Fall of 2010 they 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. The nation’s independent pharmacists are small business entrepreneurs and multifaceted health care providers who represent a vital part of the United States’ health care delivery system. They have roots in America’s communities. They are community leaders actively involved in community oriented public health, civic, and volunteer projects. Many hold local elected offices; others serve as state legislators.

NCPA Student Chapters offer pharmacy students a wide array of opportunities to broaden and enrich their educational experience, gain valuable, real world skills, and have some fun in the process. Some of these opportunities include: hosting roundtable discussions, conducting health screenings, presenting expert speakers, networking, developing leadership, and providing valuable public services. Membership grew rapidly! Even in the
first year when membership was low students accomplished many milestones. They participated in Health Fairs providing booths that educated patients on formulary and drug coverage. They also had a Thanksgiving food drive where they garnered 500 cans of food and a $1,000 check towards the food drive from John Erickson, owner of Puna Pharmacy.

The National Community Pharmacists Association, founded in 1898 as the National Association of Retail Druggists (NARD), represents the pharmacist owners, managers, and employees more than 23,000 independent community pharmacies across the United States. The nation’s independent pharmacies, independent pharmacy franchises, and independent chains dispense nearly half of the nation’s retail prescription medicines.

Hawai’i Student Society of Health-System Pharmacists (HSSHP)

The mission of the Hawai’i Student Society of Health-System Pharmacists is to increase student awareness of pharmacy practice in health systems; provide information to students about career directions and credentials needed for pharmacy practice in health systems; and encourage membership and participation in the state society and ASHP as a student and upon graduation. In conjunction with the Hawai’i Pharmacists Association, the Hawai’i Student Society of Health-System Pharmacists strives to advance and support the practice of pharmacy by improving the quality of care throughout the healthcare continuum in collaboration with our patient and members of the healthcare team.

Phi Delta Chi Professional Pharmacy Fraternity

In October 2009 the Hilo Colony of Phi Delta Chi was officially initiated with its first pinning ceremony. The ceremony consisted of 76 students.

Established in 1883, it is America’s first professional fraternity of pharmacy. Phi Delta Chi, a lifelong experience, promotes scholastic, professional, and social growth in its members while developing leaders to advance the profession of pharmacy. Members strive to provide quality services to patients, thereby advancing public health and strengthening themselves as health professionals.

During the 2010 Relay for Life event Phi Delta Chi Chapter had 95% of participation of its members. “Many of us know someone who has been affected by cancer and we all empathize with them. This event allowed us to pay our respects to those who we have lost and give support to those who are fighting this horrible disease.” (Chris Kamei, Chapter Professional and Service Committee representative) The chapter manned a booth that offered cancer awareness fliers and a poster board of information about skin cancer. They listened to speeches that were emotional and motivating. The chapter continues to participate in the yearly event supporting the fight against cancer.

The Year Book

The inaugural class set the stage for the following classes to come. Essentially they were the creators of what is to come. They were the class that had everything tested out on them. If it worked, great, if not then we would try again. This is evident in all the changes to the curriculum. They were not just “guinea pigs” but they were making history and it needed to be recorded in their own way. What better way than in a yearbook. A Yearbook Committee was formed. Members were Jessica Toyama, Sarah Kaufman, Ross Murakami, Keegan Sugimoto, Rochelle Oledzki, Trenton Teruya, Namrata Trivedi, Ashley Ann Fukumae, Veneta Tsonev, Ellen A Loney, Meagan Solava, Stan Nikitin Jennifer Zbylski, Han Duong, Adrienne Au, Enoch John Ronduen, Holly Miracle, and Amber Schwarz. The committee used computer software “Y is for Yearbook,” to manage their pictures. They were able to share pictures and stories and organize the content while members were spread throughout the state. They hoped it would start a tradition.
Community Involvement

The pharmacy students found it important to get involved in the community because they had a lot of valuable knowledge, and by sharing it they could better the community and help their professional training as well. They wanted to give back. The students were able to play active roles in events and showcase their knowledge and skills. As student pharmacists, they were able to show through their actions the future direction of pharmacy practice in promoting wellness and disease state prevention services.

For the first time in April 2008, the Inaugural Class marched in downtown Hilo for the Merrie Monarch Parade. It rained on the parade, but that didn’t stop thousands of soggy spectators from cheering on the College of Pharmacy during the parade. By the time it ended, the sky began to clear and the sun broke through. The Merrie Monarch Festival is a weeklong festival held every spring that features a hula competition, crafts fair, art show, and parade through town. The UH Hilo College of Pharmacy and Pre-pharmacy program have participated in the parade since the start of the college. Every year, rain or shine, pharmacy students and faculty have walked in the parade and pass out candy, pens and information packets to the community. In 2010, the students decided it was time to have their own float. Student volunteers, with the help of Dean Pezzuto and his family, decorated the first UH Hilo College of Pharmacy float. By 2011, marchers included students from all four cohorts, some faculty as well as pre-pharmacy students.
Health Fair: On September 2, 2009, University of Hawai‘i at Hilo College of Pharmacy APhA-ASP Chapter Executive Council held its first formal meeting to discuss patient care projects. Dr. Carolyn Ma attended the meeting and sprang the idea of having a health fair unto the students, on October 18th.

So on October 18, 2009, the College of Pharmacy sponsored its first Health Fair with roughly 6 weeks to prepare for the big event. The students wondered if this was even possible but after all, “if Dr. Ma did not think we could do it, she wouldn’t have asked, right?” The students moved quickly. The first task at hand was to decide what services they would provide. The students thought globally and locally. Since Hilo has “vog”, asthma education made sense so they decided to have one booth on asthma education. With the flu season heading into town, this topic would also make for a great learning opportunity. They offered information about immunizations at another booth. The ideas began to grow quickly and so did the panic of getting it all done in time. The entire college pitched in and divided the work among several committees.

The health fair was held both indoors and out. They provided services such as blood pressure, blood glucose, cholesterol screening and medication counseling. They presented educational materials, and children’s activities. Other entertainment included a live jazz band, face painting, and yoga and jujitsu lessons. The classes of 2011, 2012 and 2013, Pre-pharmacy Club, faculty members and community pharmacists all came together to provide screening and training sessions.

Dean Pezzuto showed his support for the health fair by participating in a body mass index (BMI) screening.

About 200 people had attended the inaugural and successful event. “While we know that putting on a health fair in six weeks is possible, I think we will allow ourselves some more time to prepare in the future.” (Lisa Hagiwara Class 2011)

The second annual Health Fair was held in the Fall of 2010. It was held in honor of American Pharmacists Month, sponsored by the College of Pharmacy’s chapter of the American Pharmacists Association Academy of Student Pharmacists. More than 150 guests attended; it was a clear indication of the College’s growing importance to the Big Island, the State of Hawai‘i, and the nation. Hawai‘i’s U.S. Senator Daniel Inouye attended the health fair with his wife Irene Hirano Inouye and Chief of Staff Patrick DeLeon. Also attending were U.S. Senator Daniel Akaka, Governor-elect Neil Abercrombie and Lieutenant Governor Brian Schatz. The Health Fair is a collaborative effort of all the classes, pre-pharmacy students, faculty and staff, local pharmacists, as well as the many other organizations involved. This
fair was particularly special because it was the first the college had a full complement of four classes to participate.

**Blood Drive:** In November 2009, the UH Hilo College of Pharmacy students, along with student athletes, sponsored and coordinated its first blood drive at the Hilo campus. It was an overwhelming success and made into an annual event. Donors contributed 129 pints of blood, which has the potential to save 387 lives. University staff also handled all the logistical arrangements, including reserving facilities, arranging parking and security, providing food and refreshments and contacting donors to remind them of their appointments.

In January 2010, the Blood Drive was coordinated by the College of Pharmacy students and collected 199 pints of blood.

By January 2011, a third Blood Drive was organized. Students from the College of Pharmacy’s Class of 2012 continued a tradition of sponsoring a daylong blood drive on Tuesday, January 18, at the University of Hawai‘i Hilo campus. The College exceeded its goal of usable pints by nearly thirty percent when 136 pints of blood were collected. There were 32 new donors. Third-year student Eric Lum began organizing the blood drive as early as the prior October. “Statistics from the Hawai‘i Blood Bank tell us nearly 60 percent of us will need blood sometime in our life, but only two percent of us donate,” he said. “We joined them to try to change those numbers. This blood drive is an important opportunity for the College to give back to the community that supports us.” (Eric Lum)

Liz Heffernan, Director of Student Services, served as community liaison for the drive. Liz was proud of the students’ commitment to the community, and to the island state. It was their second year hosting a blood drive, a tradition the students continue.

Laurie Chang, Director of Communications for the Blood Bank of Hawai‘i, said that relationships with “Lifesaver Clubs like University of Hawai‘i at Hilo are instrumental to ensuring a stable blood supply for Hawai‘i’s community.”

She explained that such clubs serve as a valuable resource during times of emergency or low donor turnout. “We rely on our special community partners, their hardworking coordinators and the wonderful donors for helping us to save and improve the lives of Hawai‘i’s patients.”

KTA Superstores and students contributed refreshments, including fresh local citrus fruits, and supplies for the day.

**Medical Missions:** In the Fall of 2009 faculty members, Drs. Carolyn Ma, Anita Ciarleglio and Scott Holuby, and two third-year students, Daniel Navas and Robert Esteban, headed to American Samoa to help at a hospital and spread the word about the profession. There’s only one place in the small, far-flung U.S. territory for its 60,000-plus residents to
fill their prescription needs, the Lyndon B. Johnson Tropical Medical Center with 128 beds. There’s such a great need for pharmacists in the setting, and that is where the University of Hawai‘i at Hilo helped to step in.

Daniel remembered when the opportunity to participate in a medical mission to American Samoa was announced. He was immediately interested. He had never been to Samoa and had some friends whose families are from there so he thought it would be interesting to learn more about where they came from. It was an opportunity to be exposed to healthcare in a different country and hopefully have some positive impact through the mission experience. Daniel felt fortunate to have been chosen to participate in the medical mission and enjoyed the experience there. “The people were very hospitable and in the short time that I was there, I grew very fond of the pharmacy staff at LBJ hospital. I was impressed at their skills in running the only pharmacy in the country with fewer resources than any pharmacy I’ve seen in Hawai‘i. I think the need for well-trained healthcare professionals in Samoa was obvious and any help that was rendered was valuable and appreciated. I feel I understand Samoan culture better now that I’ve been there and am more capable to connect with those of this ethnic and cultural background.”

The College of Pharmacy’s work in American Samoa evolved from Dr. Ma’s collaboration with the June Jones Foundation. The foundation, a nonprofit organization founded in 2004 by Southern Methodist University Head Football Coach June Jones, sponsored its second annual football academy and medical mission in Pago Pago in June. Dr. Ma and third-year students Robert Esteban and Daniel Navas spent their first days on the island at Lyndon B. Johnson Tropical Medical Center, where they helped to unload and distribute more than $400,000 worth of medical equipment and supplies provided by the foundation. They also attended official events, including a dinner with Governor Togiola Tulafono and visits with relatives of Paramount Chief Uluao “Freddie” Letuli Olo Misilagi, who was known as the “Father of the Knife Dance.”

Heart Walk: On February 20, 2010 pharmacy students joined in the American Heart Association in the thirteenth annual Hilo Heart Walk and Health Fair at Liliuokalani Gardens. Two of the College of Pharmacy teams surpassed their fundraising goals. The Class of 2012 team raised $2,320 while the Class of 2013 raised $1,820. The Class of 2012 had
the fourth-ranked fundraising team overall. Students were able to provide health screenings and promote the College at a community education tent in cooperation with Hilo Medical Center. Hundreds of walkers from Hilo area groups started the course at 8 a.m. to raise awareness of heart disease and stroke — two of the state’s top killers.

**Relay For Life:** The American Cancer Society’s Relay for Life is a life-changing event that gives everyone in the community a chance to celebrate the lives of people who have battled cancer, remember loved ones lost, and fight back against the disease. At the Relay, teams camped out at the University of Hawai‘i at Hilo and took turns walking or running around a track or path. Each team had a representative on the track at all times during the event. Because cancer never sleeps, Relay For Life are overnight events up to 24 hours in length.

In the 2008 Relay For Life, the College of Pharmacy raised more than $1,000 for cancer research. The 2009 Relay for Life, the College of Pharmacy raised $3,101 despite 12 hours of rain totaling over 3 inches. In March 2010, the College of Pharmacy participated in the fourth annual UH Hilo Relay For Life event and raised $4,705. The 12-hour walk took place at the UH Hilo Campus Center plaza. Erika Miyahara, Class 2011, played the role of team captain and committee chair. The Hilo chapter of Phi Delta Chi manned a booth that offered cancer awareness fliers and a poster board of information about skin cancer. The college continues to be dedicated and to participate in ‘Relay for Life’. “The event allowed us to pay our respects to those who we have lost and give support to those who are fighting this horrible disease,” said student Chris Kamei.

**VA Health Fair:** Pharmacy students from the Hawai‘i Chapter of the American Pharmacists Association Academy of Student Pharmacists put their skills to work at the inaugural Veterans Health Fair on April 17, 2010 at Yukio Okutsu Veterans Home. Mimi Pezzuto, a member of the College of Pharmacy faculty and adviser to the group, said third-year pharmacy student Jill Gelviro came to her with the idea of organizing a health fair at the veteran’s home.

In March of 2010, APhA-ASP Hawai‘i Chapter wanted to follow-up the College of Pharmacy’s first Health Fair. The process of coming up with the next project was simple. With the success of the previous health fair, the students wanted to reach out to a special population within the community. Jill Gelviro (Class of 2011) had come from a long lineage of military veterans, and suggested a health fair for veterans. Jill was an Air Force veteran and served in Operation Iraqi Freedom. “Developing a smaller scale health fair at the Yukio Okutsu State Veterans Home for the patients and their families made complete sense. This special population may not have gotten the opportunity to attend the College’s annual health fair on campus, so why not bring the health fair to them? On April 17, 2010, students from the classes of 2011, 2012 and 2013 as well as Pre-pharmacy students...
and faculty members combined efforts in creating the inaugural Veterans Health Fair. With the help of the VA’s Director of Recreational Services, the Veterans Home was transformed to a wheelchair and walker friendly health fair. The information booths, screening areas and exercise areas were strategically placed making it a safe environment for everyone. Students put their skills to the test by providing education on health and wellness to include topics such as blood glucose, cholesterol, blood pressure, asthma and chronic obstructive pulmonary disease (COPD) and stroke, as well as nutrition, yoga and exercise. Diagnostic testing such as glucose, cholesterol and blood pressure screenings was also provided. Approximately, 40 patients and family members were in attendance. It was an invaluable experience for both the students and attendees. “The smile on everyone’s faces was priceless.” Since there was such a positive response and it was a success, the Veterans Home requested UH Hilo CoP makes it an annual event. (Rovigel “Jill” Gelviro, Class of 2011)

John Johnson, Administrator of the Yukio Okutsu Veterans Home, said the home had never been able to offer anything like this before but the response has been positive and they’re hoping to continue the relationship.

**Diabetes Fair:** Several College of Pharmacy students spent a spring Sunday working with patients at the Taking Control of Your Diabetes Conference and Health Fair at the Hilo Hawaiian Hotel. Students worked under the supervision of Dr. Scott Holuby, Assistant Professor in the Department of Pharmacy Practice, on health screenings that included checks of blood pressure and blood glucose levels. “It’s important for students to take advantage of every opportunity to improve their ability to interact with patients. Each time the College of Pharmacy takes part in an event like this, we make our presence known in the community while introducing people to tomorrow’s healthcare professionals.” (Dr. Holuby)

**Boxing:** With a helping hand from seven College of Pharmacy students, young boxers in the Big Island Amateur Boxing Association (BIABA) faced off on January 28, 2011 to determine contenders for the first boxing card of the year.

State Representative Jerry Chang, President of the BIABA, voiced his appreciation.

“Once again the College of Pharmacy has demonstrated how invested it is in the community by hands-on participation at this event,” he said. “I am deeply grateful for these students’ aloha. Though not all pharmacy students are from Hawai’i, they all seem to have embraced our local culture, and the Big Island is better for this.”

Pharmacy students volunteered to assist local physician Dr. Ernest Bade in administering the physical examination.
required for participation. Students helped with the general health questionnaire prior to the examination and also handled blood pressure, temperature, and vision screening for each boxer.

Dr. Candace Tan, assistant professor in pharmacy practice, supervised the students. “The students’ concern for the young boxers’ health and the desire to give back to Hilo were apparent from their energy and enthusiasm. This event enabled our pharmacy students to practice their skills while simultaneously supporting local athletes.” (Dr. Candace Tan)

Peter Jo, Class of 2012, attended the event. “This experience was rewarding because the tournament was designed to keep our youth off the streets and keep the fighting in side the ring,” he said. “Moreover, we were able to show the parents of the participants that the CoP cares about the Big Island and our ‘ohana.” Other CoP student participants included Class of 2014 students Miho Aoki, Denise Kobashikawa, and Daniel Kim, and Class of 2012 students Bryceon Tanaka, and Erick Lum.

Mimi Pezzuto, an instructor in the College of Pharmacy, was given books that are the prescription logs of the Hilo Drug Company, the town’s first real pharmacy. Pasted neatly onto their pages are the prescriptions the pharmacy filled from 1899 through 1945. The drug store was a classic with a soda fountain and sundries for sale. The now obsolete pharmacy, located in downtown Hilo is currently occupied by Cronies Bar & Grill. The books had been sitting in open air on top of a file cabinet and survived several Tsunamis. The elderly grandson of one of the owners donated the logs to the newly founded pharmacy school. “It’s a continuous record of how medicine was practiced in Hawai’i for forty-six years,” said Mrs. Pezzuto, who can open one of eleven...
volumes to any page and instantly lose herself. “It’s also a kind of wonderful and fantastic genealogical record.” In addition to the little mysteries, the books contain stories about the evolution of pharmacy, the supremacy of the plantation economy and the ethnic and cultural influences at work in the Islands. They’re a who’s who of old Hilo, loaded with Shipmans and Lymans. 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. She sent the entry to her mentor, the late Dr. Pat Belcastro, at Purdue. “He was 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.” Mimi Pezzuto was photographed by Olivier Koning and a story written by David Thompson in Hana Hou! The Magazine of Hawaiian Airlines Fall 2010.

**Experiential Training**

Beginning in 2007, residents of the greater Hilo could see students working at their local pharmacies wearing lab coats with the University of Hawai‘i at Hilo logo. By 2011, the geographic area encompassed by students getting experience working in pharmacies increased many times over. Students received experience in retail and clinical pharmacies while they earned their doctorate in pharmacy degrees. The College places faculty in residence at various sites throughout the State, which enhances healthcare while easing the increasingly prevalent economic burden of healthcare. The college was able to create partnerships, and help the state while educating the students at the same time.

Dr. Carolyn Ma, Director of Clinical Education and Chair of the Department of Pharmacy Practice from 2008-2010, helped develop the program when the College enrolled its first students. She pointed out that the curriculum was very different from any other College of Pharmacy in the past since previously, students didn’t get a chance to develop foundational clinical skills until their fourth year. The college moved it up to their first year to better prepare them by the time they graduate and to help us meet accreditation standards. Per ACPE guidelines, students must complete 300 hours during their Introductory Pharmacy Practice Experiences (IPPE).
**First Year IPPE**

Pharmacy students at UH Hilo jumpstarted their careers during their first year IPPE courses (PHPP 501 and 502) by getting retail and hospital experience, observing pharmacists and patients, learning about medicine and gaining some patient contact skills from the registered pharmacists. Each student spent one semester in each setting.

The hospital setting introduces the centralized hospital pharmacy concept at Hilo Medical Center as well as an example of a satellite pharmacy in the oncology clinic. Students were exposed to patient care issues as well as inter-professional issues and how these relate to pharmacy practice by spending time on the general medical floor, inpatient pharmacy, oncology clinic and by accompanying nurses on homecare visits. Students also rotated thru PharMerica to observe how pharmacists practice in the long-term care setting.

For the majority of the students, HMC is their first exposure to hospital pharmacy, said Dr. Nelson Nako, Director of Pharmacy at Hilo Medical Center and preceptor of the year in 2009. “It is a new experience for them seeing how intravenous medications are handled, observing medication distribution within a hospital and observing the clinical activities pharmacist perform.” (Dr. Nelson Nako) “Having the College of Pharmacy here is a real boost for the Hilo community,” Dr. Nako said. “The way the school is growing the benefits can only continue to increase.”

The retail rotation exposes the student to a retail pharmacy practice. Students performed tasks and projects that included receiving and processing prescriptions as well as understanding all aspects of a retail store operation. Special projects were assigned by the retail preceptor to supplement the student experience that included creating poster boards and patient education handouts. Retail sites included Hamakua Family Pharmacy, Kaiser Hilo Clinic, KTA Super Stores, Longs Drugs/CVS, Mina

Pharmacy, Puna Pharmacy, Safeway, Shiigi Drug, Ululani Pharmacy, and Wal-mart Pharmacy.

Angelina Lovell, Class of 2012, rotated thru Hilo Medical Center (HMC) in her second semester, after completing her rotation at KTA Pharmacy. She shadowed medical staff from different departments each week. “Although I truly enjoyed my retail experience, I feel most at home in a hospital setting,” said Lovell, who is from Northern California and returned to school after 12 years working at Kaiser Permanente. “The experience I received at HMC only enhanced my understanding of the medical field as a whole.”

The relationships between the CoP and the retail and hospital pharmacies were good examples of how the College was doing something about the healthcare crisis as well as filling a need in future job markets. The advantage for the students was that they were spending time at these sites and the pharmacist overseeing them not only trained the students but also had the chance to evaluate their future potential as employees.

“Support from the retail side in Hilo was tremendous. The pharmacies are small and extremely busy, but the pharmacists have been very interested and helpful in teaching these future colleagues.” (Dr. Carolyn Ma).
Second Year IPPE

Second year students began to develop their patient interview and case presentation skills in the PHPP 503 and 504 rotations. Students spent one semester in community health care clinics and one semester in a long-term care facility. Students presented actual patient cases in a seminar format throughout the semester. At this stage, students became more comfortable with patients, and can take blood pressure as well as give immunizations.

Students were placed at the Hilo, Keaau and Pahoa Bay Clinics, Kaiser Permanente Hilo Clinic, Hui Mālama Ola Nā `Ōiwi, UH Family Medicine Clinic, Kauka Express Urgent Care as well as at Kaʻū Hospital in Pāhala. They also became more involved with patients, especially in facilities that offer long-term care. Faculty preceptors work with local healthcare providers to place students at Hale Anuenue Restorative Care Center, Life Care Center, and Yukio Okutsu State Veteran’s Home. By doing so students got a chance to rotate through the different floors and interact with nurses, nursing students, doctors and patients.

Third Year IPPE: Training expands to neighbor islands

Third year students spend a concentrated period of time with a hospital clinical pharmacist throughout the four major islands of Hawai‘i (Oahu, Maui, and Hawai‘i). Experiences included interacting and observing a clinical pharmacist and interacting with medical teams. Students were placed at Hilo Medical Center, Kaiser Permanente Moanalua, Kona Community Hospital, Kuakini Medical Center, Pali Momi Medical Center, Maui Memorial Hospital, The Queens Medical Center and Straub Clinic and Hospital.

By April 2009, CoP began offering Preceptor training to student mentors in the pharmaceutical profession on O‘ahu and Maui. This marked the first time Pharmacy students from Hilo will be able to receive the experiential phase of their education off the Big Island. More than 60 preceptors came from the major hospitals across the State. The training prepared the preceptor to receive the third-year student in a two-week clinical pharmacy/hospital rotation.

Third-year experiences helped students to become even more comfortable with patient interview skills and the various components of pharmacy practice in the acute hospital setting. The experience helped to prepare the students and the preceptor for the more extensive Advanced Pharmacy Practice rotations that comprised the entire curriculum for the fourth and final year.

Advanced Pharmacy Practice Experiences (APPE)

Although still a year away from earning their PharmD from the College of Pharmacy, many students who began their quest in 2007 left Hilo in May, 2010 not to return until graduation in spring 2011, to begin the final stage to earn their doctorate through APPE, also called “rotations.” Students participated in six different types of rotations, which provide a minimum of 1440 hours of pharmacy experiences. Mandatory rotations include hospital practice, acute medicine, ambulatory care and retail practice. The students took two electives to fulfill the APPE requirements.

And for the first time, several students traveled to the U.S. Territories and Alaska to get pharmacy practice experience. “Including Alaska as a rotation site opened doors
Emergence of the University of Hawai‘i at Hilo College of Pharmacy

for our students to get training unlike they’ve gotten before,” said Dean Pezzuto, who, along with Dr. Ma and other CoP faculty and staff, met in March 2010 with members of the South Central Foundation from Anchorage, to begin the arrangements.

Students were able to work with pharmacy professionals in Alaska, as well as on all four major islands of Hawai‘i, Kaua‘i, Maui, O‘ahu. Students also had opportunities to get experience in Guam, American Samoa and Saipan, as well as many states throughout the mainland. The college was proud to assemble a well-rounded final year of choices for our students.

The students had more patient interaction during these experiences and they performed many of the tasks that will be required once they become licensed pharmacists. That includes filling prescriptions, giving immunization, taking part in projects and interacting with other students in the health care profession.

“For the first time in their academic career, students are really on their own when they leave for these senior rotations. The experience helps students utilize drug information and clinical skills. It prepared them for the real world.” (Dr. Lara Gomez)

Fourth-year students received training around the State of Hawai‘i, including all IPPE sites.

Big Island Sites in addition to IPPE sites: Hospice of Hilo, Malama Compounding Pharmacy (Kona), Mina Pharmacy (Kona), North Hawai‘i Community Hospital (Waimea) and Walgreens.

Maui Sites in addition to IPPE sites: Kaiser Permanente, Longs/CVS, Maui Clinic Pharmacy, PharMerica, Rainbow Pharmacy and Walgreens.

Kaua‘i sites: Lihue Pharmacy, Lihue Professional Pharmacy, Menehune Pharmacy, Northshore Pharmacy, Safeway (Kapaa), Westside Pharmacy, Wilcox Memorial Hospital (Lihue), and PharMerica.

O‘ahu sites in addition to IPPE sites: Castle Medical Center, Costco, CVS Caremark, Evercare, Foodland Pharmacy, Hawai‘i Medical Center East and West, Hawai‘i State Hospital, HMSA, Kahuku Medical Center, Kaiser Permanente Clinics, Kapi‘olani Women’s and Children’s Hospital, Longs/CVS, MediPharm, Mina Pharmacy, Ohana Health Plan, Pharmacare, PharmaRx, PharMerica Honolulu, Physician Center Mililani, Queens’ Physician Office Building Pharmacies, Safeway, Schofield Barracks Health Clinic, Target, Times Supermarkets, Tripler Army Medical Center, Waianae Coast Comprehensive Health Center, Walgreens, and Wal-mart.

US Mainland Sites: Advocate Illinois Masonic Medical Center, Illinois; Ball Memorial Hospital and Ball State University, Indiana; Banner Desert Medical Center, Arizona; Beverly Hospital, California; CVS Stores, Cardinal Health.
Centennial Hills Hospital Medical Center, Nevada; Claiborne Hospital, Tennessee; Dominick’s, Illinois; Eden Medical Center, California; Edwards Hospital, Illinois; Eli Lilly, Indiana; Fort Sanders Regional Medical Center, Tennessee; Froedtert Hospital, Wisconsin; GE Nuclear, Illinois; GNYHA, New York; Good Pharmacy, Pennsylvania; Intermountain Health Care, Utah; Kaiser Permanente, California; Kessler Institute for Rehabilitation, New Jersey; Kingsbrook Jewish Medical Center, New York; Largo Medical Center, Florida; Medical Center Pharmacy, Tennessee; Mountain Park Health Center, Arizona; Novo Nordisk, New Jersey; OSF Saint Francis Medical Center, Illinois; Ogden Regional Medical Center, Utah; Omnicell, California; Patient Care Infusion, Arizona; Park Compounding, California; Phoenix Children’s Hospital, Arizona; Portage Compounding Pharmacy, Michigan; Preckshot Compounding, Illinois; Provena GSMC, Illinois; Rite Aid Pharmacy, Roe Rx Inc., Utah; Stapley Pharmacy, Utah; St. Mary Medical Center, Tennessee; Tampa General Hospital, Florida; Target, University of Illinois Chicago DI Center, Illinois; VA Altoona, Pennsylvania; VA Illiana, Illinois; VA North Chicago, Illinois; Valley Nuclear Incorporated, Texas; Walgreens, and Wal-mart.

Alaska: Alaska Native Medical Center, Cardinal Health, Elmendorf Air Force Base, Providence Alaska Medical Center, and Target.

US Territories: Guam Memorial Hospital, Guam Rexall Drugs, Guam SDA Clinic, Health Services of the Pacific (Guam), Lyndon B. Johnson Hospital (American Samoa) and PHI Pharmacy (Saipan).

Career Planning Gets Real

The inaugural class of PharmD students at UH Hilo also were the first group of PharmDs in Hawai‘i to hit the job market. To help them enter the field, the College’s first Pharmacy Career Fair was held in October 2010 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 on hand 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.”

Dr. Nelson, 2009 Preceptor of the Year and lead pharmacist at Hilo Medical Center said he 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.”

CoP’s Department of Student Services, organized the event. Because many fourth year students were completing rotations on the island of Oahu, Student Services also organized the first Interview Day in Honolulu in October 2010 at the Honolulu Country Club. Thirty-nine students from the Class of 2011 participated in some of their first professional career interviews.

“We were able to schedule 205 interviews with 13 companies and 32 representatives,” said Liz Heffernan, Director of Student Services. “I am sure many job offers are made as the result of this occasion.”

**Accolades**

*Dean’s Luau, Preceptor, Teachers Awards*

In May 2008, Dean Pezzuto and his wife, Mimi Pezzuto, opened their home to College of Pharmacy students, faculty and staff to celebrate the end of a successful school year with a traditional Hawaiian luau. There was plenty of food as well as recognition of student and faculty achievements. The luau gave the college at least one opportunity to visit in a relaxed atmosphere and to recognize great pride in their accomplishments, diligence and success. During the course of the festivities they were able to recognize the tremendous contributions of the faculty and preceptors, as well as the continuing commitment of the UH Hilo administration, most notably, Chancellor Rose Tseng.

During the luau, Kerri Okamura, Director of Pharmacy at KTA Superstores, was named the College of Pharmacy’s first Preceptor of the Year. She received a plaque, and her name is prominently displayed in the College. Kerri said she was thrilled to serve as a preceptor and help educate this first class of students.

In 2009, the Pezzutos threw their second luau. During the luau, the College announced scholarship winners, faculty and preceptor awards. Dr. Nelson Nako, Director at Hilo Medical Center, was named Preceptor of the Year. Dr. Carolyn Ma, Associate Professor and Chair for Pharmacy Practice from 2009-2010 and Director of Experiential Practice, was named Preceptor of the Year.
Education, said the soft-spoken pharmacist was well-deserving of the honor for his enthusiastic support of the program and willingness to guide first-year students. Dr. Nako was preceptor to all of the students over two years and knew every one in the program.

Also at the 2009 luau, class of 2012 students voted Mrs. Mimi Pezzuto, Department of Pharmacy Practice and Department of Pharmaceutical Sciences, and Dr. Ken Morris, Department of Pharmaceutical Sciences, as “Faculty of the Year.” Class of 2011 students voted Dr. Scott Holuby, Department of Pharmacy Practice and Dr. Daniela Gundisch, Department of Pharmaceutical Sciences, as “Faculty of the Year.”

In 2010, the third luau at the Pezzutos honored the Advancement in Pharmacy Excellence (APEx) award winners, Chancellor Rose Tseng, Jerry Johnson and Pat DeLeon. The Advancement of Pharmacy Excellence (APEx) award was established in 2009 to honor key supporters for their vision, dedication and commitment in contributing to the success of UH Hilo’s College of Pharmacy.

Teachers of the year for 2010 were Dr. Aaron Jacobs, Department of Pharmaceutical Sciences; Dr. Linda Connelly, Department of Pharmaceutical Sciences; Dr. Linda Connelly, Department of Pharmaceutical Sciences; Dr. Lara Gomez, Department of Pharmacy Practice; Dr. Supakit Wongwiwatthanukit, Department of Pharmacy Practice; and Dr. Douglas Adriance Mejia, Department of Pharmacy Practice. For the first time, the College honored two Preceptors of the Year: Lucy Bucci of Hilo Medical Center and Marq Simms of CVS Longs Puna Hawai‘i Pharmacy.
Scholarships

The first scholarships were awarded to pharmacy students in 2007 thanks to a generous $3,000 gift from Wal-Mart. By the 2010-2011 academic year, the total value of scholarships awarded had reached nearly $85,000.

“Students on average borrow in excess of $107,000 during their four academic years, so these scholarships have the potential to really help them as they begin their professional lives,” Dean Pezzuto remarked. “We’re grateful to the community for this generous show of faith in supporting pharmacy students.”

Criteria for the scholarships, funded by individuals, corporations and foundations included both merit and financial need. Students were selected by a committee of College of Pharmacy faculty, headed by Dr. Sue Jarvi, Associate Professor of Pharmaceutical Sciences and Director of the Pre-pharmacy Program.

Private funds were raised by the University of Hawai‘i Foundation, which processes all student aid payments and communicates recipient information to donors.

The first CoP scholarship awardees and their benefactors included:

2007-2008
CoP Wal-Mart Scholarship: Rochelle Oledzki, Jessica Toyama and Quinn Taira. The award was given to students with high scholastic standing, a minimum 3.0 grade point average, a demonstrated ability to lead others and a desire to enter community practice.

2008-2009
UH Hilo Achievement Scholarship: Natalie Codianne and Ryan Mashiyama.

Longs Drugs “Tradition of Caring” scholarship: Ellen Loney. This award is for a student in good academic standing who is planning to enter community pharmacy practice.

CoP WalMart Scholarship: Amber Duncan, Lisa Hagiwara and Veneta Tscany.

2009-2010
CoP Target Scholarship: Amber Duncan, Adrienne Au, Curtis Start, Rochelle Oledzki, and Daniel Hu. The award is given to students interested in retail pharmacy with a minimum 3.0 grade point average and evidence of community service, leadership potential and financial need.

Walgreens Diversity Scholarship: Marisa Kellett. The award is given to students who have made efforts toward raising awareness or educating others about diversity in the pharmacy profession.

The Haga Family Endowed Scholarship: Megan Venegas and Cari Niimi. The award benefits students with a 3.0 grade point average and preference is given to Big Island high school graduates.

The Good Neighbor Pharmacy Scholarship: Rovigel “Jill” Gelviro. The award assists students who intend to practice in independent community pharmacies with a desire to own their own store.

J.M. Long Foundation Pharmacy Scholarships: Derek Dominquez, Anthony Thai, Marine Yeh and Ceslee Fukuhara. This scholarship benefits pharmacy students, preferably in their second or third year of study, who are planning to practice pharmacy in a retail community setting and who have a combination of financial need and academic merit.

National Association of Chain Drug Stores (NACDS) Foundation Pharmacy Partners Scholarship: Candace Carbaugh and Daniel Navas. Scholarships give preference to students interested in pursuing a career in community pharmacy.

CoP WalMart Scholarship: Angelina Eustaquio.

Grace Mizuko Miyawaki Pharmacy Scholarship: Jacob Blair. Scholarships are for full-time students pursuing a PharmD degree at UH Hilo. Preference is given to students who have graduated from a high school in Hawai‘i and demonstrate some degree of financial need.
CVS Caremark Scholarships: Amy Harvy, Casey Ogata, Wendy Yamasaki Herring and Bernie Cheng. Scholarships support pharmacy students in good academic standing who are interested in practicing pharmacy in a retail setting.

2010-2011


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

Grace Mizuko Miyawaki Pharmacy Scholarship: Tiffany Pualei Santore.

Haga Family Endowed Scholarship: Melissa Yoned and Nelson Nakatsu.


National Association of Chain Drug Stores (NACDS) Foundation Pharmacy Partners Scholarship: Amber Schwarz.

Safeway Scholarships: Ceslee Fukuhara and Richelle Hirata.

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

UH Hilo Achievement Scholarships: Natalie Codianne, Amber Duncan, Ceslee Fukuhara, Lisa Hagiwara, Ashley Hori, Oh-Young Kim, Ellen Loney, Annie Mar, Ryan Mashiyama, Erika Miyahira, Casey Ogata, Rochelle Oledzki, EnochJoh Ronduen, Quinn Taira, Jonathan Tam, Jessica Toyama, and Veneta Tsonov.

Walgreen's Diversity Scholarship: Jennifer Zbylski.

CoP Wal-Mart Scholarship: Elissa Kahahane.

Additional Honors

The top 20 percent students from the College of Pharmacy classes of 2011 and 2012 were presented awards at a banquet in their honor April 16, 2010 at the Hilo Yacht Club. Sponsorship was provided by Target.

Dean John M. Pezzuto congratulated the awardees and recounted the tremendous progress of the College over the past few years. Remarks were also given by Dr. Luoluo Hong, UH Hilo vice chancellor for student affairs; Rob Parke, district team leader, Target; and Roger Thomas, Target team leader, Kailua-Kona store.

The keynote speaker was Victor Yanitchk, immediate past president of the American Association of Colleges of Pharmacy and dean of Virginia Commonwealth University. He spoke about the pursuit of excellence and leadership in pharmacy.

Students honored from the class of 2011 include: Cherie Chu, Natalie Codianne, Amber Duncan, Ceslee Fukuhara, Lisa Hagiwara, Ashley Hori, Oh-Young Kim, Ellen Loney, Annie Mar, Ryan Mashiyama, Erika Miyahira, Casey Ogata, Rochelle Oledzki, EnochJoh Ronduen, Quinn Taira, Jonathan Tam, Jessica Toyama, and Veneta Tsonov.

Students honored from the class of 2012 include: Lawrence Chan, Bernie Cheng, Megan Ching, Raeanne Fuller, Carol Lynn Goo, Richelle Hirata, Susan Kang, Daralyn Kawamoto, Paul Kim, Kari Kuribara, Amber Laird, Tanya Moore, Brian Niimi, Alexandra Perez, Bryceson Tanaka, Henry Tran, Sally
Van, Wendy Yamasaki-Herring and Marina Yeh.

The banquet was made possible thanks to a gift provided by Target as part of its longstanding commitment to give back to the community and in celebration of its new presence in Hawai’i.

The top 20% from the College of Pharmacy classes of 2011 and 2012 were presented awards at a banquet in their honor on April 16, 2010.

**New Programs**

Until 2011, the College of Pharmacy intentionally concentrated on one goal: graduating pharmacists with a PharmD degree while planning for future growth. With the certainty of graduation and planning for accreditation in sight, it was time to take some of the new program planning to the next level.

As in any bureaucratic organization, the route was circuitous. The Board of Regents, University of Hawai’i, and University of Hawai’i at Mānoa policies govern the procedures for the planning and approval of new academic courses and programs. The process begins with the submittal and approval of an Authorization to Plan (ATP). An ATP is a request to plan a new academic program, made at the beginning of the formal planning process, before resources are committed to program planning.

Upon approval of the ATP, programs have one year to prepare and submit a formal proposal for the approval of the new academic program. The proposal then must be reviewed and approved through a series of steps that include the department, graduate committee, and the UH System’s Council of Chief Academic Officers (CCAO).

Final steps involve a vote by the University of Hawai’i Board of Regents and accreditation by the Western Association of Schools and Colleges (WASC). WASC is one of six regional accrediting associations in the United States.
The WASC Accrediting Commission for Senior Colleges and Universities evaluates higher education institutions in California, Hawai‘i, Guam, the Commonwealth of the Northern Marianas, American Samoa, the Federated States of Micronesia, the Republic of the Marshall Islands, and East Asia.

**PhD in Pharmaceutical Sciences**

On Feb. 24, 2011, UH Board of Regents voted approval for the PhD in Pharmaceutical Sciences. The final hurdle before applicants could be considered for the program was met when WASC granted approval in May.

The degree in pharmaceutical sciences is only the second PhD offering at UH Hilo. Students with a PharmD, Master’s or Bachelor’s degree and those currently working in the field will be eligible to apply to the new PhD program.

“The curriculum and research proposals that come over my desk from the College of Pharmacy have impressed me in their capacity to influence the state of health care not only in Hawai‘i but in the world,” said Kenith Simmons, UH Hilo Interim Vice Chancellor for Academic Affairs. “We are encouraged by this vote of confidence from the Board.”

Studies will culminate with the award of a PhD in Pharmaceutical Sciences, with an emphasis on natural products discovery and development. The PhD complements the PharmD program by exposing students to career prospects beyond the practice of pharmacy. It will prepare graduates to be scientists with extensive skills in research, design, techniques and methodologies. Graduates can serve as faculty members, and will be well qualified to excel in a broad range of industrial, governmental, clinical, retail, marketing and consultant settings.

“Not only will residents of Hawai‘i be able to earn a PhD in Pharmaceutical Sciences without leaving the state, we will be able to attract scholars from the mainland and abroad with unparalleled opportunities,” Dean Pezzuto said. “The economic and intellectual benefits to the state reach far beyond our imagination at this point.”

“Hawai‘i is ideally positioned to become part of the anticipated future growth in the western use of Indian and Chinese Traditional Medicines,” said Anthony Wright, director-designate of the PhD program and associate professor of pharmaceutical sciences. “This program will contribute to the development of young industries already taking root within the state.” In August 2011, the first seven students were admitted to the program.

**Bachelor’s Degree in Pharmacy Studies (BAPS)**

The Board also voted on Feb. 24 to approve a Bachelor of Arts degree in Pharmacy Studies (BAPS). The bachelor’s degree is an undergraduate academic degree designed for students who are enrolled in the PharmD curriculum at the College of Pharmacy.
Only students enrolled in the PharmD program who have completed UH Hilo’s General Education and Integrative Requirements are eligible for the BAPS, which would be completed after two years of being in the rigorous four-year PharmD program.

“An undergraduate degree isn’t required to gain admission to a PharmD program, yet around 70% of our students typically have already earned their bachelor’s,” said Edward Fisher, Professor and Associate Dean for Academic Affairs for the College of Pharmacy. “The BAPS gives students the background they need and makes UH Hilo’s College of Pharmacy more attractive to applicants over other schools and colleges that don’t offer this type of degree.”

**Master of Science Degree in Clinical Psychopharmacology (MSCP)**

The third new degree to be approved for the College of Pharmacy in 2011 was the Master of Science in Clinical Psychopharmacology (MSCP) degree, approved by the Board of Regents in August and WASC in June. The University of Hawai’i at Hilo becomes the first in the nation to offer a MSCP degree solely within a College of Pharmacy.

In recommending the program for final approval, WASC reviewers said that “UH Hilo is commended for the strong planning demonstrated in this new program with a well-articulated design of courses, a solid financial plan, and an admirable plan of faculty development.”

Typically offered by schools of psychology, the degree gives clinical psychologists in the military, as well as in Guam and two states (New Mexico and Louisiana), the authority to write prescriptions once they pass a national board exam. Initially the program will be offered to students at the Tripler Army Medical Center in Honolulu.

“Senator Inouye has studied the need for psychologists to have prescriptive authority for decades,” said Pat DeLeon, Chief of Staff to Senator Daniel Inouye and past-president of the American Psychological Association (APA). “We’re happy to see our College of Pharmacy take the lead in developing this program that helps our troops and their families while looking ahead to improving the way all clinical psychologists can do their jobs.”

The MSCP program provides advanced professional development to working clinicians, with an initial focus on those practicing in the state of Hawai’i.

“Training clinical psychologists in the art and science of psychopharmacology will result in improved mental health treatment for our service men and women and their families, and we’re honored to meet the needs of the military in Hawai’i,” Dean Pezzuto said. “In addition, our long-term expectations are that we will be able to help improve patient care on a broader basis if legislation pending in several states, including Hawai’i, gives prescriptive authority to all MSCP graduates. In any case, clinical psychologists will be better positioned to interact with physicians and care for their patients.”

Students started in the Fall of 2011. The program requires four semesters and one summer session to complete. Most of the coursework was offered via distance education through lectures posted on the Internet and biweekly hour-long meetings between instructors and students that was recorded and provided to students for review.

“The curriculum begins with a strong foundation in biochemistry and physiology,” said Edward Fisher, Associate
Dean of the College of Pharmacy and Director of the MSCP program. “Our objective is to provide a rigorous, advanced education in clinical psychopharmacology so licensed, doctoral-level, practicing psychologists can safely and effectively prescribe medications for their patients.”

“With more than 40,000 active military personnel stationed in Hawai‘i, we are constantly striving to meet and improve on the pharmacologic treatment of mental health issues,” said Captain Rafael A. Salas, Chief of the Education and Training Branch and Deputy Chief in the Department of Psychology at Tripler Army Medical Center. “Our clinical psychologist staff has expressed a great deal of enthusiasm about learning about psychopharmacology from the experts at the College of Pharmacy. We are looking forward to making this program a success.”

The program includes a one-year practicum where students must complete a minimum of 400 hours under the supervision of an individual with prescriptive authority, he said.

Tripler Army Medical Center (TAMC), located in Honolulu, is the headquarters of the Pacific Regional Medical Command of the armed forces administered by the United States Army in the State of Hawai‘i. It is the largest military hospital in the Asian and Pacific Rim, providing a full range of services, including mental health services.

**In the future: Dual Degree Nurse Practitioner (DNP) & Doctorate in Pharmacy (PharmD)**

The College of Pharmacy is planning to be the first in the country to offer a dual degree with a Nurse Practitioner Specialty and Doctorate in Pharmacy (DNP/PharmD) thanks to a congressionally directed $951,000 grant from the Department of Education.

“Students studying at the University of Hawai‘i at Hilo’s College of Pharmacy are able to take advantage of the best that Western science, Eastern traditions and Native Hawaiian heritage has to offer as they explore the healing arts,” said U.S. Senator Daniel Inouye, whose office approved the funding. “We must continue to expand the educational opportunities available to them so that new ways to heal our sick and prevent illness emerge.”

The new program is being created and jointly offered by UH Hilo’s College of Pharmacy and the School of Nursing. It requires a six-and-a-half-year commitment from the student, said Dr. Edward Fisher, associate dean for academic affairs in the College of Pharmacy.

With aid from the grant, the College of Pharmacy will also be able to:

- Create a general practice pharmacy residency program and distance learning program.
- Develop a clinical pharmacist training model for rural and underserved areas in Hawai‘i.
- Enhance training of pharmacy students through the use of new technologies, such as virtual laboratories.
- Begin the planning phase for a doctoral program in physical therapy.

“There is critical need for all health care services in rural areas of the Pacific region, including many areas of Hawai‘i,” Dean Pezzuto said. “This grant will help us expand our reach and be used to help increase the availability of both pharmacists and nurse practitioners to these underserved areas. We are very appreciative of the U.S. Department of
Education for their vision in helping us to get these innovative programs started.”

The DNP/PharmD degree broadens the scope of practice of pharmacists through education and training in the diagnosis and hands on management of common acute and chronic medical conditions, Dean Pezzuto said. Additionally, and DNP/PharmD dual degree would provide nurse practitioners additional detailed skills relating to medications and potential food and drug interactions.

Family nurse practitioners already provide services to patients of all ages in diverse practice settings and subspecialties, said Dr. Kathryn “Kay” Daub, Chair of the Baccalaureate Nursing Program.

“Nurse Practitioners are working hard to reduce medication errors, which are a major concern in healthcare facilities,” Dr. Daub said. “Our goal is to enhance the evidence-based practice of the nurse practitioner regarding drug therapy and prescriptive authority that will improve patient outcomes. The unique collaboration between Nursing and Pharmacy will provide innovative interdisciplinary research and practice to address the complex needs of a rural and richly multi ethnic population.”

The UH Hilo Nursing Program received a Health Resources and Services Administration (HRSA) grant for $383,000 to assist with the graduate studies in Doctor of Nursing Practice and the dual Nurse Practitioner/PharmD degree program.

Employment opportunities are in any clinical site, such as private physician or nurse practitioner practices, walk-in clinics, school clinics, extended care facilities, veterans administration facilities, hospitals and hospital clinics, hospice centers, home health care agencies, emergency rooms, public health departments, urgent care sites, or long-term care facilities.

“The most applicable benefit will be essentially supplying two highly needed health care professionals for one individual in a rural setting,” Dean Pezzuto said. “As a result of this work, we can significantly enhance the clinical pharmacy training and applied rural science programs conducted by UH Hilo.”

**Physical Therapy (DPT)**

In June 2007 the College of Pharmacy began the preliminary stages of planning a new academic program, Doctorate in Physical Therapy (DPT). Like the College of Pharmacy the DPT program is unique in the state of Hawai‘i where there is a clear niche and need for the program. In 2007 Hawai‘i ranked 31st out of 50 states in the number of DPT’s per capita population, all of whom were trained elsewhere. The demand for physical therapists is strong and will grow with an aging population. The program will begin with a class of 20 students growing to 30 each year. The Doctor of Physical Therapy Program is a three year full-time professional graduate degree program (90 credit hours minimum) that meets or exceeds all of the Commission on Accreditation in Physical Therapy Education (CAPTE) requirements preparing graduates to be autonomous, evidence-based doctors of physical therapy, clinical researchers, and administrators of clinical practice. Additionally, the program advances the practice of physical therapy while serving the societal needs of Hawai‘i Island, the State of Hawai‘i and the Pacific Basin. The program embraces the cultural diversity and unique clinical opportunities at the
UHH and the island communities. There are no other courses like it in the UH system. The program is a valuable addition to health sciences education in Hawai‘i. The campus overwhelmingly endorsed the program and supported its creation within the College of Pharmacy. Planning was conducted by Dr. Taniguchi and Dr. Janet Crosier, physical therapist consultant. Finances to start the planning came through a grant awarded by the U.S. Department of Education. At the time of this writing, the ATP is scheduled to be approved, and the full program proposal has been accepted by the faculty of the College of pharmacy. It is headed for approval by the President and UH BOR.

**Research**

During the formative years of the College of Pharmacy, efforts were directed toward building a research infrastructure commensurate with the College’s aspirations of becoming a top-tier research institution. This task was made more complex by the myriad of physical locations, none of which had laboratory space except for the College’s original address. The College started with one 1200 square-foot laboratory at the Institute of Pacific Island Forestry. Faculty showed creative collaborations in sharing lab space with colleagues in other departments at UH Hilo, including biochemistry, chemistry and molecular biology.

In 2006, Dean Pezzuto was made aware of some space owned by the state about five miles south of Hilo off Highway 11 near the Pana‘ewa Rainforest Zoo. Facilities at Waiakea Research Station included 10 neglected buildings that had been constructed in the late 1960s and ’70s on 2.1 acres. Nobody else wanted them, but the College of Pharmacy saw the potential. With the help of Senator Inouye, the College was able to start intense renovations and by July, 2009, researchers started moving in bringing in state-of-the-art equipment. The research station added an additional 8,000 square feet lab space for the College that included 11 laboratories plus an instrumentation room.

The temporary modular facilities also added space for instruments and research. Three labs gave CoP an additional 4,500 square feet in October, 2009, and more was expected when another modular building was supposed to arrive in the fall of 2011.

“Approximately $3 million has been invested to purchase basic science equipment,” Dean Pezzuto said. “But we also have some very elite equipment, such as the Perkin Elmer Operetta high content screening system, that is one out of only 15 in the country. So we’re making progress.”

Postdoctoral Associates

After receiving a doctoral degree from an institution of higher education, postdoctoral experience is often necessary prior to accepting a permanent position. The population of postdoctoral associates, otherwise known as “postdocs,” within the College of Pharmacy has grown from one in 2007 to about twenty in 2011. To highlight that growth, the first “Postdoctoral Symposium” was held on the UH Hilo campus June 3, 2011.

“Along with our assemblage of incredible PharmD students, the new PhD and MSCP programs, and our achievement of full accreditation, this expansion of research illustrates our steady growth toward excellence,” said Dean John Pezzuto. “Postdocs are extremely valuable contributors to our research enterprise and, with this symposium, they are showing they have the Hawaiian spirit of ‘ohana as well.”

Twelve CoP post-docs presented 15-minutes talks throughout the day. First place went to Marco Pieroni, who works in Ghee Tan’s lab. Christoph Eibl from Daniela Guendisch’s lab took second place, while Amy Park, from Dean Pezzuto’s lab, won third place.

Dr. Helen Turner, Dean of the Division of Natural Sciences and Mathematics at Chaminade University on Oahu, was the keynote speaker. Dr. Turner is an internationally regarded researcher in molecular immunology. She also is affiliated with the John A. Burns School of Medicine and Department of Microbiology at the University of Hawai‘i.

André Bachmann, Chair of Pharmaceutical Sciences, introduced the competition. “It’s important to know how to present ideas,” Dr. Bachmann said. “You might have the best research in the world, but nobody will hear you unless you know how to talk about it. This competition gives postdocs an opportunity to talk about their research while honing their communication skills.”

Linda Connelly, Assistant Professor in Pharmaceutical Sciences, organized the symposium along with then-postdoc Dana Koomoa-Lange, who later became an Assistant Professor in Pharmaceutical Sciences.

“Dr. Koomoa-Lange and I participated in similar presentation competitions while we were postdocs at other institutions,” said Dr. Connelly. “This was an important part of our research training and we wanted our CoP post-docs to benefit from a similar experience. In addition, we wanted to
have the competition on the main campus to introduce some of our research to our colleagues in other disciplines. We look forward to having our new PhD students participate in future symposiums alongside our postdocs.”

**GRANTS**

Outside funding traditionally drives educational programs to conduct research beyond the scope of training students. Money from federal and government funds also has the ability put a new College in the national spotlight. Leading by example, Dean Pezzuto has been funded continuously by the National Institutes of Health (NIH) for more than 30 years. He is well known for his work using natural products for medicinal purposes, most notably for the discovery of resveratrol, the compound found in grapes and wine that is thought to have cancer preventative and many other biological activities. Dean Pezzuto received renewal notice in 2009 for a research project that looks at deep-sea microorganisms to prevent cancer from the National Cancer Institute in the National Institutes of Health.

The grant, entitled “Natural Inhibitors of Carcinogenesis,” was in its 17th year with an annual budget of $1,341,115. In order to hasten progress even further, as part of the American Recovery and Reinvestment Act of 2009, an additional $477,847 was awarded effective August 1, 2009. He also served as Co-Investigator for an International Collaborative Biodiversity Group awarded by the Fogarty Foundation of NIH.

Dean Pezzuto assembled faculty who have the potential to follow in his footsteps with extramural funding. Associate Dean for Research Robert P. Borris had funding from the Ecological Genomics and Metabolomics (ECOGEM) Hawai‘i EPSCoR IMUA 3. Andre Bachmann, Associate Professor and Chair of Pharmaceutical Sciences, conducted research with grants from NIH’s National Cancer Institute (NCI), the Hawai‘i Community Foundation (HCF), Magic Water Foundation, and the Weinman Foundation. Pharmaceutics Professor Ken Morris came to UH Hilo with a grant from the NSF’s Engineering Research Center for Structure Organic Particulate System (ERCSOP) and is working on research funded by the California Table Grape Commission (CTGC).

The College submitted many institutional proposals and was awarded some very high visibility grants that will sustain research for years to come.

**Beacon Communities**

In February of 2010, Dr. Karen Pellegrin, Director of Strategic Planning and Continuing Education, put together a proposal to compete for $16 million from the Obama administration’s “Beacon Communities” program. It was funded through the 2009 federal stimulus bill.

Applying for the grant was a long shot. Only 15 communities in the entire country were chosen by the U.S. Department of Health and Human Services. Dr. Pellegrin, with help from Dean Pezzuto, and many others, was able to assemble a consortium of Big Island health care providers called the Hawai‘i County Beacon Community Consortium, a group of educators, health care providers and insurers and other community members. The group was formed to strengthen and use health information technology to continuously improve healthcare quality, cost efficiency, and population health in Hawai‘i County.

On May 4, 2010, at a press conference in Washington D.C., Vice President Joe Biden and Health and Human Services Secretary, Kathleen Sebelius, announced that...
Hawai‘i County was chosen to serve as a pilot community in the Beacon Communities program. The charge was to develop wide scale use of electronic medical records. The UH Hilo College of Pharmacy is listed as the lead applicant organization for the grant.

“Given the geography of the Big Island, getting in to see a health care professional can be difficult for some residents,” said Senator Daniel K. Inouye.

“In order to maximize this precious time with patients, health care professionals need immediate access to up-to-date information in order to properly diagnose and treat the patient. Integrating our vast network of public and private health care professionals in Hawai‘i is vital to ensuring that patients receive the highest quality of care. Health information helps ensure that patients are receiving care that accounts for every aspect of their medical history.”

The effort concentrated on the implementation of a region wide Health Information Exchange and Patient Health Record solution. The system used secure, internet based care coordination and telemonitoring tools to increase access to specialty care for patients with chronic diseases such as diabetes and hypertension, the White House announcement said.

Dr. Pellegrin said the project would not be possible without tremendous effort and staff time from businesses in the community such as KTA and T&T Electric, as well as members of the consortium, whose Board members include: Hawai‘i Medical Service Association; Hilo Medical Center; East Hawai‘i Independent Physicians Association; North Hawai‘i Community Hospital; North Hawai‘i Outcomes Project; Kona Community Hospital; West Hawai‘i Community Health Center; Bay Clinic; Hamakua Health Center; Hui Malama Ola Na ‘Owi; Hawai‘i Health Information Exchange; Hawai‘i Island Healthcare Alliance; and Hawai‘i County Mayor William “Billy” Kenoi.

“Given an extraordinary level of community engagement and stakeholder leadership at the highest levels, the College of Pharmacy is honored to work alongside these other community leaders. Our goals are to improve prevention of disease, improve access to appropriate care, and reduce health disparities for Hawai‘i Island residents.” (Karen Pellegrin)

Other grant recipients included Minnesota’s Mayo Clinic and Pennsylvania’s Geisinger Clinic, both considered national models for high quality, cost efficient health care, as well as other newer community based consortiums from around the country.

“This award is particularly monumental for bringing in money to the State and the significant improvement in serving the health care needs of patients in Hawai‘i. We’re pleased that the UH Hilo College of Pharmacy could take a leading role in this initiative that demonstrates the strength of partnerships throughout the State at all levels.” (Dean Pezzuto)

**IDeA Networks of Biomedical Research Excellence (INBRE)**

Funding from another major NIH grant that is channeled through UH Manoa assisted seven junior investigators work on research at UH Hilo. Through their projects, supervised by CoP senior faculty mentors, this proposal helped strengthen the project that brought $9 million in federal funding to Hawai‘i over three years beginning in 2010.
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 project was renewed with $9 million spread out over three years and disbursed to several campuses in the University of Hawai‘i system. Dean Pezzuto and Dr. Pellegrin led the collaborative research program called INBRE II along with UH Manoa faculty members Drs. Eric Holmes and David Haymer of the Department of Cell and Molecular Biology.

“This funding helped invigorate and strengthen biomedical research capacity not only for the College of Pharmacy but for the entire state,” Dean Pezzuto said.

Administrative, Bioinformatics, Research, and Training and Education centers on the project are based in Honolulu. In Hilo, Dean 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 multidisciplinary research expertise and infrastructure throughout the State of Hawai‘i,” said Dr. 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.”

The COPRI junior investigators based in the College of Pharmacy have worked with their mentors to develop research proposals in the following areas:

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

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

Dr. Daniela Guendisch’s project focused on diverse diseases in the central nervous system (CNS). She synthesized 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. Aaron Jacobs research focused on a cellular process called autophagy that is implicated in many disease states, including cancer and neurodegeneration. His project examined the role of the enzyme diacylglycerol kinase iota and monitors its effect in a cancer model.

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

Dr. Eugene A. Konorev’s project assessed 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 examined the mechanisms of inhibition of angiogenesis by doxorubicin.

Dr. Dianqing Sun’s project aimed to discover and develop antibiotics for use in tuberculosis, as well as to find potential drugs to treat malaria. Work in his laboratory utilized a natural product library approach to discover and develop novel anti-infective agents. As a sign of the success of this program, at the time of this writing, Dr. Sun hand leveraged his work to obtain an independently funded award from the NIH.

**U.S. Department of Education**

The college began new health care initiatives in Hawai’i and the Pacific region thanks to a $1.5 million congressionally directed grant from the U.S. Department of Education. The two-year grant period began September 1, 2010.

“I have watched the College of Pharmacy grow over the past few years, and it is very gratifying to see what a critical difference it is making in Hawai’i and throughout the Pacific,” Senator Daniel K. Inouye said at the announcement of the grant. “Improvement in health care is very important to me and I am very glad we can help the College of Pharmacy fulfill its critical mission. I know the financial support will be put to good use and the College will continue to make us proud.”

The congressionally directed grant was designed to accomplish 10 key objectives:

- Provide support for Pacific Island students toward completion of pre-pharmacy academic requirements. Specifically to continue collaboration with administrators/educators/advisors at the University of Guam and American Samoa Community College as they further develop pre-pharmacy programs.
- Create a guaranteed admissions program for students from underserved communities. The Steps Towards Excellence in Pharmacy (STEP) program provides students from underserved communities and populations the opportunity, guidance and mentorship to achieve their academic potential with successful completion of the PharmD program at UH Hilo CoP.
- Develop community partnerships and further engagement opportunities.
- Manage critically important conferences and administer continuing education.
- Continue development and foster a general pharmacy practice residency program that provided advanced clinical pharmacy training in general pharmacy practice as well as specialty areas in the institution, ambulatory care and community pharmacy practice settings.
- Leverage technology to advance pharmacy practice in rural settings, including Health Information Technology education for pharmacists.
- Establish joint pharmacy initiatives to enhance rural healthcare education. Continue development of a physical therapy program.
- Develop a simulation and chemistry platform to train pre-pharmacy, pre-engineering, and PharmD students.
- Provide hands-on experience in how new drugs are evaluated for activity and characterized to determine how they are best incorporated into dosage forms.

"Thanks to this congressionally directed support provided by the Department of Education, we will be able to significantly accelerate the pace of fulfilling our mission of improving health care in Hawai‘i and the Pacific region. The new educational opportunities provided by this support are extraordinary. The activities described in the application are not easy but we will keep our promises. These are the types of actions that make a Top 25-ranked college, and that’s what we intend to be.” (Dean Pezzuto)

The grant also helped the College establish an accredited continuing education program that will provide health care professionals information for drug development, clinical pharmacy practice and pharmacotherapy.

“I applaud the successes of UH Hilo’s College of Pharmacy. Through this federal grant, of which I was pleased to support, they will be able to expand their pre-pharmacy pathways to students in rural Hawai‘i and the U.S. Pacific. I can remember when it was just another ‘bright’ idea – today, it is a hub for science and math, providing young people with promising paths for the future,” stated U.S. Senator Inouye, whose office endorsed the funding.

**Rural Health Center**

The College of Pharmacy houses a newly formed center at UH Hilo that that is designed to 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.

Dean 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 said, “We are extremely pleased to support this new
Emergence of the University of Hawai‘i at Hilo College of Pharmacy

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 redesign 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 White Coat Ceremony October 17, 2010, 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 is Dr. Karen Pellegrin, the College of Pharmacy 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. 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)

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 Hawai‘i 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.”

**HMSA Foundation**

A grant from the HMSA Foundation grant helped UH Hilo Pharmacy students keep pace with technology. Students in the College of Pharmacy gained experience using clinical software tools thanks to a $75,506 grant from the HMSA Foundation. The grant was acknowledged March 13, 2009 before a lecture on disease management to 86 second-year pharmacy students from Dr. John Berthiaume, MD, HMSA medical director and vice president.

“This generous grant helps assure our students are well versed in state-of-the-art technology that will help them compete in the global marketplace, and we are grateful for the...
foresight HMSA has shown in awarding us the opportunity. Keeping pace with technological advancements is especially important as we continue our quest to become one of the top pharmacy schools in the country.” (Dean Pezzuto)

The grant provided the students in the inaugural three classes with handheld personal computer devices (PDAs), which will enable students to load software tools that can assist with diagnostic and therapeutic decision-making.

“We’re very pleased to support the College of Pharmacy at UH Hilo. These PDAs will put valuable information at the fingertips of pharmacy students, and will help advance the quality of health care in the community. The HMSA Foundation is proud to be supporting this effort.” (Cliff K. Cisco, HMSA)

The HMSA Foundation was established in 1986 by the Hawai‘i Medical Service Association to stimulate research of issues that confront Hawai‘i’s healthcare industry. The Foundation awards between $1.0 and $1.4 million in grants each year.

“HMSA’s decision to fund this technology is another example of the support the entire community has shown the College of Pharmacy and we are extremely proud to be associated with them. This gift not only benefits Pharmacy students, but the public we serve.” (Ron Taniguchi)
J.M. Long Foundation is helping us fulfill our pledge to offer our students quality education while addressing the critical shortage of qualified pharmacists in Hawai‘i and across the nation.” The gift came at a time when CoP’s teaching, research, study, administrative and faculty office spaces were distributed across the UH-Hilo campus and the city of Hilo.

The J.M. Long Foundation was created by Joseph M. Long in 1966 as a way of giving back to others from whom he received during his lifetime. Long first visited Hawai‘i in 1948, sailing across the Pacific on the SS Lurline for vacation. He was very impressed with what he saw, so much so that in 1953 he negotiated a lease for property at the corner of Hotel and Bishop Streets, and built what became the first Longs Drugs store in Hawai‘i opening in 1954. He was personally involved in working with Walter Dillingham on the opening of Longs in the Ala Moana Shopping Center in 1959, the second Longs in the islands. During the next 20 years, whenever a Longs store site came up for consideration, he remained an advocate for continued support of the community in Hawai‘i.

As Chairman of the Board of Longs Drug Stores, he noted: “In everything we have done I have never forgotten my mother’s admonitions about caring for people; caring for those who work with us, caring for those we work for, caring for our fellowman. We go through this life but once. If there is anything we can do, or help that we can give, let us do it now, because we may not pass this way again.”

CVS Caremark Corp.

CVS Caremark Corp. arrived on the Big Island of Hawai‘i after purchasing Longs Drug Stores in 2008, and immediately began a close working relationship with the College of Pharmacy. Together with its philanthropic arm, CVS Caremark Charitable Trust, CVS Caremark continued Longs Drugs’ commitment to funding pharmacy student scholarships, with five to 10 CoP students benefiting from their support each year. In the fall of 2009 and 2010, CVS Caremark also stepped forward to sponsor the White Coat Ceremony for the Classes of 2013 and 2014 respectively.

CVS Caremark has made other generous donations to the college, including a grant to support the publication of this document and funding to support the Dean’s Welcome Reception in 2011. CVS representatives have visited campus frequently to meet and interview students for summer internships and future employment at its Longs Drugs and CVS pharmacies.

Walgreens

Soon after entering the Hawai‘i market in 2007, Walgreens began supporting the new College of Pharmacy in Hawai‘i, helping to get the college noticed by its Illinois corporate headquarters. As a result, Walgreens recognized...
the CoP with an early pledge of $50,000 in May, 2008, designated for the building fund.

As Dean Pezzuto said, “This gift came at the conclusion of our first year of studies, and gave us even greater confidence in our ability to train pharmacists who will enter the profession and help to improve healthcare throughout the State of Hawai‘i. We are very grateful and look forward to continuing our partnership with Walgreens for many years to come.”

“Walgreens is proud to support the UH Hilo College of Pharmacy,” said Clark Fujihara, Walgreens district pharmacy supervisor for Hawai‘i in 2008. “I met many of the students and I’m extremely impressed with their dedication and talent. As Walgreens continues to grow throughout the State, we hope many of these students will consider joining our company once they receive their doctoral degrees.”

Walgreens is well known for supporting pharmacy education in the U.S. through its diversity program. In January 2009, CoP joined the ranks of other top-ranked pharmacy schools receiving annual grants to fund programs that foster diversity and inclusion within the pharmacy profession and local communities.

CoP has put its Walgreens diversity grants to use in ways unique to Hawai‘i, respecting the host culture. In the fall of 2009, first-year pharmacy students were treated to a tour focusing on Hawaiian culture led by leaders from Kipuka, UH Hilo’s Native Hawaiian Student Center. Kipuka’s Cultural Tour of Hilo included visits to Mokuola (Coconut Island), Pi‘op‘io, and Waianeunene to reveal the Hawaiian worldview through the exploration of local myths and stories pertaining to significant local sites.

In March of 2011, an expedition comprised of 18 student pharmacists and two faculty members traveled to Moloka‘i to visit Kalaupapa, which was the home of over 8000 Hansen disease patients living in forced exile, torn away from their families and communities. Prior to departure, the students were required to invest a considerable amount of time preparing a well-researched paper discussing the effects Hansen disease had on the culture of Hawai‘i. Upon their return, the students presented their insights to their classmates. Studying the historical context of Hansen disease in Hawai‘i was unforgettable and transformational. Students came away with a much deeper understanding of how the intricate panorama of political influences, economics, culture, disease, history and geography all interplay to contribute to health policy and the delivery of health care. The impact of Kalaupapa as a prison was tangible as they hiked three miles down some of the steepest sea cliffs in the world descending over 1700 feet.

“Our future pharmacists of Hawai‘i will be uniquely positioned to positively influence the health and wellness of their local communities,” said Dr. Luoluo Hong, UH Hilo vice chancellor for student affairs. “A gift such as this helps our students more effectively serve the extremely diverse, multicultural communities in which they will be living and working.”
Target

Beginning in 2008, even before opening its first stores in Hawai‘i, Target Corp. began providing support to the College of Pharmacy in the form of student scholarships. Then in 2009, it sponsored the first Target Case Competition for third-year pharmacy students in Hilo. Dr. Carolyn Ma’s Management and Marketing class, and challenging students to create plans to improve Target’s marketing of pharmacy services. Winning students were Keegan Sugimoto, Matthew Kirkland, Quynh Dao, Steven Evans and Zoe Chun-Dela Cruz.

The winning group proposed an “OnTarget” comprehensive patient monitoring system to record a patient’s vital signs, including cholesterol, blood pressure, weight and ovulation, from a wide range of monitors. The system would then organize the data for easy retrieval by a Target pharmacist or by the patient for personal use or to take to doctor appointments.

Sugimoto said the experience solidified camaraderie among the students and exemplified teamwork essential to all future pharmacists. Marketing teams presented their proposals in four rooms earlier in the morning. The judge in each room selected the best proposal for a final round of presentations in front of all the judges and the entire class.

The following fall, in 2010, Target gave students in Dr. Mok Chong’s marketing class a chance to compete. The winning presentation featured a system to make medication management more efficient. Winning students were Bernie Cheng, Megan Ching, Richelle Hirata, Jeff Retter and Jessie Wong.

Dr. Chong commented, “This exercise teaches students how things run in the real world and shows them how they can make it happen,” said Dr. Chong, 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.”

Wyeth Corporation

Many CoP faculty came to UH Hilo with corporate ties that would help equip the new laboratories. As an example, in August, 2009, Wyeth Corporation worked with Dr. Robert P. Borris, Associate Dean for Research, to give the College a gift of a 400-megahertz nuclear magnetic resonance spectrometer (NMR) valued at a quarter million dollars. The NMR is used to identify the structure of chemicals, both alone and in mixtures and can assist in the discovery of new drugs, either synthesized in the laboratory or isolated from some natural product.

“The gift of the NMR from Wyeth removed a major impediment to scientific research that we require to compete
on a national or international scale. Not having this kind of equipment tells federal funding agencies such as the National Science Foundation that we don’t have the facilities in which to do cutting edge research. Having the NMR at UH Hilo means we won’t have to travel to O‘ahu or to the mainland to conduct our work. We’re very grateful to Wyeth for helping us to establish a cutting-edge scientific base for students at UH Hilo.” (Dr. Borris)

Because CoP researchers collaborate with UH Hilo faculty in chemistry, biology and biochemistry, the presence of the NMR facilitated inter-disciplinary collaboration; ample access was given to anyone at UH Hilo in need of this fundamental tool for analytical chemistry.

Dr. Guy T. Carter, assistant vice president of chemical technologies at Wyeth Research’s Chemical & Screening Sciences, noted that Wyeth tries to place retired equipment that is still functional in academic research settings that will derive the greatest benefit. The drug company, based in New York, typically chooses institutions that are in close proximity to one of their sites, such as Columbia University in Manhattan and Temple University in Philadelphia. Carter said he was able to direct the NMR to UH Hilo through personal communications with Borris.

“I find it personally gratifying that the instrument will enable UH Hilo students to have access to high quality NMR data for their studies,” Carter said. “I am particularly hopeful that the NMR will be valuable in advancing research in natural products drug discovery, which we are passionate about at Wyeth.”

“The gift was a signal of support from the pharmaceutical industry for the growing College of Pharmacy. We are competing for the same funding that universities everywhere need, so it’s absolutely critical that we can rely on the pharmaceutical industry. Support from Wyeth Research was reassuring because it showed we’re headed in the right direction.” (Dean Pezzuto)

**Hawai‘i Independent Pharmacies, Inc.**

When Hawai‘i Independent Pharmacies, Inc. decided to dissolve its organization in 2011, its board voted to allocate the remaining assets to a permanently endowed scholarship at the University of Hawai‘i at Hilo College of Pharmacy.

“Your timing for this scholarship fund is perfect,” Dean Pezzuto told the group’s officers in a gift ceremony at the College of Pharmacy. “Our new graduates who got their degrees in May are just starting jobs as pharmacists throughout the country, and they’re now finding out what it is like to pay back student loans that may total more than $200,000. Not only will your scholarship make a huge difference in future students’ lives, it will also reinforce the role of independent pharmacists among the very population who knows the value of what you do. Thank you for thinking of UH Hilo.”

Phyllis Robinson, outgoing president of Hawai‘i Independent Pharmacies, said she and her colleagues welcome the opportunity to support UH Hilo. “It is our hope that having the college here will raise the level of pharmacy practice across the state of Hawai‘i.”

**More Support**

In addition to the corporate giving detailed above, the College of Pharmacy is grateful for support from numerous other entities including K. Taniguchi Ltd., Mina Pharmacy, Takeda Pharmaceuticals North America, Inc., Isemoto
Numerous members of Hawai’i’s pharmacy community and other individuals have also stepped forward to make leadership gifts to benefit the College of Pharmacy. The college is indebted to many generous supporters for their vote of confidence in our students and the future of the pharmacy profession in the state. These supporters include: Michi Haga Miller, Georgiana and Edwin Kam, Gladys Sonomura, Dr. and Mrs. Elwin Goo, Dr. & Mrs. Ron Okamura, Dr. and Mrs. Ron Taniguchi, Grace Miyawaki, George and Esther Noguchi and Mr. and Mrs. Byron Yoshino.

**GRADUATION**

The first student to receive her doctorate in pharmacy from the University of Hawai’i at Hilo was chosen by her peers because of her endurance in the face of adversity, but also because she is an inspiration.

Tehane Ornellas from Kula, Maui, was the first of 84 PharmD students from the College of Pharmacy to receive the ceremonial hood at commencement events May, 14, 2011, at Edith Kanaka‘ole Stadium.

A cancer survivor, Ornellas completed the rigorous four-year professional program despite having to undergo several bouts of chemotherapy. Class president Jessica Toyama said Ornellas is an inspiration to her classmates.

“We all recognized that walking on stage to receive the first diploma was going to go down in history, so we had a vote who we thought should go first,” Ms. Toyama said. “I’m so happy Tehane received the most nominations because it’s a way for us to recognize her contribution to our class as a whole.”

The honor was announced Thursday, May 12, 2011, at a graduation luncheon at Hilo Yacht Club. The event kicked off a three-day celebration of the inaugural class graduating from the only college of pharmacy in the Pacific region.

Also announced at the event was a gift of $20,000 annually to the College of Pharmacy building fund from Mina Pharmacy owner Hany Guirguis, RPh, Certified Clinical Nutritionist, PhD.

“We like having a school of pharmacy in Hawai’i so I am committed to trying to help the community and help the students,” (Hany Guirguis)

The class also honored Judith Fox-Goldstein for her work helping the College and for her gift, which was in honor of her late son, Daniel Fox.

Other awards announced were: Cherie Chu, from Kaneohe, O’ahu, was given the Mylan Excellence in Pharmacy Award for academic achievement, professional motivation and a demonstrated ability to communicate drug information.
Jill Gelviro, from Virginia, was presented with the United States Public Health Service Excellence in Public Health Pharmacy Practice Award. This award is given to a student who has demonstrated the development and implementation of programs that advance the goals stated in “Healthy People 2010” and who participates in programs that support the philosophy and goals of the U.S. Public Health Service.

The second event for the graduating pharmacists was held on Friday, May 13, 2011 after a schedule-packed day that included the final day of review for the NAPLEX exam, commencement rehearsal, and a group photo shot at Lili‘uokalani Gardens, a one-of-a-kind Japanese ornamental park just off Hilo Bay. After much consideration, students chose to have their celebration party at Sangha Hall, a community gathering place that could accommodate 500 people, with a stage area and kitchen facilities. Dinner was catered by Don’s Grill. The occasion was made even more special by a speech from Dr. Carolyn Ma, Associate Professor in Pharmacy Practice, who had been a big part of the inaugural class’s education from beginning to end.

The inaugural class chose to announce the “CoP Inaugural Class of 2011 Scholarship” at the Friday night party. With the scholarship, they hope to begin a tradition for future graduating classes by presenting a “class gift” as a way order to give back to the College of Pharmacy. The Class of 2011 chose to award the scholarship to Dan Hu, a member of the Class of 2012, because they said he demonstrated both academic merit and community service to promote the spirit of CoP.

Also announced at the party were the winners of the Advanced Pharmacy Practice Experiences (APPE) Preceptors of the Year, Kara Izumi, preceptor for Surgical Intensive Care Unit and Trauma student rotations, and Susan Eade Parson, preceptor won her second tour of duty at Tripler Army Medical Center.
**NAPLEX Preparation**

College of Pharmacy faculty members dedicated three days the week before graduating the inaugural class to preparing the students for the exam that would qualify them to become a licensed pharmacist: the North American Pharmacist Licensure Examination, or NAPLEX.

Every state has its own Board of Pharmacy that dictates requirements to be licensed, and every state requires a pharmacist to successfully complete the NAPLEX exam. The test is designed to determine whether someone has the knowledge, judgment, and skills they are expected to demonstrate as an entry-level pharmacist.

“There are many requirements to become a licensed pharmacist, but the NAPLEX is the test that pulls it all together. Our students are very test savvy, having taken hundreds of tests throughout four years of intense learning and preparing for this great career as a pharmacist. This was a review of what to expect in this next step toward getting their license.” (Dr. Fisher)

“The CoP curriculum contains everything students need to successfully pass the exam, but taking the review can point out areas to focus on before sitting for the four-hour and fifteen minutes exam. Students are assessed in three areas of competency: Pharmacotherapy, Safe and Accurate Preparation and Dispensing of Medications, and Provide Health care Information that Promotes Public Health.” (Dr. Fisher)

College of Pharmacy faculty Dr. Robert Borris, Associate Dean for Research; Dr. Ron Taniguchi, Interim Department Chair, Department of Pharmacy Practice and Director of Community Partnerships; Dr. Candice Tan, Assistant Professor, Pharmacy Practice; Dr. Caitrin Vordtriebe, Clinical Track Faculty; and Dr. Ben Chavez, Assistant Professor, Pharmacy Practice all participated in the NPALEX review.

The first two days were packed with eight hours of the intensive review, and the third day held six review hours. Topics included hypertension, hyperlipidemia, angina, chronic heart failure, diuretics, diabetes, antibiotics/antivirals, gout, asthma, cancer, opioids, gastroesophageal reflux disease, peptic ulcer disease, arrhythmia, over-the-counter products, psychology, and infectious disease and pharmacy calculations. Students were tutored in federal- and state-specific law so they would be prepared to pass the Multistate Pharmacy Jurisprudence Examination (MPJE) portion of the exam.

Danita Henley, a new PharmD from the class of 2011, said she thought the students were provided with a well-rounded group of courses.

“The best part about the review course was the way the material was presented,” Dr. Henley said. “It was scaled down to bits of information that was very concise. This is exactly how I will study in preparation for taking the NAPLEX.”

Dr. Henley, who worked on the new CoP Psychopharmacology program, was also a member of a committee that was formed to evaluate the success of the NAPLEX review. The committee, which includes a current fourth-year student and clinical faculty, will meet before the class of 2012 takes the test next year to recommend improvements.

“My five years of experience providing NAPLEX reviews across the country has shown me what to cover, but we want to make sure we stay current and provide the best, most informed review every year,” Dr. Fisher said.
Employment

As with any discipline, employment is a critical factor that can only be fully judged over a lifetime. At the time of this writing, college of pharmacy alumni from the University of Hawai‘i at Hilo have been hired for jobs that require a PharmD degree in 16 states as well as Guam and Washington D.C. at various retail chains, community pharmacies and hospitals. According to a survey conducted by college’s Department of Student Services, more than a third of the graduates who found work so far accepted jobs that allow them to stay in Hawai‘i.

Upon their graduation in May, 2011, 66 percent of the recent graduates reported that they have obtained a job or were working in a paid residency.

“These numbers show the breadth of impact our inaugural graduates are already making since graduating just three months ago. Their remarkable success at securing jobs before taking the exam for licensure confirms the idea that new pharmacists have hit the ground running and will continue to make us proud.” (Dean Pezzuto)

There was a 95% response rate from the survey. They answered questions about what they will be doing after graduation and were asked how they thought the college of pharmacy did in preparing them for a career in pharmacy.

Preliminary results from the surveys also found:

24 percent of the class applied for the residency match program
95 percent of those who applied received at least one interview
53 percent of those who applied received a residency job offer
59 percent of the respondents to the survey were Hawai‘i residents for tuition purposes during the spring 2011 semester
60 percent of these Hawai‘i resident respondents stated they had either secured employment in a job that required a PharmD or were working in a paid residency.


They accepted jobs at the Children’s National Medical Center, CVS, Fred Myer, GE Nuclear, Guam Memorial Hospital, Heartland Regional Medical Center, Kaiser Permanente, Kapiolani Medical Center for Women and Children, K-VAT Food City, Menezhune Pharmacy, Marsh, Mina Pharmacy, Palos Community Hospital, Roe RX, Safeway, Seattle Children’s Hospital, Target, University of Hawai‘i Hilo College of Pharmacy, Walgreens and Wal-Mart.

The graduates also are working in several highly competitive pharmacy residency positions throughout the nation in order to gain intensive training in health care settings. Residencies are often a requirement for employment in hospital pharmacy practice or as a faculty member at a pharmacy school. Locations include the Phoenix Indian Medical Center and the Banner Baywood Medical Center and Heart Hospital in Arizona; UH Hilo College of Pharmacy in Hawai‘i; Intermountain Healthcare in Utah; and Palos Community Hospital and Edward Hines Jr. VA Hospital in Illinois.
“Gathering information on our graduates is a very important part of the development of our college and the accreditation process,” said Liz Heffernan, Director of Student Services, whose office sent out the AACP Graduating Student Survey and the Supplemental Graduating Student Survey. Assessment Coordinator Paula Zeszotarski helped create the survey and analyze the data.

[See Supplemental Graduating Student Survey 2011 in Appendix D]

Future plans for compiling data include sending an Alumni Survey to CoP’s graduates in the summer of 2012.

“Their feedback will help us to improve our programs and develop into one of the top Colleges of Pharmacy in the nation,” Heffernan said.

### Two Stories of Success

Working on a pharmacy residency is one of the paths available to graduates with a PharmD degree. Pharmacy residencies provide intensive training in health care settings and are often a requirement for employment in hospital pharmacy practice or as a faculty member at a pharmacy school.

**Dr. Rovigel “Jill” Gelviro**

Dr. Rovigel “Jill” Gelviro, she accepted a residency at the Phoenix Indian Medical Center in Phoenix. Her residency provides experience in all areas of hospital pharmacy including acute medicine and ambulatory care.

She was granted seven out of seven interviews, and received two early commitment offers for residency, both at the top of her list. She said it wasn’t easy scheduling seven interviews during rotations.

“I found the faculty members open to my many questions about the interview process,” Dr. Gelviro said. “Dr. Batz, Dr. Gomez and Dr. Ma are great supporters of my endeavors. I greatly appreciate the guidance they provided throughout the process.”

Dr. Gelviro said she is attracted to IHS/PHS because of her previous work with the Department of Homeland Security/Federal Emergency Management Agency in Washington, D.C. She was a pharmacy technician and member of medical manpower teams in the US Air Force, and served in Texas,
Mississippi, Guam, Bahrain, Saudi Arabia and Iraq.

“I had the opportunity to work with several Public Health Service officers, who spoke about the great opportunities available for health professionals in the Commissioned Corps,” she said. “I would have the chance to provide healthcare services to underserved populations as well as to provide medical response during national and international disasters.”

When she puts on a military uniform again, it will be not as an enlisted member but as a commissioned officer. She will resume her military time in service and have the chance to retire in 11 years.

“I am truly excited about the opportunities that lie ahead,” Dr. Gelviro said. “Although, I was sad to leave Hawai’i, I hope I will have the opportunity to return someday to enrich the community with what I have learned and experienced on the mainland. I am thankful to the UHH-CoP for giving me the foundation to what looks like a bright future.”

**Dr. Cherie Chu**

Cherie Chu, from Honolulu, accepted a job as a pharmacy resident at Banner Baywood Medical Center and Heart Hospital in Mesa, Arizona. Her residency will be focused on acute care.

“I was attracted to this residency because of the staff. Also the type of rotation choices they had matched my interests in critical care,” said Dr. Chu. She also is considering their second-year residency in cardiology.

Dr. Chu researched residencies by attending the American Society of Health-System Pharmacists (ASHP) midyear conference and asking other residents about their experiences with the interview and application process.

“The hardest part of the transition was and is the licensing process,” she said. “Having to apply to take boards in various states is a chore, and trying to get all the necessary paperwork in to the various states is tedious work. Then there is trying to prepare for the NAPLEX and MPJE.”

Both Drs. Rovigel and Chu say they miss their classmates because, as the inaugural group of PharmD students at UH Hilo, they were a tight group. They manage to keep in touch via phone, e-mail or Facebook.

“It’s sad not to see them everyday, but I still keep in touch with my classmates,” Dr. Chu said. “Currently I have two other co-residents at my institution, so the support from others who are in the same boat as I am is there for me.”
The Future

Every day the current economic downturn dominates the news, dismal unemployment statistics concern even the employed. The College of Pharmacy has experienced the consequences of this situation. But at the same time, we could revel in the fact that our inaugural graduates took the workforce by storm. Beyond this, we’ve been fully accredited by the Accreditation Council for Pharmacy Education. We continue down the path leading us to become a Top 25 college of pharmacy.

Nonetheless, at the time of this writing, we were not yet done with “inaugural” events. In 2011, for the first time, some of our PharmD students will be receiving the BA in Pharmacy Studies. Our first PhD students have started this program. The first classes have started for our new Master’s in Clinical Psychopharmacology. We are in the planning phase of other new programs. Our College of Pharmacy will always have “firsts” and everyone, from our faculty to staff to student, embraces change, creating innovative projects that have serious impact on real-world health issues.

Several activities we maintain will eventually be considered as traditions, such as our annual health fair and the White Coat Ceremony. We have expanded our existing temporary physical facilities to better serve our students. While we continue to search for adequate funding, the planning and design of our permanent building is nearly complete.

We are building momentum as we are building a world-wide reputation of excellence, becoming stronger, ever confident in our goal. While our physical facilities still need to catch up, we are fortunate to have acquired nuclear magnetic resonance spectrometers, mass spectrometers, and other state-of-the-art equipment, that will allow our researches and students to reach their full potential and remain competitive.

Our pedagogical base on Oahu has expanded, and thanks to a collaborative arrangement with the JABSOM, physical facilities in Honolulu are superb. In December 2011, we serve as the local host for the 50th Annual Meeting of the Phytochemical Society of North America. This will attract hundreds of scientists to the Big Island who will have an opportunity to observe our rapid progress on a firsthand basis.

But it is energy and enthusiasm of our supporters that keeps us going, that keeps our faculty engaged, and that keeps our students excited about learning. We have the talent, the abilities, and the eventual resources. But it’s the people that make the difference. The individuals who say “why not,” rather than “whatever.”

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.

A gift given to Dean Pezzuto in May 2011 from Lisa Hagiwara, PharmD and her family. Lisa was a graduate of the inaugural class 2011 and one of the 10 founding students of the Hawai’i Chapter of the American Pharmacists Association - Academy of Student Pharmacists.
List of Appendices

Appendix A .............................. Student Composite Pictures
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Appendix I ............................... Honor Roll of Donors

Appendix A - Student Composite Pictures
Appendix B - Map of Student Residency
Current Student Population & Diversity

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<td><strong>100</strong></td>
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Chancellor, University of Hawai‘i at Hilo

Rose Y. Tseng

March 31, 2004
We believe that a UH Hilo College of Pharmacy has the potential to have an economic impact on the State as well. The expertise of a resident pharmacy faculty could support a growing industry in natural medicines, and could provide the base for research and development partnerships with Asian drug companies. A Pharmacoeconomic Center at the College, like many on the mainland, would also provide a source of expertise for the State in dealing with the many contemporary drug related problems, policies and issues.

The proposed College of Pharmacy can help address the manpower needs for highly trained pharmacists who can deliver pharmaceutical care sensitive to the unique cultural and ethnic makeup of the entire State, especially rural and neighbor islands where the needs are most acute. The University of Hawai`i at Hilo College of Pharmacy will complete the triad of health professional degrees offered by the University of Hawai`i, alongside Medicine and Nursing. It will also offer access for local residents to obtain a pharmacy education at an affordable resident tuition, rather than the $30,000 and higher annual tuition costs at private colleges.

With your support of this Resolution, we would present to you at your next legislative session a specific funding plan for the creation of a College of Pharmacy at the University of Hawai`i at Hilo.
APPENDIX D - MINUTES OF THE REGENTS’ COMMITTEE

MINUTES OF THE REGENTS’ COMMITTEE ON ACADEMIC AFFAIRS

Date: Thursday, October 21, 2004

Place & Time: University of Hawai‘i at Hilo
   University Classroom Building, Room 127
   3:41 p.m.

Committee Members Present: Regents
   Bender (presiding)
   de la Peña
   Haynes
   Kakuda
   Lee (ex-officio)

Other Regents Present: Regents
   Albano
   Kai
   Lagareta
   Tanaka
   Yamasato

Others Present: David McClain, Acting President, University of Hawai‘i
   Walter S. Kimitsu, Vice President and University General Counsel
   Rose Y. Tseng, Chancellor, University of Hawai‘i at Hilo
   Jerry L. Johnson, Professor, University of Hawai‘i at Hilo
   David Iha, Executive Administrator and Secretary of the Board
   Carl H. Makino, Executive Assistant to the Board

Approval of Committee Meeting Minutes

Regent Kakuda moved to approve the minutes of the meeting of the Regents’ Committee on Academic Affairs and Joint Committees on Academic Affairs and Budget and Long-Range Planning and Joint Committees on Academic Affairs and Community Colleges meetings held on September 9, 2004. The motion was seconded by Regent Haynes and unanimously carried.

Subjects:
1. Overview of University of Hawai‘i at Hilo

Appendix D - Minutes of the Regents’ Committee on Academic Affairs
October 21, 2004
Page 2

2. Proposed College of Pharmacy for the University of Hawai‘i at Hilo

3. Establishment of a Doctorate in Hawaiian and Indigenous Language and Culture Revitalization; the Certificate in Indigenous Language and Culture Revitalization; and the Master of Arts in Indigenous Language and Culture Education

Overview of University of Hawai‘i at Hilo

Chancellor Tseng reported on initiatives at UH-Hilo. Efforts are being made to develop partnerships between campus and the community. Reports were also provided by Professor Don Henneson on his research on mushrooms. He reported that there will be a conference on micology at UH-Hilo in 2005. Professor Susan Jarvi also reported on her research on native bird populations.

Proposed College of Pharmacy for the University of Hawai‘i at Hilo

Chancellor Tseng requested that the Committee approve the creation of a College of Pharmacy at the University of Hawai‘i at Hilo and that they be authorized to recruit for a Dean for the College.

There is a serious nationwide shortage of pharmacists and this shortage is present in Hawai‘i as well. Hawai‘i is one of only six states without a school or college of pharmacy, and the pharmacist shortage has made it extremely difficult for Hawai‘i students to gain admission to state pharmacy colleges on the mainland. Those who can manage the costs are thus forced to attend expensive private colleges for their training. Many Hawai‘i residents are unable to attend a pharmacy school on the mainland for financial or family reasons.

With the new requirement that the entry level degree nationwide for pharmacy licensure is the Pharmaceutical Doctorate, and with the standard of licensure for pharmacists requiring the Doctor of Pharmacy degree, it is important to the quality of health care in Hawai‘i that local pharmacists have access to this level of education. The proposed College of Pharmacy is intended to address this need.

BOR Policy 5-7a(1)(a) states: “The University of Hawai‘i at Mānoa will remain the only public research University campus in the State. It will continue as the only University of Hawai‘i campus that offers the doctoral degree, degrees in law and medicine, and a comprehensive array of master’s degrees and undergraduate curricula.” Although Pharmacy D is a professional degree that requires a two-year pre-pharmacy course work plus a four-year pharmacy training, it can be considered a doctoral degree. Therefore, an exception is required in order for Hilo to offer this doctoral degree.

APPENDIX D - MINUTES OF THE REGENTS’ COMMITTEE
Professor Jerry Johnson stated that the objective of the proposed College of Pharmacy is to provide a high quality Doctor of Pharmacy program that will help address significant health care needs in Hawai‘i. The proposed College of Pharmacy will be focused state-wide, and on the needs of the U.S.-Affiliated Pacific Jurisdictions. Pharmacists are needed throughout the region to meet the growing challenges of health care to a population that is growing older and requiring more medications. The College will seek to meet the unique needs for pharmacy education of the various regions and their students. The rural nature of much of Hawai‘i and the Pacific presents special challenges to professional pharmacy education. The most serious pharmacist shortages are in the rural areas, and the practice of pharmacy is significantly different in rural communities compared to urban practice. The location of the College of Pharmacy in Hilo, rather than Honolulu, will maximize the likelihood that its graduates will be prepared for and willing to practice in rural settings.

The presence of a new professional school will enhance the University’s ability to contribute to the needs of the State. For example, an independent Pharmacoeconomic/Public Policy Center is a common feature of colleges of pharmacy throughout the mainland. The State Legislature, Executive Branch and other public/private interests have an unmet need for a local independent think tank to evaluate all manners of legislative proposals, drug benefit designs, natural product development and public spending programs related to pharmaceuticals.

In addition to the current demand for pharmacists, there are factors that suggest that the need will increase through the foreseeable future. Drug usage has been increasing at an accelerating rate, with the largest increases among those in the older population. As the baby boomers begin to retire, the number of people in the age group that has the highest usage of drug therapy will increase dramatically. It is now common for an individual to be taking 7 or 8 drugs at the same time, and it is not uncommon for people to take two or even three times that number. There are also increasing numbers of new drugs on the market, which increases the variety of drugs and drug interactions that must be managed. The pharmacist is the central health care provider in drug management, and this is increasingly true with the shift to a more clinical role for pharmacists throughout the profession and with the new requirement that the entry level degree nationwide for pharmacy licensure is the Pharmaceutical Doctorate.

The demographics of the pharmacy profession also suggest an increasing need for pharmacists. A large percentage of the pharmacy workforce is nearing retirement, which will add significantly to the shortage. There is also a trend for increasing numbers of women to enter the pharmacy workforce, and the data show that female pharmacists generally desire a more balanced lifestyle and work fewer hours than men, thus adding to the shortage.
including program approval, fiscal, staffing, building and curricular issues. Concurrently with the planning for the College of Pharmacy, efforts will be undertaken to publicize the pre-pharmacy curriculum, strengthen the undergraduate science curriculum at the University of Hawai‘i at Hilo in anticipation of increasing enrollment in basic science courses, and offering a Pharmacy Technician training program. The latter program will be offered in Hawai‘i and to the Pacific Basin Jurisdictions via distance learning and is presently being developed in cooperation with the University of Hawai‘i Community Colleges.

Because the College of Pharmacy is likely to impact selected undergraduate courses in basic sciences, resources will be allocated to address these impacts. The major effect of an increase in undergraduate students enrolling in pre-pharmacy courses will be on the Biology and Chemistry departments. In addition to the faculty needed for the professional pharmacy curriculum, a position in each of these two departments will be added to meet the additional demand for Biology and Chemistry courses. Funds have been allocated from the current year’s planning grant to upgrade the equipment in the chemistry laboratories, and the pharmacy building plan includes a biomedical sciences laboratory which can be used for undergraduate instruction.

Accreditation Standards mandate that appropriate space for the College of Pharmacy be available. This will require the construction of a new building. An architect is currently working on developing cost estimates and initial schematic design and conceptual drawings of a building based on the space plan. This information will be used to attempt to secure funding from federal and private sources for the building construction. The campus long-range development plan identifies a site for a new instructional building upon which the pharmacy building would be constructed.

The annual operating budget for the College at full enrollment will be approximately $6.1 million. With tuition providing an income of approximately $4.4 million, the balance of $1.7 million in operating funds will be requested from the State. There are presently no state funds budgeted for this program. Federal funding in the amount of $700,000 has been awarded for the current year, and the same amount is included in the federal budget for next year. At least this level of funding is expected for the next few years. The federal funds are expected to cover all costs of the first year of planning period, excluding construction. The second planning year will be the first year state funds would be needed. This is the second year of the next biennium budget cycle. Year two of the planning period will add a position for a Dean of the College. Year three will include positions for a total of four administrative and six professional staff. A total of 38 faculty will be required for the college. Twenty-five of these will be clinical faculty located throughout the islands. Senator Daniel Inouye has indicated his strong support for the creation of the College of Pharmacy at UH-Hilo. He has earmarked $700,000 for the current year and next year to support program development. At least this level of funding is expected to continue for the next few years. Assuming the federal funds continue at the present level, the projected operating budget would exceed the federal funding by $950,000 in the 2006-2007 academic year. The net operating costs in state funds for program operation could be reduced by assuming a different tuition rate for resident students, non-resident students, or both. The attempt in the present model was to keep resident tuition at a relatively low level to encourage access to pharmacy careers for local residents.

The College of Pharmacy would enroll 66 students per year, with 75% of the students from Hawai‘i and 25% non-residents. This mix is expected to meet the local demand for pharmacists and allow the College to still have a student body of varied backgrounds. Tuition is proposed to be $11,000 annually for residents and $22,000 annually for non-residents. The differential tuition will allow the non-residents to help subsidize the costs of the College for residents. As indicated earlier, there is such a high demand for pharmacy education that there should be no difficulty finding qualified students. The working timeline for the creation of a College of Pharmacy at UH-Hilo is to admit the first class in the Fall of 2007, with the first graduation in Spring of 2011. Thus, the need for pharmacists must be projected to that date and beyond. The American Association of Colleges of Pharmacy has estimated an unmet net requirement for pharmacists nationwide of 157,000 by 2020 if the need is not addressed by the creation of more pharmacy education programs. This will lead to a major healthcare crisis. A 1998 report by the State Department of Labor projected an annual need for 28 pharmacists in Hawai‘i. Our need assessment in 2002 indicated that the number of unfilled positions had increased to approximately 40. In addition, letters from virtually all of the state’s hospitals, community health centers, major long-term care facilities and chain drug stores identify a severe shortage, both immediate and projected for the long term. Both HMSA and Kaiser Permanente have also submitted letters documenting the need.

The University of Hawai‘i at Hilo Faculty Congress endorsed the establishment of the College of Pharmacy at its February 2004 meeting.

Regent de la Peña asked if Pacific Island and Trust Territory residents will be able to attend the proposed College of Pharmacy. Professor Johnson said they would but did not expect many from those areas in the beginning.

Regent Tanaka noted that in the out years UH-Hilo might encounter a shortfall with this program. Professor Johnson said that if that was the case they would ask the Legislature to provide funds. Regent Lagareta followed that she no longer had problems recognizing the need for such a school and that it be placed in Hilo. However she still had serious concerns about resources and priorities at the time of limited resources and how such a new school would impact other priorities. She recalled that at a previous meeting Dr. Johnson had said that the Hilo community was prepared to step forward with financial support as soon as the program was established, adding that she hoped that would be the
case or the Board would have concerns. Chairperson Lee concurred, adding that in their financial projections, UH-Hilo had counted on a certain amount of non-residents, however, after one year these non-residents could become residents, thus affecting the financial projections. Dr. Johnson said that tuition would then be raised.

The following testimonies were received:

1. State Representative Jerry Chang asked for equity among campuses of the University’s system. He pledged that he would gather sufficient support from his fellow legislators to assure that funding for the new school, if needed, will be provided.

2. Big Island Mayor Harry Kim expressed his support for the School of Pharmacy.

3. Big Island Councilman Fred Holschuh expressed support for a School of Pharmacy as it would benefit the economic development of the Big Island.

4. Paula Helfrich representing the Economic Development Alliance assured that the County will support such a program.

5. Dr. Alec Keith described the field of pharmacy and pharmaceuticals. Chairperson Lee thanked him for his philanthropic support of UH-Hilo.

6. Stacy Evensen representing Hawai'i Medical Service Association (HMSA) expressed support for the School of Pharmacy because it will help the overall health care of Hawai'i.

7. Kent Kikuchi expressed that a School of Pharmacy located in Hawai'i will help residents get their license at a lower cost.

8. Mewing Cash-Kaeo representing Alu Like expressed support for the School of Pharmacy.

9. Kathy Hirayama, KIAA, expressed that the Big Island business community was fully in support of a School of Pharmacy.

10. Dr. Joel Weber expressed support for a School of Pharmacy.

11. Ronald J. Schurra of Hilo Medical Center, informed that there was a shortage of pharmacists and, therefore, he was in support of a school of pharmacy here in Hawai'i.
Appendix E - Graduate Survey

Supplemental Graduating Student Survey 2011

ALOHA and Congratulations!! Gathering information on our graduates is a very important part of the development of our college and the accreditation process. Please take a few minutes, while you are back on campus, to let us know where you are headed next and answer a few questions about our program.

Please note that we will also be sending you a few online surveys. For us to be able to use the data and present reports in our accreditation documents, a high response rate is essential. We have already sent you a request to complete the AACP Graduating Student Survey due by June 30 and a request to complete the Alumni Survey will follow in the summer of 2012.

Please take a few minutes to fill in the questionnaire below. Your feedback will help us to improve our programs and develop into one of the top Colleges of Pharmacy in the nation!

Mahalo Nui Loa,
Liz Heffernan   Paula Zeszotarski
Director of Student Services Assessment Coordinator

1. In Spring 2011 were you considered a Hawaii Resident for UH Hilo tuition purposes? (check one)
   - [ ] Yes
   - [ ] No
   a) If YES, how many years have you been a Hawaii resident? ___

2. What is your gender? (check one)
   - [ ] Male
   - [ ] Female

3. What is your age? ___

4. What is your race/ethnicity? (select all that apply)
   - [ ] African American or Black
   - [ ] American Indian or Alaskan Native
   - [ ] Asian Indian
   - [ ] Caucasian or White
   - [ ] Chinese
   - [ ] Filipino
   - [ ] Guamanian or Chamorro
   - [ ] Hispanic
   - [ ] Japanese
   - [ ] Korean
   - [ ] Middle Easterner
   - [ ] Mixed Asian
   - [ ] Mixed Hispanic
   - [ ] Mixed Pacific Islander
   - [ ] Mixed Race (2 or more)
   - [ ] Native Hawaiian or Part Hawaiian
   - [ ] Other
   - [ ] Other Pacific Islander
   - [ ] Other Asian
   - [ ] Other Hawaiian
   - [ ] Other Middle Easterner
   - [ ] Other Native Hawaiian or Part Hawaiian
   - [ ] Other Pacific Islander
   - [ ] Other
   - [ ] Other Asian
   - [ ] Other
   - [ ] Other
   - [ ] Decline to state

5. In Fall 2011, what will you be doing? (check one)
   - [ ] Working full-time in a position that requires a Pharm.D. (go to question #6)
   - [ ] Working part-time in a position that requires a Pharm.D. (go to question #6)
   - [ ] Pharmacy residency (go to question #6)
   - [ ] Other (go to question #6)
APPENDIX E - GRADUATE SURVEY

6. What is the name of the institution/company where you will be working or doing your residency in Fall 2011?

   a) In what state is this institution located?

   b) What is the setting of primary practice? (check one)

   - Chain community pharmacy
   - Independant community pharmacy
   - Hospital
   - Clinic-based pharmacy
   - Consultant
   - Home care
   - Managed care
   - Academia
   - Government or regulatory agency
   - Pharmaceutical Industry
   - Nursing home/long-term care facility
   - Other

7. What is the approximate annual salary of the position identified in question #6? (optional)

8. Please indicate the extent to which you agree with the statement below: (please check one)

   I feel prepared by the CoP program to begin my career in Pharmacy.

   - Strongly Agree
   - Agree
   - Disagree
   - Strongly Disagree

9. Did you apply to the residency match program? ☐ Yes ☐ No

   a) If YES, how many invitations to residency interviews did you receive? (select one)

10. How many Pharmacy-related jobs (outside of Interview Day & not residencies) did you apply for since September 2010?

11. How many Pharmacy-related jobs (non-residency) offers did you get this year? (select one)

12. Did you participate in Interview Day on October 23, 2010? ☐ Yes ☐ No

13. Did you receive any job offers from the contacts you made that day? ☐ Yes ☐ No

14. If YES, how many job offers did you receive as a result of Interview Day? (select one)

15. What did you gain from participating in Interview Day?

16. How could we improve Interview Day in the future?

Name (optional):

Your name will not be reported in connection with the information you provided in the survey but we may want to contact you directly about your responses. Thank you very much!

Submit by Email    Print Form
APPENDIX G - ECONOMIC IMPACT REPORT

The Contribution of the University of Hawai`i – Hilo College of Pharmacy to Hawai`i’s Economy 2009

Prepared by:
Professor David Hammes
University of Hawai`i at Hilo, Department of Economics

February 2009

APPENDIX G - ECONOMIC IMPACT REPORT

The College

In the fall of 2007, the University of Hawai`i at Hilo campus welcomed its first class of eighty students into the new (and state’s only) College of Pharmacy (CoP). These students, forming the class of 2011, are currently in their second year of the four-year Doctor of Pharmacy degree program. In the fall of 2008, the College’s second class (the class of ’12), again approximately 80 strong, was admitted. Plans call for the College to grow by approximately 80 students per year until a steady-state enrollment of 350-360 students, spread evenly into four classes, is reached in the fall of 2010.

Serving this existing and growing student body, the number of faculty and staff will grow from the current 17 faculty and 10 staff members to 39 and 11 respectively by the fall of 2011.

Measuring Economic Impact—General Principles

The economic impact of a specific unit within the state may be measured using standard economic tools and techniques. The source of the economic impact is identified as the new economic participants who have entered a region and their direct expenditures as well as expenditures by others in the region.

See http://pharmacy.uhh.hawaii.edu/

These students come from both in-state and out-of-state. See Appendix One for more detail on students, tuition rates, faculty and staff.

The author has performed these studies for both the UH-Hilo campus and programs (1994, 2002, 2003, 2006) the UH System (2007, an update of earlier studies by Mak, J., et al, of 2000 and 2004), and the County of Hawai`i (2007), please see the bibliography. Using the same methodology others have performed economic impact studies for a College of Pharmacy, see Gourley, et al (2008).

It should be noted that while the focus of this study is the College’s economic impact, this impact represents only a small part of the contribution made to the community by a College of Pharmacy. Research advances, patents, service and volunteer efforts, health improvements, education and diversity, to name but a few important factors, are all enhanced by the presence of a CoP.
because of the new entrants (e.g. by visitors), with the follow-on expenditures induced by the original expenditures (referred to as indirect expenditures) calculated. Naturally, not all of these direct and indirect expenditures are necessarily for goods and services produced within the state. To capture the state impact, information derived from structural (Input-Output, or ‘I-O’) studies of regional/state economies is used. This information is commonly referred to as ‘multiplier’-analysis conveying the idea that an initial expenditure circulates through the region, some of it draining away on goods and services bought from outside the region, and some of it re-circulating within to be spent and re-spent.

The magnitudes calculated in these impact studies when multipliers are available are the Final Demand economic impacts (both direct and indirect) on a region’s output of goods and services, earnings (incomes), jobs, and taxes.

For the state of Hawai‘i, the multipliers derived from the underlying information in the state’s input-output table yield the following (Type II) multipliers:

---

The UHH-CoP represents an uncommonly ‘clean’ unit of economic analysis. The students and faculty in the College would be very unlikely to be in the state of Hawai‘i in the absence of the College. There are no other Colleges of Pharmacy in the state, and these students, whether they originate in-state or out, would be out-of-state in pursuit of their D. Pharm. degrees if this College were not in-state.


Type II multipliers encompass the direct and indirect expenditure process outlined above. The multipliers shown in Table One are then derived by apportioning the spending by different units across different activities and industries and finding the weighted sum. Thus, the state’s Final Demand Output multiplier on “Educational Expenditures” is 2.21. The Final Demand Output multiplier on “Eating and Drinking” is 2.05 (see State Input-Output Study, ref. footnote 4 above, Table 8, page 29). If all a person did was spend equally on these two categories the resulting output multiplier for their expenditures would be (0.50*2.21)+(0.50*2.05) = 2.13. The interpretation is that $1 of new expenditures by a person made in the above fashion would generate $2.13 of new output within the state. Of course, there are more underlying multipliers and expenditure categories (e.g., housing, transportation, recreation and entertainment). For detail on the calculation of these multipliers see Appendix One.

The multipliers found by researchers in Tennessee (Gourley, et al, 2008) are Output, 2.30; Earnings, 0.83; Jobs, 31.3. Thus, we are using more conservative multipliers which may reflect more leakage from an island economy.

---

<table>
<thead>
<tr>
<th>Multiplier/Year</th>
<th>2008-2009</th>
<th>2009-2010</th>
<th>2010-2011</th>
<th>2011-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>1.019</td>
<td>1.025</td>
<td>1.021</td>
<td>1.029</td>
</tr>
<tr>
<td>Earnings</td>
<td>0.580</td>
<td>0.585</td>
<td>0.59</td>
<td>0.588</td>
</tr>
<tr>
<td>Jobs (per million$)</td>
<td>23.1</td>
<td>23.3</td>
<td>23.5</td>
<td>23.4</td>
</tr>
<tr>
<td>Taxes</td>
<td>0.096</td>
<td>0.097</td>
<td>0.097</td>
<td>0.097</td>
</tr>
</tbody>
</table>

The interpretation of these multipliers is as follows: in 2008-2009, every $1 spent by a member of the UHH-CoP (student, staff, faculty) or by a visitor or colleague in the state because the CoP is here, results in an increase in state output of $1.92; results in an increase in earnings of $0.58; results in an increase in tax revenues of 9.6 cents. The jobs multiplier is per million dollars of expenditures.

Creating Jobs and Generating Income

To use these multipliers the levels and types of expenditures generated by the students, staff, faculty, visitors, are necessary. From information provided (see Appendix Two and Three) Table Two may be constructed:
Table Two: Expenditures by College of Pharmacy Students, Staff, Faculty, Researchers, and Visitors

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>$0.886</td>
<td>$1.303</td>
<td>$1.668</td>
<td>$2.033</td>
</tr>
<tr>
<td>Sub-Total</td>
<td>$5.091</td>
<td>$7.869</td>
<td>$10.837</td>
<td>$11.678</td>
</tr>
<tr>
<td>Wages&amp;Salaries</td>
<td>$2.708</td>
<td>$3.821</td>
<td>$4.755</td>
<td>$5.69</td>
</tr>
<tr>
<td>Student Expenses</td>
<td>$3.094</td>
<td>$4.714</td>
<td>$6.43</td>
<td>$6.61</td>
</tr>
<tr>
<td>Visitor Expenses</td>
<td>$0.973</td>
<td>$1.456</td>
<td>$1.955</td>
<td>$2.055</td>
</tr>
<tr>
<td>Total</td>
<td>$11.868</td>
<td>$17.859</td>
<td>$23.977</td>
<td>$26.033</td>
</tr>
</tbody>
</table>

These expenditures are broken down into those which are primarily on educational expenditures consistent with the state I-O model (tuition payments and research) and those expenditures made by students, staff, faculty, and visitors, across the major maintenance and enjoyment of living categories, e.g., housing, transportation, food and beverages, recreation and entertainment. These amounts were determined by a survey taken in January 2009 of students, staff, and faculty (see Appendix Three).

The column totals (last row entries) of Table Two are then multiplied by the appropriate multipliers in Table One to assess the full economic impact of the expenditures of members of the College, as shown in Table Three.

### APPENDIX G - ECONOMIC IMPACT REPORT

Table Three: Final Demand Output, Earnings, Jobs and Tax Revenues

<table>
<thead>
<tr>
<th></th>
<th>$ figures in millions(rounded)</th>
<th>2008-2009</th>
<th>2009-2010</th>
<th>2010-2011</th>
<th>2011-2012</th>
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</thead>
<tbody>
<tr>
<td>Output</td>
<td></td>
<td>$22.77</td>
<td>$34.37</td>
<td>$46.29</td>
<td>$50.21</td>
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<tr>
<td>Earnings</td>
<td></td>
<td>$6.89</td>
<td>$10.45</td>
<td>$14.14</td>
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<tr>
<td>Jobs</td>
<td></td>
<td>274.3</td>
<td>416.3</td>
<td>503.6</td>
<td>610.4</td>
</tr>
<tr>
<td>Taxes</td>
<td></td>
<td>$1.14</td>
<td>$1.72</td>
<td>$2.33</td>
<td>$2.52</td>
</tr>
</tbody>
</table>

It is apparent that the College of Pharmacy is a major growth pole within the UHH. In 2008-2009, state appropriations (wages and salaries) of $2.708 million brought forth another $9.16 million in direct expenditures and $22.77 million in increased state output. Per wage and salary dollar, those are returns of $3.38 in direct expenditures and $8.41 in increased (direct and indirect) state output. These figures will rise with planned growth in the College (see Appendix Four). In sum, the College of Pharmacy is a generator of spending and economic activity in and of itself.

While this study is suggestive, there are reasons to believe that the estimates are conservative. Three areas, one estimated the others unaddressed, should provide further sources of new dollars into the state’s economy due to future activity at CoP over and above the planned growth through 2012. The first area, estimated above, is research funding for the College’s faculty and researchers. The nascent College has already attracted close to a million dollars per year in research grants and that figure could rise significantly as existing faculty generate more grants and new faculty come on-line. For the purpose of this study research funding was increased on a per capita faculty basis with the
level of funding determined by the 2008-2009 per faculty member level. This level may not represent the per capita funding once the College is at steady-state size and activity. There are economies of network, scope and agglomeration which may yield increased external funding per faculty as the number of faculty grows.

Secondly, research activity may lead to successful patenting and royalty earnings which will accrue partially to the state.

Thirdly, continuing education opportunities (conferences, educational summer programs, and the like) should provide a revenue stream into the College and of expenditures into the state economy by participants from around the world. Taking Tennessee as an example (see Gourley, et al, 2008, page 4), the College of Pharmacy at the University of Tennessee in Memphis attracted an estimated $1.1 million (in 2005) in this activity.

APPENDIX G - ECONOMIC IMPACT REPORT

Bibliography


Mak, James, PingSun Leung, Jeffrey Brown, and Marcia Sakai, December 2000, Economic Impact of the University of Hawai`i System, at: http://www.hawaii.edu/offices/app/econimpact/report.pdf, 2004 up-date by the two lead authors above at: http://www.hawaii.edu/offices/app/econimpact/03uhcontribution_report.pdf
APPENDIX ONE

Final demand Multipliers

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</thead>
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<tr>
<td>Output</td>
<td>1.918792</td>
<td>1.924699</td>
<td>1.9305</td>
</tr>
<tr>
<td>all else</td>
<td>1.918792</td>
<td>1.924699</td>
<td>1.9305</td>
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<tr>
<td>Weight1</td>
<td>2.21</td>
<td>0.429003</td>
<td>0.570997</td>
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<tr>
<td>Weight2</td>
<td>0.82</td>
<td>1.70</td>
<td>0.82</td>
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<tr>
<td>Jobs</td>
<td>32.9</td>
<td>23.11312</td>
<td>23.50662</td>
</tr>
<tr>
<td>Taxes</td>
<td>0.12</td>
<td>0.096018</td>
<td>0.096505</td>
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<tr>
<td>weighted average</td>
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From  Survey  State I-O Tables
<table>
<thead>
<tr>
<th>Table8</th>
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<tr>
<td>0.1000</td>
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APPENDIX TWO

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<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>College of Pharmacy</td>
<td>FY09</td>
<td>FY10</td>
<td>FY11</td>
</tr>
<tr>
<td>Total Students(1)</td>
<td>179</td>
<td>266</td>
<td>354</td>
</tr>
<tr>
<td>Resident</td>
<td>91</td>
<td>135</td>
<td>180</td>
</tr>
<tr>
<td>Non-Resident</td>
<td>88</td>
<td>131</td>
<td>174</td>
</tr>
<tr>
<td>Tuition Rate(2)</td>
<td>Resident</td>
<td>$15,750</td>
<td>$16,538</td>
</tr>
<tr>
<td>Non-Resident</td>
<td>$31,500</td>
<td>$33,076</td>
<td>$34,730</td>
</tr>
<tr>
<td>Tuition Residents</td>
<td>$1,433,250</td>
<td>$2,316,630</td>
<td>$3,125,682</td>
</tr>
<tr>
<td>Tuition Non-Residents</td>
<td>$2,772,000</td>
<td>$4,332,956</td>
<td>$6,042,985</td>
</tr>
<tr>
<td>Total Tuition Revenue</td>
<td>$4,205,250</td>
<td>$6,565,586</td>
<td>$9,168,667</td>
</tr>
</tbody>
</table>

External Source Research
| Funds(3) | $886,070 | $1,303,044 | $1,667,896 | $2,032,749 |
| Tuition&Research | $5,091,320 | $7,868,630 | $10,836,564 | $11,678,083 |
| Non-Tuition Spending per student(4) | $17,289 | $17,722 | $18,165 | $18,619 |
| Total Non-Tuition Student Expenditures | $3,094,781 | $4,713,922 | $6,430,251 | $6,695,626 |
| Visitor Spending(5) | $973,349 | $1,456,347 | $1,954,566 | $2,055,090 |
| Non-Tuition Student Expenditures+ | $9,195,450 | $14,038,899 | $19,221,380 | $20,342,798 |
| Faculty/staff Related($6210/year) | $167,670 | $229,149 | $280,548 | $334,375 |
| Total Expenditures+ | $9,363,120 | $14,264,048 | $19,501,928 | $20,677,163 |

Notes:
(1) Actual data in 2007-2009, projections for 2009 and beyond assume a 5% transition from non-resident to resident status per year and a 1% attrition rate per year. Attrition is low due to rigorous application screening, including in-person interviews.
(2) Actual rates for 2008-2009 and 2009-2010, increased 5% per year as per BOR.
(3) Actual figures for 2008-2009 (FY09) assumed to grow 47% from FY09 to FY10, 28% FY10 to FY11 and another 25% FY11 to FY12. This reflects the anticipated growth in faculty size (see below) not an increase in grants per faculty (which may well occur considering grants grew by 20% '08 to '09 without an increase in faculty numbers).
(4) Based on student survey results, January 24, 2009. Increased by expected rate of inflation of 2.5% per year.
(5) Daily expenditures from DBEDT, visitor's surveys, days per student (1/24/09 Survey) and per faculty/staff as per 1/24/09 survey. http://www.hawaii-county.com/databook_current/Table%207/7.24.pdf
(7) From Tables 8, 9, 10, 11, and 12, "The Hawai’i Inter-County Input-Output Study: 2002 Benchmark Report., March 2007, DBEDT, and survey information.
(8) Seventeen faculty and ten staff, average salaries provided.
APPENDIX THREE
Of those who moved to Hawaii to go to school at the UHH COP (n=29),...

Students
The average number of family members moving with them was 0.45.
96.6% rent property.
3.4% own property.
Average amount spent per month:
- $713.15 for housing, including utilities
- $172.04 for local transportation, including car payment, gas, and maintenance
- $351.48 for food, including groceries and eating out
- $172.77 for recreation and entertainment
21.4% are employed, working 8.5 hours per week at $11.17 per hour
82.8% (n=24) had friends or relatives from outside of Hawaii visit Hawaii in the past year because the student was here.
- average # of visitors in the past year = 3.75
- average % of those visitor nights they stayed in a hotel, motel, or other rental = 23.39%

Faculty
N=24 (80% response rate)
14 of 24 (58%) moved to Hawaii to work at the UHH COP.
Of those 14, 5 (36%) had one or more family members move with them.
Of those 5, the average number of family members moving with them was 2.
Of the 14 who moved to Hawaii to work at the UHH COP, 7 have been here a year or longer.
- average # of visits in the past year = 8.0
- average % of those visitor nights they stayed in a hotel, motel, or other rental = 28.14%

APPENDIX G - ECONOMIC IMPACT REPORT
APPENDIX Four

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Total Tuition Revenue</td>
<td>$4,205,250</td>
<td>$6,565,586</td>
<td>$9,169,667</td>
<td>$9,645,334</td>
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<tr>
<td>External Source Research Funds</td>
<td>$886,070</td>
<td>$1,303,044</td>
<td>$1,667,896</td>
<td>$2,032,749</td>
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<tr>
<td>Total Non-Tuition Student Expenditures</td>
<td>$2,094,781</td>
<td>$4,713,922</td>
<td>$6,430,251</td>
<td>$6,609,626</td>
</tr>
<tr>
<td>Visitor Spending</td>
<td>$973,349</td>
<td>$1,456,347</td>
<td>$1,954,566</td>
<td>$2,055,090</td>
</tr>
<tr>
<td>Total Salaries</td>
<td>$2,708,333</td>
<td>$3,820,525</td>
<td>$4,755,368</td>
<td>$5,690,211</td>
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<tr>
<td>Total</td>
<td>$11,867,783</td>
<td>$17,859,424</td>
<td>$23,976,748</td>
<td>$26,033,009</td>
</tr>
<tr>
<td>External Dollar/W&amp;S$</td>
<td>$3.38</td>
<td>$3.67</td>
<td>$4.04</td>
<td>$3.58</td>
</tr>
</tbody>
</table>
| Multipliers
| Final Demand Output | 1.919 | 1.925 | 1.931 | 1.929 |
| Final Demand Earnings | 0.58  | 0.58  | 0.59  | 0.588 |
| Final Demand Total Jobs (per million$) | 23.1 | 23.3 | 23.5 | 23.45 |
| Final Demand Tax | 0.096 | 0.097 | 0.097 | 0.097 |
| Impact (Statewide)
| Final Demand Output | $22,774,276 | $34,379,391 | $46,299,124 | $50,217,669 |
| Final Demand Earnings | $6,883,341  | $10,447,762 | $14,146,286 | $15,307,409 |
| Final Demand Total Jobs (per million$) | 274.1 | 416.1 | 563.5 | 610.5 |
| Final Demand Tax | $1,139,307  | $1,732,364 | $2,325,745 | $2,525,202 |
| Output/W&S $ | $8.41 | $9.00 | $9.74 | $8.83 |
INTRODUCTION

As the UHH College of Pharmacy (COP) enrolled its second cohort of pharmacy students, the first formal strategic planning cycle was launched in accordance with Accreditation Council for Pharmacy Education (ACPE) standards. As a new college, and the only pharmacy program in Hawaii and the Pacific Basin, we are navigating new territory. Through this planning process, we understand our unique opportunities. Through execution of these plans, we achieve excellence.

Why we exist – Our purpose: The mission of the COP is the traditional mission of academic healthcare – education, research, and service with emphasis on patient care. More specifically, our mission is:

- To educate pharmacy practitioners and leaders.
- To serve as a catalyst for innovations and discoveries in pharmaceutical science and practice for the promotion of health and wellbeing.
- To provide community service, including quality patient care.

What our mission is based on – Our overarching goals: The COP mission is predicated on four goals:

- Implement academic curricula leading to a flagship Pharm. D. program, which produces graduates committed to serving people via science-based practice.
- Accountability to the Institute of Medicine core competencies for the health professional workforce.
- Conduct research that advances pharmaceutical sciences and makes a difference for humanity inclusive of effects on global health.
- Cultivate culturally competent, intellectually inquisitive, self-directed, caring pharmacists, who are critical thinkers, problem solvers and life-long learners in a changing healthcare environment.

The way we do business – Our values: A values framework underpins the COP mission and vision in its commitment to building a culture of quality and excellence in pharmacy practice and pharmaceutical sciences via enactment of five values:

- Ethics underlies responsibility and accountability to standards in ensuring safe, quality, healthy environments for education, conducting research, providing pharmaceutical healthcare services, and sustaining livelihood. The COP thrives upon ethical decision-making and morality.
- Community is cultivated through spaces of collaborations and places of meaning, respect, openness, freedom and creativity. The COP is rooted in humanism.
- Diversity among people, cultures, theories, practices, institutions permeate 21st century healthcare. The COP embraces and celebrates diversity, with a niche in cultural diversity.
- Scholarship is the passion and outcomes of academic and professional life. The quest of the COP for quality and excellence affirms scholarly pursuits.
Life-long learning is the pathway to stimulating pharmacy practice on a continuum of development and advancing pharmacy as a science and profession. The COP is nurtured via the continuum of lifelong education.

Where we want to go – Our vision: The vision of the College of Pharmacy at the University of Hawaii at Hilo is to drive improvement in the quality of healthcare in Hawaii and throughout the Pacific Basin.

How we will get there – Our primary strategy: We will achieve this vision by focusing on Hawaii’s unique cultural, physical, and geographic features, by employing world-class faculty, and by graduating exceptional professionals.

The hallmarks of our planning process – Our guiding principles: As we chart our course, we are committed to:

- Preserving the strengths of our foundation.
- Demonstrating a positive impact.
- Ensuring financial viability that enables us to support the mission of UH Hilo.
- Living the values of the University of Hawaii System.
- Engaging and giving back to our community.
- Embracing unique opportunities.

How we measure success – Our global performance indicators: In addition to the strategy-specific process and outcome measures identified in this plan, we track these global measures of excellence:

- Scholarly publications.
- Total dollars in competitive research awards.
- Operational surplus.
- Student/graduate success.
- Health/healthcare improvement.

The purpose of this strategic plan is to facilitate the achievement of our vision by identifying specific strategic goals, timelines, measures, and accountabilities. As we achieve this vision, we advance the mission and overarching goals of the College of Pharmacy.
Appendix H - Strategic Plan

Facilities Goals
- Acquire or build adequate space to support the goals outlined in this strategic plan and planned enrollment growth in numbers of students, faculty, and staff.
- Develop a master facilities plan to support the design of a permanent pharmacy building or campus that will meet the long-range needs of the COP.

Finance Goals
- Establish and implement a tool for conducting financial analyses and projections of consolidated COP sources and uses of funds.
- Establish and implement internal financial processes that support alignment with the UH and UHH budget cycle and effective, efficient operations.
- Establish and implement training for COP faculty and staff to ensure awareness and understanding of budget and finance issues.
- Document the economic impact of the COP on the State of Hawaii.

GOAL DETAILS

RESEARCH

Strategic RESEARCH Goal # 1:
Develop a community research partnership, process, and protocol for understanding the diversity of natural products originating in Hawaii, the Pacific, and around the world and their applications to healing in a culturally respectful way.

Rationale:
The science of drug discovery from natural products has developed a reputation as an exploitative endeavor. Community concerns about bioprospecting have raised valid questions about how to fairly share the benefits from research and how to ensure sustainable use of biodiversity. As a new College of Pharmacy with experts in natural products research in a location with significant biodiversity and a history of traditional medicine, it is essential that the community—defined as the diverse groups of people, particularly Native Hawaiians, who share social ties, common perspectives, and activities in Hawaii—be active partners in and help guide any potential research with natural products of local cultural significance. A natural product is defined as an organic compound from terrestrial or marine organisms.

Objectives:
- To build relationships with community leaders—defined as those who are generally respected by local community members for their knowledge and preservation of cultural traditions pertaining to medicinal use of natural products throughout the state of Hawaii, particularly Native Hawaiian healers, and share perspectives on understanding the scientific basis of ethnomedical practices, health and wellness needs of the community, and the College’s research interests.
- To develop consensus among community leaders regarding the development of a general approach to the investigation of local ethnomedical practices.
- To develop consensus among the community leaders regarding the proper procedures and cultural protocols for using small amounts of local natural resources for research addressing the health needs of the local and global communities.
- To ensure that local natural products research is conducted with the community’s support and participation.

Actions (due date; responsible person/department):
- Identify the community leaders, including Native Hawaiian healers, who are stakeholders in local natural products research (December, 2009; Director of Community Partnerships in consultation with Native Hawaiian health and cultural organizations).
- Host community forums with the community leaders, open to the public, to
Traditional Native Hawaiian healers. These actions will provide faculty and students with the unique opportunity to learn from professionals:

- Participate in a model community-based participatory research program in a culturally diverse setting.
- Initiate research programs in alignment with the recommendations of the community research council (June 2012, Associate Dean for Research).

Impact of the implementation on the existing program:
Implementation of these actions will greatly enhance the opportunities for students to participate in a model community-based participatory research program in a culturally diverse setting.

Opportunities for beneficial interactions with other health professions and professionals:
These actions will provide faculty and students with the unique opportunity to learn from traditional Native Hawaiian healers.

Resources that need to be allocated:
Existing faculty and staff resources will be allocated to these actions. Travel and event funds will be needed to host the community forums and to support the participation of Hawaiian healers. Funds will also be needed to compensate Community Research Council members for their time. UHH counsel will be needed to assist with the development of the community agreement.

<table>
<thead>
<tr>
<th>EVALUATION PLAN</th>
<th>Strategy-specific process measures</th>
<th>Frequency of Review</th>
<th>Review and Action By</th>
<th>Collected By</th>
<th>Disseminated To</th>
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</thead>
<tbody>
<tr>
<td>NIH grant awards (total dollars received from NIH plus dollars received as a subcontractor or co-PI) pertaining to natural products and submitted with support and participation from the community research advisory group</td>
<td>Annual</td>
<td>Executive Committee, Associate Dean for Research, Community Research Council</td>
<td>Fiscal Officer</td>
<td>Faculty &amp; Staff &amp; Community Research Council</td>
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</table>

**Foundation/Association research awards (total dollars pertaining to natural products and submitted with support and participation from the community research advisory group)**  
**Peer reviewed publications, per Pharmaceutical Sciences faculty, pertaining to natural products and submitted with support and participation from the community research advisory group**  
**Total dollars in licensing revenue given to the local community resulting from development of natural products based on traditional Hawaiian medicine.**

**EVALUATION PLAN**

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<tr>
<th>Strategy-specific outcome measures</th>
<th>Frequency of Review</th>
<th>Review and Action By</th>
<th>Collected By</th>
<th>Disseminated To</th>
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<tbody>
<tr>
<td>Number of natural products-based new lead compounds developed by the CoP</td>
<td>Annual</td>
<td>Executive Committee, Associate Dean for Research, Community Research Council</td>
<td>Associate Dean for Research</td>
<td>Faculty &amp; Staff &amp; Community Research Council</td>
</tr>
</tbody>
</table>

**Strategy-specific outcome measures**

- Number of natural products-based new lead compounds developed by the CoP
- Total dollars in licensing revenue given to the local community resulting from development of natural products based on traditional Hawaiian medicine.

**Strategic RESEARCH Goal # 2:**
Create a pharmaceutical technology research center for dosage form design and characterization based on the precepts of Quality by Design.

**Rationale:**
Relative to other industries, the pharmaceutical industry has been slow to implement the concepts of quality by design (QbD) that emphasize the importance of designing products with the end in mind. This is due largely to regulatory requirements and to the fact that traditional quality assurance and clinical trial practices have been reasonably cost-
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Appendix H

Effectiveness
Effective when the majority of pharmaceutical products are based on small molecular drugs. As our active pharmaceutical ingredients are increasing in complexity and potency, a new model is needed to ensure the viability of drug design and manufacture into the future. The Food and Drug Administration also recognizes that implementation of QbD principles has the potential to significantly reduce waste in these processes.

Objectives:
- To implement a research model that improves the cost-effectiveness of drug development and manufacture.
- To expand dosage form development to include complex and natural products.
- To educate the next generation of drug development scientists and engineers.

Actions (due date; responsible person/department):
- Establish a state-of-the-art physicochemical characterization laboratory that includes the following (December, 2011; Associate Dean for Research):
  - Equipment to elucidate key properties of raw materials, intermediates, and final dosage forms via spectroscopic, diffraction, mechanical, and thermoanalytical techniques.
  - Facilities in which to safely operate the equipment.
- Staff trained to conduct research using the equipment.
- Engage industrial partners to contract with UHH COP to use the lab (December, 2011; Associate Dean for Research)

Impact of the implementation on the existing program:
Establishment of this lab will give pharmacy students the opportunity to learn advanced analytical laboratory and design sciences for discovery and development not available in the majority of pharmacy programs.

Opportunities for beneficial interactions with other health professions and professionals:
Students, faculty, and staff involved in this laboratory will have the opportunity to interact with a broad range of pharmaceutical scientists, regulatory staff, and administrators in industry and other universities through research partnerships.

Resources that need to be allocated:
Facilities and equipment will be provided by UHHI. Technicians will be supported by federal and/or industry research contracts and will be supervised by existing faculty.

Rationale:
There have been significant national efforts to study health and disease patterns among diverse populations and to implement interventions to reduce racial and ethnic health disparities. However, the majority of health disparities interventions have focused on Black/African American and Hispanic/Latino populations. Furthermore, virtually all of the racial/ethnic health disparities studies pertaining to medication therapy management and compliance have focused on differences between Whites, Blacks/African Americans, and/or Hispanic/Latinos. Thus, there is a need to better understand disease and medication therapy management among the diverse populations with origins in Asia, Hawaii, and other Pacific Islands.

Strategy-specific growth measures:

<table>
<thead>
<tr>
<th>Strategy-specific growth measures</th>
<th>Frequency of Review</th>
<th>Review and Action By</th>
<th>Collected By</th>
<th>Disseminated To</th>
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</thead>
<tbody>
<tr>
<td>Peer reviewed publications involving the pharmaceutical technology research center</td>
<td>Annual</td>
<td>Associate Dean for Research</td>
<td>Associate Dean for Research</td>
<td>Faculty &amp; Staff</td>
</tr>
</tbody>
</table>

Strategic RESEARCH Goal # 3:
Build a center of excellence in health services research focused on medication therapy management and outcomes in diseases prevalent among Hawaii’s diverse populations.

Objectives:
- To advance knowledge regarding medication use and outcomes.
- To reduce health disparities among diverse populations in Hawaii.
- To be the leading resource for medication issues pertaining to the diverse populations with origins in Asia, Hawaii, and other Pacific Islands.

Actions (due date; responsible person/department):
- Expand the capacity for conducting biostatistical analyses with a large administrative and clinical database through partnerships with other organizations and/or hiring additional faculty and staff with this expertise (December 2009, Associate Dean for Research, Chair of Pharmacy Practice).
- Identify and subscribe to, purchase, and/or execute data agreements to access large dataset(s) that include medication data elements from Hawaii patients and/or
Peer reviewed publications, per Pharmacy Practice faculty, pertaining to clinical epidemiology | Annual | Executive Committee, Associate Dean for Research | Associate Dean for Research | Faculty & Staff

Strategy-specific outcome measures | Frequency of Review | Review and Action By | Collected By | Disseminated To

Impact of research findings on health outcomes as quantified in peer-reviewed publications | Annual | Executive Committee, Associate Dean for Research | Associate Dean for Research | Faculty & Staff

**Strategic RESEARCH Goal #4:**
Achieve excellence in research on teaching effectiveness and learning outcomes in pharmaceutical education spanning the continuum of lifelong learning and advance the profession.

**Rationale:**
The UHH COP is committed to lifelong learning and promotes this value among students, faculty, staff, preceptors, and graduates. A comprehensive research program on teaching effectiveness will facilitate the continuous improvement of the educational programs offered by the COP. This program will not be limited to the traditional degree-seeking student learning, but will include research on distance learning, preceptor training, mentorship, and continuing education.

**Objectives:**
- To develop innovative, evidence-based teaching/learning methods and programs that guide and address all aspects of the COP educational needs and offerings.
- To conduct research programs which evaluate teaching/learning methods and programs across the continuum of educational needs and offerings and contribute new and meaningful knowledge to the disciplines relevant to the profession of pharmacy.
- To understand the impact of cultural diversity on teaching effectiveness and learning outcomes.
- To engage in the research process the communities of learners who are the recipients of COP educational offerings.
- To promote an academic environment that supports continuation of faculty development and growth as an effective, active teacher, experiential preceptor, healthcare professional, and mentor.
- To promote an environment for active student learning with an emphasis on curiosity, scientific method, creative thinking, problem-solving, integrative abilities, life-long learning, and effective verbal and written communication.

**Actions (due date; responsible person/department):**
- Assemble a team of researchers with interest in teaching effectiveness (June 2009).
Improving health in Hawai’i and throughout the Pacific
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APPENDIX H - STRATEGIC PLAN

EDUCATION

Strategic EDUCATION Goal # 1:
Establish a general pharmacy practice residency program through existing practice sites to encourage scholarship and academic careers.

Rationale:
Residency programs give pharmacists extensive clinical training along with research experience. These programs also provide exposure to diverse career paths and a competitive advantage in many markets. There are currently only three accredited postgraduate pharmacy residency programs located in Hawaii. Thus, there are only a small handful of resident positions available in Hawaii to Pharm.D. graduates, and none that address the unique issues involved in rural healthcare.

Objectives:
- To increase the pool of advanced pharmacy clinicians with rural health experience in Hawaii.
- To increase the pool of pharmacists with research experience and facilitate recruitment for faculty positions in the Department of Pharmacy Practice.

Actions (due date; responsible person/department):
- Identify sites that will serve as the primary residency training sites (December 2009; Chair of Pharmacy Practice).
- Establish funding for three resident positions (December, 2009; Chair of Pharmacy Practice).
- Design the residency program (i.e., rotational, extended, longitudinal, and/or concentrated), including development of learning objectives, evaluation, service commitment, training manual, and research project (December 2010; Chair of Pharmacy Practice).
- Designate a Residency Program Director (December 2010; Chair of Pharmacy Practice).
- Apply for pre-candidate status from the American Society of Health-System Pharmacists (December 2010; Chair of Pharmacy Practice).
- Recruit for and fill the resident positions (July 2011; Chair of Pharmacy Practice).
- Apply for ASHP accreditation (July 2011; Residency Program Director).

Impact of the implementation on the existing program:
Establishing an accredited residency program will enhance student recruitment for the current Pharm.D. program and give graduates an opportunity to obtain intensive training in rural Hawaii.

Opportunities for beneficial interactions with other health professions and professionals:
A residency program will give faculty the opportunity to strengthen relationships with practice sites in the community.
EVALUATION PLAN

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<tr>
<th>Strategy-specific process measures</th>
<th>Frequency of Review</th>
<th>Review and Action By</th>
<th>Collected By</th>
<th>Disseminated To</th>
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</thead>
<tbody>
<tr>
<td>Number of pharmacists completing the residency program</td>
<td>Annual Executive Committee</td>
<td>Residency Program Director</td>
<td>Faculty &amp; Staff</td>
<td></td>
</tr>
<tr>
<td>Strategy-specific outcome measures</td>
<td>Frequency of Review</td>
<td>Review and Action By</td>
<td>Collected By</td>
<td>Disseminated To</td>
</tr>
<tr>
<td>Number of graduates from the residency program working in clinical pharmacy positions in rural Hawaii or as a faculty member in the COP Department of Pharmacy Practice</td>
<td>Annual Executive Committee</td>
<td>Residency Program Director</td>
<td>Faculty &amp; Staff</td>
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Strategic EDUCATION Goal # 2:
Launch graduate programs to educate students and support the research mission in both academic departments.

Rationale:
The COP is committed to enhancing the science of pharmacy through its teaching and research mission. In order to achieve excellence and advance the discipline, it is important to develop research-oriented programs that will complement the current Pharm.D. program, which focuses on the practice of pharmacy. Graduate programs aligned with the academic departments will offer advanced education options to college and pharmacy students while promoting scholarship within each department.

Objectives:
- To enhance academic rigor and scholarship within the COP.
- To leverage the research expertise of COP faculty.
- To advance the science of pharmacy.
- To offer new career options to undergraduate and pharmacy students.

Actions (due date; responsible person/department):
- Develop a graduate degree program in Pharmaceutical Sciences:
  - Identify at least one proposed graduate degree aligned with the Pharmaceutical Sciences department (June, 2009; Associate Dean for Academic Affairs).
  - Obtain “Authorization to Plan” as required by the UH System (January, 2010; Associate Dean for Academic Affairs).
  - Complete UH System-required New Program Proposal and obtain Board of Regents approval (January, 2011; Associate Dean for Academic Affairs).
  - Complete external notifications and/or approvals of new graduate program (June, 2011; Associate Dean for Academic Affairs).
  - Launch recruitment and enroll students (August, 2011; Associate Dean for Academic Affairs).
- Develop a graduate degree program in Pharmacy Practice:
  - Identify at least one proposed graduate degree aligned with the Pharmacy Practice department (December, 2011; Associate Dean for Academic Affairs).
  - Obtain “Authorization to Plan” as required by the UH System (June, 2012; Associate Dean for Academic Affairs).
  - Complete UH System-required New Program Proposal and obtain Board of Regents approval (June, 2013; Associate Dean for Academic Affairs).
  - Complete external notifications and/or approvals of new graduate program (January, 2014; Associate Dean for Academic Affairs).
  - Launch recruitment and enroll students (August, 2014; Associate Dean for Academic Affairs).

Impact of the implementation on the existing program:
Implementation of these actions will offer Pharm.D. students the option of obtaining a research degree to complement the professional degree. Pharm.D. students will also be able to choose from a broader array of research-focused electives from a larger faculty with research expertise.

Opportunities for beneficial interactions with other health professions and professionals:
These actions will significantly increase the opportunity for students and faculty to interact with researchers in pharmacy-related sciences.

Resources that need to be allocated:
The current faculty and staff recruitment plan will support the planning processes for these graduate programs. Each graduate program plan will include details regarding the resources that will be needed and sources of funds to support these programs.

EVALUATION PLAN

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</table>
As a leader of clinical pharmacy training and education for the State of Hawaii and professionals/clinicians.

Develop continuing education programs to support lifelong learning for healthcare program faculty

Peer reviewed publications per graduate program faculty

Rationale:
As a leader of clinical pharmacy training and education for the State of Hawaii and throughout the Pacific Basin, the UH COP is committed to continuing education for health professionals, including the preceptors who contribute to the experiential training of pharmacy students. Hawaii State Law requires continuing education credits for licensed physicians, pharmacists, and nurses with prescription authority. The COP has the expertise to offer pharmacy-related continuing education programs designed to ultimately improve patient care.

Objectives:
- To be the leader in pharmacy-related continuing education programs throughout Hawaii and the Pacific Basin.
- To offer evidence-based continuing education programs that will strengthen knowledge and skills and facilitate practice change to produce optimal patient outcomes.
- To offer education programs that improve preceptor teaching skills, enhance student experiential learning, and increase preceptor retention and satisfaction.
- To establish a continuing education office that is financially viable and based on integrity.

Actions (due date; responsible person/department):
- Achieve accreditation as a CE provider for pharmacists and physicians (June 2009, Director of Continuing Education).
- Establish capability to offer programs via distance learning (December 2009, Director of Continuing Education).
- Market the CE Office to organizations with CE needs (December 2009, Director of Continuing Education).
- Design and conduct CE programs to address patient care issues in Hawaii and the

Impact of the implementation on the existing program:
Offering rigorous, relevant continuing education programs will encourage best practice and lifelong learning among COP graduates. Programs targeting preceptors will enhance the experiential education of pharmacy students.

Resources that need to be allocated:
After accreditation is achieved and programming is underway, a part-time CE coordinator will be needed. It is expected that this role will develop into a full-time position as the program grows. Technology needs include the ability to offer programs via distance learning and the ability to scan participant surveys.
Strategic EDUCATION Goal # 4:
Establish a drug information service to promote quality patient care in Hawaii.

Rationale:
The COP is preparing a pipeline of highly trained pharmacists that will help ease the shortage in Hawaii and the Pacific Basin. While these pharmacists will help increase basic clinical coverage at existing hospitals, clinics, and retail pharmacies, Hawaii continues to lack critical infrastructure for supporting the delivery of optimal medication therapy management across its diverse populations, especially for those located in rural settings. The introduction of a drug information service will provide evidence-based decision support to healthcare professionals, consumers, and policy-makers that can help ensure medication use is safe, effective and appropriate.

Objectives:
- To improve access to evidence-based drug information.
- To improve the safe, effective and appropriate use of medications.
- To provide a center for drug policy analysis and consultation.
- To provide a resource to drug benefit coverage information.
- To support community efforts to preserve local knowledge of Traditional Medicines.

Actions (due date; responsible person/department):
- Recruit a Pharmacy Practice faculty member with expertise in drug information services (December 2009, Chair of Pharmacy Practice).
- Secure subscriptions to all relevant electronic resources (December 2009, Chair of Pharmacy Practice and Pharmacy/Health Sciences Librarian).
- Develop a menu of service offerings, including specific deliverables and fee schedules (December 2010, Chair of Pharmacy Practice).
- Invite community leaders in Hawaiian Traditional Medicines to collaborate with the Hawaiian Collection Librarian in the creation of a library or information resources that will catalog information about Hawaiian Traditional Medicines (March 2010, Director of Community Partnerships and Pharmacy/Health Sciences Librarian).
- Identify and evaluate reimbursement opportunities (March 2010, Chair of Pharmacy Practice).
- Establish a service Director, faculty staffing, and student rotations (June 2010, Chair of Pharmacy Practice).
- Launch and market services throughout Hawaii (December 2010, Chair of Pharmacy Practice and Director of Community Partnerships).

Impact of the implementation on the existing program:
These actions will offer students a unique rotation and training in literature retrieval, evaluation, and consultation.

Opportunities for beneficial interactions with other health professions and professionals:

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EVALUATION PLAN

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<th>Review and Action By</th>
<th>Collected By</th>
<th>Disseminated To</th>
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<tbody>
<tr>
<td>Volume of contacts by client type</td>
<td>Quarterly</td>
<td>Executive Committee</td>
<td>Director of Drug Information Services</td>
<td>Faculty &amp; Staff</td>
</tr>
<tr>
<td>User satisfaction survey</td>
<td>Annual</td>
<td>Executive Committee</td>
<td>Director of Drug Information Services</td>
<td>Faculty &amp; Staff</td>
</tr>
<tr>
<td>Revenue</td>
<td>Quarterly</td>
<td>Executive Committee</td>
<td>Director of Drug Information Services</td>
<td>Faculty &amp; Staff</td>
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<tr>
<th>Strategy-specific outcome measures</th>
<th>Frequency of Review</th>
<th>Review and Action By</th>
<th>Collected By</th>
<th>Disseminated To</th>
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</thead>
<tbody>
<tr>
<td>Documented evidence-based practice changes resulting from use of services</td>
<td>Annual</td>
<td>Executive Committee</td>
<td>Director of Drug Information Services</td>
<td>Faculty &amp; Staff</td>
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Strategic EDUCATION Goal # 5:
Enhance outreach programs for underserved communities to address healthcare needs.

Rationale:
The State of Hawaii is comprised of a large number of rural, medically underserved areas and populations, with shortages in primary care health professionals and mental health professionals. In addition, it is estimated that 12% of all hospitalizations in the State of Hawaii could be avoided through education of high-risk populations, improved access to vaccines, early interventions, and appropriate outpatient care. The COP is committed to building a teaching model that addresses community health needs in Hawaii and throughout the Pacific.

Resources that need to be allocated:
The current faculty recruitment plan will support this initiative, provided that a faculty member with drug information service expertise can be successfully recruited. Resources for subscriptions to all relevant electronic resources will need to be secured, along with resources to market the services.
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Objectives:

- To improve medication education throughout local communities.
- To reduce morbidity, mortality, and health resource utilization through preventive measures.
- To improve quality of life among Hawaii residents.
- To reduce health disparities and improve health literacy among underserved populations.
- To increase visibility of COP contributions to addressing local health issues and concerns.
- To enhance community partnerships, support, and trust.
- To enhance service learning opportunities for pharmacy students.
- To promote the value of community service among students and faculty.

Actions (due date; responsible person/department):

- Host community-based educational seminars on health-related topics:
  - Identify educational needs and interests (December 2009 and beyond; Director of Community Partnerships).
  - Plan, design, and launch programs in Hilo (December 2010 and beyond; Chair of Pharmacy Practice and Director of Community Partnerships).
  - Use distance technology to expand program reach throughout Hawaii (June 2011 and beyond; Director of Continuing/Distance Education).
  - Use distance technology to expand program reach throughout Asia and the Pacific Basin (December 2011 and beyond; Director of Continuing/Distance Education).
- Coordinate with local health organizations to provide medication education and participate in screening, prevention, and early intervention efforts:
  - Identify organizations with service needs such as assistance with immunizations, HIV and Hepatitis awareness, and UHH student health services (December 2009 and beyond; Director of Community Partnerships).
  - Obtain and implement legal advice regarding liability issues for students and faculty (March 2010; Chair of Pharmacy Practice).
  - Coordinate with targeted health organizations to provide healthcare-related outreach services (September 2010 and beyond; Director of Community Partnerships).
  - Partner with medical mission organizations to enhance pharmacy services offered on international medical missions:
  - Coordinate with medical mission organizations to identify pharmacy service needs (December 2009; Chair of Pharmacy Practice).
  - Establish medical mission participation as a course elective for pharmacy students (December 2010; Chair of Pharmacy Practice).
- Enhance outreach efforts to assist and inspire Native Hawaiians and other Pacific Islanders to pursue a career in pharmacy:
  - Establish a “Pharmacy Gateway Program” modeled on the UH Keala Lapa'au Program (December 2010; Director of Pre-Pharmacy).

EVALUATION PLAN

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<tr>
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<th>Collected By</th>
<th>Disseminated To</th>
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<tbody>
<tr>
<td>Number of collaborations with community organizations</td>
<td>Annual</td>
<td>Executive Committee</td>
<td>Director of Community Partnerships</td>
<td>Faculty &amp; Staff</td>
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<tr>
<td>Number of COP outreach events delivered</td>
<td>Annual</td>
<td>Executive Committee</td>
<td>Chair of Pharmacy Practice</td>
<td>Faculty &amp; Staff</td>
</tr>
<tr>
<td>Number of consumers attending COP outreach events</td>
<td>Annual</td>
<td>Executive Committee</td>
<td>Chair of Pharmacy Practice</td>
<td>Faculty &amp; Staff</td>
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1 Hawaii Health Information Corporation, Health Trends in Hawaii; available at: http://www.healthtrends.org/healthutilize_overview.aspx
3 Hawaii Health Information Corporation, Health Trends in Hawaii; available at: http://www.healthtrends.org/healthutilize_overview.aspx

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- Explore the feasibility, costs and benefits of establishing a UHH COP academic health clinic:
  - Assess current models of academic pharmacy health care in rural settings (December 2010, Chair of Pharmacy Practice).
  - Identify an optimal academic health clinic model for Hawaii (December 2011, Chair of Pharmacy Practice).
  - Conduct a feasibility study to determine the viability, costs and benefits of launching and operating a UHH COP academic health center (December 2012, Chair of Pharmacy Practice).

Impact of the implementation on the existing program:
Implementation of these actions will significantly enhance the experiential program focus on community service and health outcomes. This will produce pharmacists who have a greater understanding of community health issues and how pharmacists can make a positive impact.

Opportunities for beneficial interactions with other health professions and professionals:
Implementation of these actions will greatly expand interactions with community-based interdisciplin ary teams.

Resources that need to be allocated:
Pharmacy practice faculty and preceptors will need to be dedicated to these actions. Legal services will also be needed to assess and implement risk management actions. For most outreach initiatives, funding sources will need to be identified to cover miscellaneous expenses such as supplies and printed materials. For the academic health center, resources will be needed to hire a consultant to conduct the feasibility study and, if viable, to establish the facilities and technical infrastructure.
Number of Native Hawaiians and other Pacific Islanders who apply to the UHH Pharm.D. program overall and by referral source

| Annual Executive Committee, Associate Dean for Academic Affairs | Director of Student Services | Faculty & Staff |

Strategic EDUCATION Goal #6:

Broaden the pool of clinicians able to safely manage medications and improve patient access.

Rationale:

Effective medication therapy management is critical for quality patient care across the continuum of care. Given the fragmented healthcare system, health professional shortages, particularly in rural areas, and continued high rates of medication errors, the COP is committed to establishing advanced educational offerings that will enhance safe medication management and patient access.

Objectives:

- To expand the scope of practice among qualified clinicians.
- To improve access to high quality medication management services in rural areas.
- To improve medication management competence among clinicians.
- To reduce medication errors.
- To facilitate the development of new models of medication therapy management service delivery that will improve quality of care.

Actions (due date; responsible person/department): Develop a dual Pharm.D./advanced nursing degree program:

- Assess the viability of this dual degree program, including assessment of the need, market, availability of clinical sites, and student interest (March, 2010; Associate Dean for Academic Affairs).
- If viable, develop the curriculum in collaboration with the Nursing Department and obtain institutional and external approvals for the program (December, 2010; Associate Dean for Academic Affairs).
### Appendix H - Strategic Plan

#### HUMAN RESOURCES

**Strategic HUMAN RESOURCES Goal # 1:**
Attract faculty that will be a good fit for the unique environment and opportunities of the UHH COP.

**Rationale:**
Currently, Pharmacy Practice faculty demand is high due to the establishment of many new Pharm.D. programs throughout the nation. At the same time, given the pharmacist shortage that is the target of these new programs, the supply of qualified Pharmacy Practice faculty is low. The task force on the pharmacy faculty workforce founded by the Council of Faculties and the Council of Deans within the American Association of Colleges of Pharmacy recommends recruitment strategies that promote the unique benefits of a career in academia. In addition, while most people are attracted to the unique beauty and opportunities in Hawaii, the geographic location and rural setting makes this an impractical career choice for many Pharmacy Practice and Pharmaceutical Sciences faculty prospects.

**Objectives:**
- To increase the pool of high quality, good-fit candidates applying for open faculty positions.
- To attract sufficient senior-level faculty to ensure mentors are available to junior faculty.
- To improve the efficiency of the recruitment process.

**Actions (due date; responsible person/department):**
- Develop faculty recruitment materials that strongly emphasize the unique features of the UHH COP and the quality of life in Hilo (December 2009; Dean).
- In addition to routine ad placement, target recruiting to those individuals interested in working in rural settings (June 2010; Dean).
- Establish and promote in faculty/staff recruitment materials a program to assist new employees with the following (December, 2009; Director of Strategic Planning):
  - Professional networking for spouses.
  - Evaluating housing options.
  - Orienting to life in Hilo.
  - Applying for available loan repayment programs.
  - Assistance with immigration processes and requirements.
- Implement counseling for students that highlights the benefits of an academic career (June 2010; Director of Student Services).

**Impact of the implementation on the existing program:**
Implementation of these actions will likely enhance the existing program by reducing faculty turnover.

### EVALUATION PLAN

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<tr>
<th>Strategy-specific process measures</th>
<th>Frequency of Review</th>
<th>Review and Action By</th>
<th>Collected By</th>
<th>Disseminated To</th>
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<tbody>
<tr>
<td>Number of students enrolled in and graduating with the dual Pharm.D./advance nursing degree</td>
<td>Annual</td>
<td>Executive Committee, Associate Dean for Academic Affairs</td>
<td>Director of Student Services</td>
<td>Faculty &amp; Staff</td>
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<tr>
<td>Number of students enrolled in and graduating with the dual Pharm.D./M.B.A. degree</td>
<td>Annual</td>
<td>Executive Committee, Associate Dean for Academic Affairs</td>
<td>Director of Student Services</td>
<td>Faculty &amp; Staff</td>
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<tr>
<td>Number of psychologists enrolled in and completing the Psychopharmacology Certificate program</td>
<td>Annual</td>
<td>Executive Committee, Associate Dean for Academic Affairs</td>
<td>Director of Student Services</td>
<td>Faculty &amp; Staff</td>
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<th>Review and Action By</th>
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<tbody>
<tr>
<td>Number of graduates from the Pharm.D./advanced nursing program working in positions that use both pharmacy and nursing clinical skills</td>
<td>Annual</td>
<td>Executive Committee, Associate Dean for Academic Affairs</td>
<td>Director of Student Services</td>
<td>Faculty &amp; Staff</td>
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<tr>
<td>Number of graduates from the Pharm.D./M.B.A. program working in pharmacy management positions</td>
<td>Annual</td>
<td>Executive Committee, Associate Dean for Academic Affairs</td>
<td>Director of Student Services</td>
<td>Faculty &amp; Staff</td>
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<tr>
<td>Number of psychologists completing the Psychopharmacology Certificate program who report that the certificate has helped improve clinical competence</td>
<td>Annual</td>
<td>Executive Committee, Associate Dean for Academic Affairs</td>
<td>Director of Student Services</td>
<td>Faculty &amp; Staff</td>
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</table>
Resources that need to be allocated:
These actions will be implemented with existing staff, technology, and recruitment budgets.

Strategic HUMAN RESOURCES Goal #2:
Establish an effective mentorship program to develop and retain strong faculty, staff, and preceptors.

Rationale:
Given the disruption and expense of turnover and the competition among pharmacy programs, retaining strong faculty, staff, and preceptors is a priority. The American College of Clinical Pharmacy Education Task Force and the task force on the pharmacy faculty workforce founded by the Council of Faculties and the Council of Deans within the American Association of Colleges of Pharmacy recommend implementation of mentorship programs. Similarly, the American Association of Colleges of Pharmacy Faculty Recruitment and Retention Committee Final Report (2004) recommends that schools of pharmacy create faculty development programs. Finally, the peer-reviewed literature on mentorship indicates that good mentorship is associated with greater career and job satisfaction and reduced turnover intentions, that informal mentorship relationships are more effective than formal ones, and that perceived quality of input into the mentoring process predicts effectiveness.

Objectives:
* To provide a work environment that promotes continuous professional growth and development.
* To enhance employee satisfaction.
* To minimize turnover.

Actions (due date; responsible person/department):
* Create a Faculty Development Committee charged with developing a new faculty orientation program, with offering workshops for faculty (e.g., teaching effectiveness, exam writing, active learning strategies), and with establishing a peer evaluation process (June 2009, Dean).
* Establish a faculty, staff, and preceptor mentorship program that is voluntary for protégés and includes the following (December 2009, Dean):
  o Assessment of each faculty and staff professional development within 6 months of hire and at least once every 2 years thereafter.
  o Assistance in locating potential mentors to help address development issues, including mentors outside of the COP and UHH if necessary.
  o Identification and internal publication of mentor competencies among current faculty and staff.
  o Annual (April) submission of all faculty with interest in biomedical, behavioral, clinical, or social science research related to NIDDK mission areas to the STEP-UP (Short-term Education Program for Underrepresented Persons) Program Coordinator for consideration to serve as a research mentor to high school or undergraduate students who have been funded as a student researcher.
* Incorporate into faculty, staff, and preceptor evaluations evidence of success as a mentor (December 2009; Dean).
* Incorporate mentorship program highlights into faculty recruitment materials and new faculty, staff, and preceptor orientation (December 2009; Dean).

Impact of the implementation on the existing program:
Implementation of these actions will greatly enhance the current program by establishing a mechanism to strengthen all faculty, staff, and preceptors and relationships with other departments, colleges, and institutions.

Resources that need to be allocated:
These actions will be implemented with existing staff, technology, and recruitment budgets.

EVALUATION PLAN

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<th>Strategy-specific process measures</th>
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<th>Review and Action By</th>
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<td>Employee satisfaction survey</td>
<td>Annual</td>
<td>Executive Committee</td>
<td>Strategic Planning Office</td>
<td>Faculty &amp; Staff</td>
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<td>Work Environment Scale</td>
<td>Annual</td>
<td>Executive Committee</td>
<td>Strategic Planning Office</td>
<td>Faculty &amp; Staff</td>
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<td>Faculty turnover rate</td>
<td>Annual</td>
<td>Executive Committee</td>
<td>Strategic Planning Office</td>
<td>Faculty &amp; Staff</td>
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<tr>
<td>Staff turnover rate</td>
<td>Annual</td>
<td>Executive Committee</td>
<td>Strategic Planning Office</td>
<td>Faculty &amp; Staff</td>
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COMMUNICATIONS

Strategic COMMUNICATIONS Goal # 1:
Establish a bidirectional communications hub that ensures all COP faculty and staff are kept apprised of COP issues, events, and changes in a timely manner.

Rationale:
Trust in top management is positively related to satisfaction with and quality of information shared by management\(^1\). In addition, good communication is one of the strongest predictors of a healthy work environment. In turn, a healthy work environment is significantly correlated with higher job satisfaction, commitment and morale and with lower absenteeism and intent to quit\(^2\). The COP is committed to establishing internal communication practices that inspire trust and enhance employee satisfaction and productivity.

Objectives:
- To enhance employee satisfaction and commitment to the COP mission and vision.
- To support optimal decision-making, productivity, and interactions with external stakeholders by ensuring faculty and staff are well informed.

Actions (due date; responsible person/department):
- Identify the person or department or technology that will serve as the central point for receiving and coordinating the dissemination of formal internal COP communications (June 2009; Dean).
- Establish internal communication procedures that include (June 2009; Dean):
  - Routine communications including updates on personnel, facilities, and accomplishments.
  - At least quarterly faculty meetings to discuss priorities, progress, and changes pertaining to strategic initiatives.
  - Clear expectations for committee communications, including confidentiality when appropriate and prompt posting of minutes.
- Conduct a needs assessment for technology-based communication tools and prioritize resources and implementation accordingly (September 2009; Director of Information Technology).
- Train all current and new faculty and staff regarding the proper use and benefits of available communication tools (June 2009 and beyond; Director of Information Technology).

Impact of the implementation on the existing program:
These actions will improve coordination among faculty and staff and increase their effectiveness and productivity.

Resources that need to be allocated:
One-half FTE plus existing IT staff will need to be allocated to these actions.

---

Strategic COMMUNICATIONS Goal # 2:
Establish and communicate a COP brand that promotes a consistent image and message to external stakeholders in a way that enhances our ability to secure adequate financial resources, earn community support, and achieve recognition by our peers.

Rationale:
The COP is committed to achieving excellence in pharmacy teaching, research, and patient care in a way that makes a significant impact on health in Hawaii and the Pacific Basin. To ensure support among key stakeholders, this vision, and progress toward achieving it, must be communicated effectively. A strong, appropriate brand will facilitate this communication\(^3\), including slogans or taglines that are broad enough to communicate this long-term vision and clearly articulate the unique strengths of the COP\(^2\).

Objectives:
- To facilitate positioning the COP as a top pharmacy program as it achieves strategic goals.
- To increase donations supporting the unique COP vision.
- To inspire good will among the communities served by the COP.

Actions (due date; responsible person/department):
- Develop a COP logo and tagline(s) that effectively communicate the core mission and vision (September, 2009, Dean).
- Offer branded products to promote the COP (December, 2009, Dean).
- Ensure community contacts, particularly those pertaining to research and education goals, are consistent with branding (ongoing; Director of Community Partnerships).
- Establish and communicate a COP brand that promotes a consistent image and message to external stakeholders in a way that makes a significant impact on health in Hawaii and the Pacific Basin. To ensure support among key stakeholders, this vision, and progress toward achieving it, must be communicated effectively. A strong, appropriate brand will facilitate this communication\(^3\), including slogans or taglines that are broad enough to communicate this long-term vision and clearly articulate the unique strengths of the COP\(^2\).

Objectives:
- To increase donations supporting the unique COP vision.
- To inspire good will among the communities served by the COP.

Actions (due date; responsible person/department):
- Establish a communication plan for potential and current students and alumni that is consistent with branding (December 2009 and beyond; Student Affairs).
- Develop formal communication channels with other colleges/schools of pharmacy, including (December 2009 and beyond; Dean):
  - Collect faculty and administrator e-mail addresses and distribute press releases and other materials.
  - Routine invitations to targeted peers at other institutions to visit the COP and/or collaborate on research and/or educational projects.
- Offer branded products to promote the COP (December, 2009, Dean).
- Establish a bidirectional communications hub that ensures all COP faculty and staff are kept apprised of COP issues, events, and changes in a timely manner.
- Clear expectations for committee communications, including confidentiality when appropriate and prompt posting of minutes.
- Establish internal communication procedures that include (June 2009; Dean):
  - Routine communications including updates on personnel, facilities, and accomplishments.
  - At least quarterly faculty meetings to discuss priorities, progress, and changes pertaining to strategic initiatives.
  - Clear expectations for committee communications, including confidentiality when appropriate and prompt posting of minutes.
- Conduct a needs assessment for technology-based communication tools and prioritize resources and implementation accordingly (September 2009; Director of Information Technology).
- Train all current and new faculty and staff regarding the proper use and benefits of available communication tools (June 2009 and beyond; Director of Information Technology).
following (December 2010 and beyond; Dean):

- Student/alumni newsletters and events to foster loyalty to the UHH COP.
- Corporate campaign and events to develop relationships with companies with interests in alignment with those of the COP.
- Employee/staff campaign and events to enhance commitment to the COP mission and vision.

Impact of the implementation on the existing program:
These actions will improve understanding of the unique COP mission in a way that attracts students, faculty, and staff that are a good fit for the program and helps secure resources for its future.

Resources that need to be allocated:
One-half FTE will need to be allocated to these actions.

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<td>Faculty and staff satisfaction with COP communications</td>
<td>Annual</td>
<td>Executive Committee</td>
<td>Director of Strategic Planning</td>
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<tbody>
<tr>
<td>US News and World Report rank</td>
<td>When available</td>
<td>Executive Committee</td>
<td>Director of Strategic Planning</td>
<td>Faculty &amp; Staff</td>
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<tr>
<td>Total dollar value of donations to COP</td>
<td>Quarterly</td>
<td>Executive Committee</td>
<td>Fiscal Officer</td>
<td>Faculty &amp; Staff</td>
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FACILITIES

Strategic FACILITIES Goal # 1:
Acquire or build adequate space to support the goals outlined in this strategic plan and planned enrollment growth in numbers of students, faculty, and staff.

Rationale:
Currently, there is insufficient lab space for all pharmaceutical sciences faculty to conduct research. In addition, current facilities are inadequate to support planned enrollment growth in the number of COP students, faculty, and staff. While state funds have been allocated to design permanent COP facilities, it is critical to ensure that interim facilities are adequate for the fulfillment of the COP mission and vision.

Objectives:
- To ensure that proper and permanent facilities are built that effectively support COP student learning.
- To ensure ACPE accreditation standards are met.
- To inspire confidence among students, faculty, and staff regarding UHH support of the COP.

Actions (due date; responsible person/Department):
- Document interim COP space needs in a way that meets UHH facilities standards, and communicate this to UHH administration (March 2009; Dean).
- Continuously assess the adequacy of interim facilities and report the status to the COP Dean at least monthly (ongoing, beginning March 2009 through completion of permanent facilities; Director of Pharmaceutical Innovation and Facility Planning).

Impact of the implementation on the existing program:
Having adequate facilities for students, faculty and staff is critical to the integrity of the Pharm.D. program.

Resources that need to be allocated:
These actions will be implemented by existing staff.

Strategic FACILITIES Goal # 2:
Develop a master facilities plan to support the design of a permanent pharmacy building or campus that will meet the long-range needs of the COP.

Rationale:
Given that State funds have been allocated to design permanent COP facilities, thorough planning is needed to maximize utility of these facilities within the budget constraints.

Objectives:
**Appendix H - Strategic Plan**

**To ensure that funds for facilities are used effectively.**

**To build permanent facilities that are optimal for fulfilling the COP mission and vision.**

**To build a permanent animal research facility.**

**Actions (due date; responsible person/department):**

- Document COP space needs for permanent facilities, including animal research facility and lab space for each Pharmaceutical Sciences faculty member, in a master plan in a way that meets UHH facilities standards and gathers input from faculty and staff, and communicate this to UHH administration (December 2009; Director of Pharmaceutical Innovation and Facility Planning).

- Update the master plan as needed at least annually to ensure any significant changes are incorporated into facilities design (ongoing prior to construction of permanent facilities; Director of Pharmaceutical Innovation and Facility Planning).

**Impact of the implementation on the existing program:**

These actions will significantly enhance the Pharm.D. program by providing plans for permanent facilities that will optimize the student experience in terms of quality and efficiency.

**Resources that need to be allocated:**

These actions will be implemented by existing staff.

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<td>Faculty and staff satisfaction with COP facilities</td>
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<tr>
<td>Square footage of office space per COP faculty and staff</td>
<td>Quarterly Executive Committee</td>
<td>Director of Pharmaceutical Innovation and Facility Planning</td>
<td>Faculty &amp; Staff</td>
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<tr>
<td>Square footage of lab space per pharmaceutical sciences faculty</td>
<td>Quarterly Executive Committee</td>
<td>Director of Pharmaceutical Innovation and Facility Planning</td>
<td>Faculty &amp; Staff</td>
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FINANCE

Strategic FINANCE Goal # 1:
Establish and implement a tool for conducting financial analyses and projections of consolidated COP sources and uses of funds.

Rationale:
Currently, funds to build and operate the COP come from multiple sources, including state budget allocations, research funding organizations, philanthropy, and federal earmarks. There is no mechanism to link these financial systems in a consolidated way to allow timely analyses and projections.

Objectives:
- To support decision-making regarding use of financial resources.
- To link financial planning to strategic goals.

Actions (due date; responsible person/department):
- Identify all current and expected sources and uses of funds (March 2009; Fiscal Officer).
- Build and populate a consolidated spreadsheet with automated links to all sources of funds (December 2009; Fiscal Officer).
- Add all proposed items from the strategic plan to projected uses of funds (December 2009; Fiscal Officer).
- Continuously update and use the tool for analysis and decision-making (ongoing; Fiscal Officer).

Impact of the implementation on the existing program:
Implementation of this tool will facilitate and support optimal financial planning and decision-making to ensure there are adequate current and future resources dedicated to the COP.

Resources that need to be allocated:
Current resources will be used to implement these actions.

Strategic FINANCE Goal # 2:
Establish and implement internal financial processes that support alignment with the UH and UHH budget cycle and effective, efficient operations.

Rationale:
Financial management in the COP has been largely managed centrally. As the COP grows, accountability at the departmental/unit level will promote ownership and decision-making by those most knowledgeable about daily activities and needs. As financial management is decentralized, standard operating procedures are needed to ensure consistency with institutional requirements and to promote smooth operations.

Objectives:
- To promote financial accountability among all faculty and staff.
- To ensure compliance with UHH financial procedures.
- To reduce errors and re-work in financial processes.

Actions (due date; responsible person/department):
- Develop and implement position-specific training programs that clarify expectations regarding financial issues (March 2010; Fiscal Officer).
- Implement and document this training for all current faculty and staff (June 2010; Fiscal Officer).
- Ensure that this training is completed and documented for all new faculty and staff (ongoing; Fiscal Officer).

Impact of the implementation on the existing program:
These actions will not directly impact the Pharm.D. program, but will improve the...
finance function such that the program administration is more efficient and effective.

Resources that need to be allocated:
Current resources will be used to implement these actions.

Strategic FINANCE Goal #4:
Document the economic impact of the COP on the State of Hawaii.

Rationale:
The decision to establish the UHH COP required commitment of significant state resources to ensure the mission would be fulfilled. In addition to the expected positive COP impact on healthcare and science, the COP will have a positive impact on the economy in the State of Hawaii.

Objectives:
- To quantify the economic impact of the COP on the State of Hawaii.
- To educate stakeholders about the economic impact of the COP.

Actions (due date; responsible person/department):
- Ensure that a credible analysis of the economic impact of the COP is conducted (March 2009; Director of Strategic Planning).
- Produce a written report of the economic impact analysis (March 2009; Director of Strategic Planning).
- Ensure that the analysis is updated at least every three years (ongoing; Director of Strategic Planning).
- Distribute the report to stakeholders whose awareness of the positive economic impact of the COP will influence the continued development and success of the COP (ongoing; Director of Community Partnerships).

Impact of the implementation on the existing program:
These actions will help ensure the viability of the Pharm.D. program by ensuring that key stakeholders are aware of the economic benefits of the COP.

Resources that need to be allocated:
A consultant with expertise in economics will be secured to conduct and/or supervise the conduct of the analyses.

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<tr>
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<tbody>
<tr>
<td>Percent of financial transactions without error</td>
<td>Quarterly Executive Committee</td>
<td>Fiscal Officer</td>
<td>Faculty &amp; Staff</td>
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<tr>
<td>Percent of routine financial reports submitted on time</td>
<td>Quarterly Executive Committee</td>
<td>Fiscal Officer</td>
<td>Faculty &amp; Staff</td>
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</tbody>
</table>
**Research Goals**

1. Develop a community research partnership
2. Launch a research program that coordinates teaching and research
3. Develop continuing education programs
4. Achieve excellence in research on teaching effectiveness
5. Build a center of excellence in health services research
6. Create a pharmaceutical technology research center for dosage form design and characterization
7. Launch graduate programs
8. Establish a general pharmacy practice residency program

**Timeline Summary**

(See NOTES at end of timeline for color codes)

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<tr>
<td>Approve/endorse characterized research projects.</td>
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<td>Launch and market services throughout Hawaii.</td>
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<td>Assemble a team of researchers with interest in natural products and ethnomedical practices.</td>
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<td>Identify and subscribe to, purchase, and/or execute datasets through partnerships with other organizations and/or hiring additional faculty and staff.</td>
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<td>Review the literature on teaching effectiveness and assessment.</td>
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<td>Identify the community leaders, including Native Hawaiian healers, who are stakeholders in local natural products research.</td>
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<td>Develop a written protocol or agreement between the College of Pharmacy and community leaders about local natural products research.</td>
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<tr>
<td>Host community forums with the community leaders, Hawaiian healers, who are stakeholders in local natural products research.</td>
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<td>Launch recruitment and enroll students.</td>
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<td>Complete external notifications and/or approvals of Proposal and obtain Board of Regents approval.</td>
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<td>Obtain &quot;Authorization to Plan&quot; as required by the UH System.</td>
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<td>Identify at least one proposed graduate degree program.</td>
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<tr>
<td>Develop a graduate degree program in Pharmaceutical Sciences:</td>
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<tr>
<td>- Pharmacy Practice:</td>
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<td>- Develop a menu of service offerings, including information resources that will catalog information on Hawaiian Traditional Medicines to collaborate in the creation of a library or information resource.</td>
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<td>- Identify and evaluate reimbursement opportunities about Hawaiian Traditional Medicines.</td>
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<td>- Invite community leaders in Hawaiian Traditional Medicine to join the COP areas of expertise.</td>
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<td>- Recruit a Pharmacy Practice faculty member with appropriate), viable certification programs related to training program.</td>
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<td>- Design and conduct CE programs to address patient care issues in Hawaii and the Pacific Basin.</td>
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<td>- Establish capability to offer programs via distance pharmaceutical.</td>
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<td>- Secure subscriptions to all relevant electronic resources.</td>
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<td>- Apply for pre-candidate status from the American College of Pharmacists HP accreditation.</td>
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<td>- Establish funding for three resident positions.</td>
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<td>- Identify sites that will serve as the primary residency training sites.</td>
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<td>- Design and conduct CE programs to address patient care issues in Hawaii and the Pacific Basin.</td>
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</table>
| - Establish capability to offer programs via distance.
APPENDIX H 274 - Emergence of the University of Hawai'i College of Pharmacy
Appendix H - Strategic Plan

Alignment of COP strategic goals with UH System and UH strategic plans

<table>
<thead>
<tr>
<th>UH System Strategic Outcomes 2008-2015</th>
<th>COP Strategic Goals</th>
<th>UH Goals 2002-2010:</th>
</tr>
</thead>
<tbody>
<tr>
<td>To position the University of Hawai‘i as one of the world’s foremost indigenous-serving universities by supporting the access and success of Native Hawaiians</td>
<td>To increase the educational capital of the state by increasing the participation and completion of students, particularly Native Hawaiians, low-income students, and those from underserved regions</td>
<td>Maintain a well-rounded mix of liberal arts and professional programs, while distinguishing ourselves by taking full advantage of the extraordinary natural environment and cultural diversity afforded by our island setting</td>
</tr>
<tr>
<td>To contribute to the state’s economy and provide a solid return on its investment in higher education through research and training</td>
<td></td>
<td>Continue to refine and strengthen efforts to fulfill our primary mission to offer high quality undergraduate liberal arts and professional programs</td>
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<tr>
<td>To address critical workforce shortages and prepare students (undergraduate, graduate, and professional) for effective engagement and leadership in a global environment</td>
<td></td>
<td>Build a learning environment that facilitates student development and success</td>
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<td>To acquire, allocate, and manage public and private revenue streams and exercise exemplary stewardship over all of the University’s resources for a sustainable future</td>
<td></td>
<td>Obtain sufficient resources to support enrollment growth, high quality programs, and enhanced services</td>
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</tbody>
</table>

Research Goal #3  Education Goal #5  Education Goal #3  Research Goal #4

Facilities Goal #2  Education Goal #2  Facilities Goal #1  Finance Goal #4

HR Goal #1  Research Goal #1  Communications Goal #1  Finance Goals #1,2,3


college of PHARMACY Strategic Plan 2009-2015

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Improving health in Hawai‘i and throughout the Pacific
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Appendix H - Strategic Plan

College of Pharmacy Strategic Plan 2009-2015

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