The University of Hawai‘i Cancer Center’s new 150,000-square-foot research facility, located in Kaka‘ako, is an awesome site to behold. Strategically located adjacent to the John A. Burns School of Medicine, the UH Cancer Center’s architecture specifically incorporates Hawaiian cultural elements, as well as an environmentally sustainable and cost-efficient design.

The new facility follows what is known as Leadership in Energy and Environmental Design (LEED). The building features two towers connected by an open-air lobby and a centralized staircase that provides access to all of the building’s levels. There is also a sustainable vegetated roof surface that serves as natural insulation, which reduces air conditioning costs and extends the roof’s lifespan.

Architect Jeff Nakamura incorporated important key Hawaiian cultural components throughout the building’s design. These details are clearly seen in the natural free-flowing landscape, which incorporates native plants suitable to the local climate and two gardens comprised of sacred stones known as pōhaku.

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Dear Friends,

Today is my first day in my new office in the new UH Cancer Center building in Kaka’ako; this is the first document I write from my new office.

After all the excitement of moving during the past two days, today is pretty quiet, and I am watching the waves and the beautiful Kaka’ako Park from my window. It feels so good to be here.

We can proudly say that we have the most beautiful cancer center building in the country, entirely built by the men and women of the local building industry, $16M under budget and three months ahead of schedule.

We owe this beautiful building to many people:

- the Hawai‘i State legislature for providing the funding;
- the late Senator Daniel K. Inouye;
- the UH Board of Regents;
- UH President M.R.C. Greenwood and the previous UH Manoa Chancellor Virginia Hinshaw, who made the success of the Cancer Center a priority of their tenures;
- Jeff Nakamura, our architect;
- the Kobayashi firm that managed the project impeccably;
- Brian Minaai, the UH associate vice president for capital improvements, who represented UH in the building construction;
- Kerry Kakazu and the faculty, who together decided how to design the research space;
- our Consortium partners;
- the American Cancer Society;
- the many friends and supporters who testified on our behalf to the legislature to underscore the importance of a Cancer Center in our State;
- and we owe it to the 500 or so construction workers who actually built it.

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The Friends of the University of Hawai‘i Cancer Center generate community support for cancer research, education, prevention, reduction in cancer-related deaths, as well as improvement in the quality of life for those diagnosed with cancer. We are volunteers and ambassadors who bring awareness to the work being done at the UH Cancer Center. As the Friends, we undertake fundraising efforts to support and assist the UH Cancer Center and its director. Some of the ways the Friends have helped include:

- assistance with researchers’ recruitment expenses,
- community education efforts,
- transportation for neighbor island patients to come to Honolulu for clinical trials in a program called “Tickets for a Cure”, and
- underwrite the publication of this newsletter “Innovations.”

With the UH Cancer Center’s new building, as well as the alliance of the Hawai‘i Cancer Consortium, this is a truly exciting time for us to be ambassadors in the community for the UH Cancer Center.

The Friends of the University of Hawai‘i Cancer Center is a Hawai‘i nonprofit organization with I.R.C. 501(c)(3) status and official recognition by the University of Hawai‘i pursuant to Executive Policy E8.209. We have no paid staff; everyone is a volunteer so every dollar donated not only stays in Hawai‘i, but is used to support the UH Cancer Center.

Please join us in supporting this work. Cutting-edge research is essential to better cancer treatment and prevention for all of the people in our state.

Aloha,

Diane T. Ono
President, Friends of the University of Hawai‘i Cancer Center
Bonifacio Urian considers himself a regular guy, blessed with a good life. Born and raised in Wahiawa, he made the most of opportunities given to him through his military and professional career in the field of communications technology. Now in a position to give back, he has established the Yoshiko and Bonifacio Urian Endowment for Cancer Research Fellowship, in honor of his wife, with an estate gift exceeding $250,000. This fellowship will support undergraduate, graduate, and post-graduate programs and activities that train students for research and academic careers in areas that directly impact our understanding of cancer prevention and treatment.

“I hope these resources will be used to provide education and mentoring opportunities that will prepare our next generation of research scientists who will one day cure cancer,” said Mr. Urian.

Attracting and keeping bright students in Hawai‘i for careers in the sciences is one way that the University of Hawai‘i Cancer Center hopes to provide additional benefits to our community. Every summer since 2002, high school and undergraduate students interested in pursuing a career in a biomedical or research-related field intern with seasoned cancer researchers. These students study subjects such as clonal patterns in malignant mesothelioma, inhibitors for human colon cancer cell growth, or the ras mutational status in skin cancer. More than a handful of students from this program have successfully completed graduate degrees in the sciences and a few have received doctorate or medical degrees.

The internship program is so popular that the Cancer Center receives over a hundred applicants from local high school students and undergraduates attending college here and on the mainland every year. Only about 20 are selected for the program because of limited funding.

Mr. Urian’s gift will give many more promising researchers the opportunity to explore a career in the sciences while living and working right here in Hawai‘i. If you would like to learn more about how you can support cancer research, please contact us at (808) 564-5815 or visit us at www.uhcancercenter.org/.

Bonaficio Urián and his wife Yoshiko
UH Cancer Center researchers discover a gene defect responsible for a new cancer syndrome

This discovery by University of Hawai’i Cancer Center scientists of a gene defect that causes a new cancer syndrome allows physicians to visually identify individuals with a possible gene mutation that puts them at higher risk of malignant melanoma and mesothelioma. Patients can be identified by testing for the presence of mole-like skin tumors that may have the BAP1 gene defect. The findings of this syndrome were published in the August 30, 2012 issue of the *Journal of Translational Medicine*.

Two unrelated families with BAP1 defects were studied, and members were found to have an increased occurrence of mole-like melanocytic tumors that were non-cancerous, flat or slightly elevated, and pigmented skin lesions. These lesions were found to carry the BAP1 mutation, and it was concluded that people with this specific type of melanocytic lesion are at higher risk of developing melanoma, the most aggressive type of skin cancer, and mesothelioma, a cancer of the lining of the chest cavity surrounding the lungs, and less frequently the lining of the abdomen.

“Identifying this gene as a cause of several cancers can tell us who is at risk in a family before the cancer develops,” says principal investigator Michele Carbone, MD, PhD, director of the UH Cancer Center and professor of pathology at the John A. Burns School of Medicine. “We can advise patients to undergo routine exams and genetic testing for early diagnoses and treatment.”

Identification of these high-risk individuals could lead to close monitoring for cancer prevention and early detection to increase cures for melanoma and improve treatment results for mesothelioma. Testing for the BAP1 gene mutation has been patented and is performed exclusively at The Queen's Medical Center in Honolulu, Hawai’i.

**Non-invasive liver cancer detection via plasma DNA analysis**

The UH Cancer Center’s liver cancer research team is conducting a pilot study to investigate a non-invasive liver cancer monitoring method using plasma DNA analysis. This study is a prime example of research that has the potential to translate laboratory findings to the patient setting through the development of new diagnostic or therapeutic approaches to cancer. The team includes lead investigator Sandi Kwee, MD, Maarit Tiirikainen, PhD, Min-Ae Song, MS, and Linda Wong, MD.

Previously, the liver cancer research team isolated circulating tumor DNA (ctDNA) from the bloodstream of prostate cancer patients. It successfully correlated the molecular characteristics of this tumor, obtained from genetic material, with treatment response derived by positron emission tomography (PET scan), a form of whole-body molecular imaging. The team will build on its earlier work by applying this monitoring approach to hepatocellular carcinoma (HCC), the most common primary liver cancer. The team’s goal is to determine the characteristics of ctDNA from HCC and learn whether changes in the composition of ctDNA may serve to gauge a patient’s response to treatment in a minimally-invasive manner and could eventually help physicians customize treatments based on the individual genetics of a patient’s tumor.
Continued from page 1

New Cancer Center Facility

However, not to be lost in the impressive physical make-up of the building is what the structure actually represents to the people of Hawai’i.

“The people of Hawai’i deserve a cancer center that provides top-quality research as well as patient care,” said UH Cancer Center Director Michele Carbone, MD, PhD. “This new facility will provide residents direct access to the best cancer treatments available without them having to leave the state.”

Established in 1981, and previously known as the Cancer Research Center of Hawai’i, the Center operated out of offices on Lauhala Street near The Queen’s Medical Center, lab space at the John A. Burns School of Medicine, and office rentals in the Gold Bond Building on Ala Moana Boulevard. This scattered existence made it challenging to collaborate and collectively share research ideas.

“For the first time in a long time, our Cancer Center administration, researchers, and faculty will be together in one facility,” said Carbone. “This will allow us to better share knowledge and resources in a collaborative environment, where scientists, students, and staff work together cooperatively.”

The University of Hawai’i Cancer Center is the only National Cancer Institute (NCI) designated cancer center in Hawai’i and the Pacific. The UH Cancer Center has maintained its NCI designation since 1996 and recently received a five-year extension which ensures funding through NCI-designated cancer center support grants.

Since part of the University of Hawai’i’s agreement with the NCI involved constructing a new state-of-the-art center, this became a top priority for Carbone and University of Hawai’i President M.R.C. Greenwood.

“The Cancer Center project has been and continues to be one of the highest priorities for me, Dr. Carbone, and the Board of Regents,” said Greenwood. “This state truly needs its own Cancer Center, especially given the immediate access researchers have to multiethnic populations to participate in clinical trials.”

Carbone, Greenwood, UH Cancer Center board members, community partners, and key lawmakers met regularly to coordinate the center’s planning. It was through their hard work and determination that the new facility was completed ahead of schedule.

“This new building will not only allow us to attract top academic researchers but also help us to maintain and strengthen relationships with our Hawai’i Cancer Consortium partners,” said Carbone.

The Hawai’i Cancer Consortium, founded in February 2010, includes the University of Hawai’i Cancer Center, The Queen’s Medical Center, Hawai’i Pacific Health, and Kuakini Medical Center.

“The Consortium’s goal is to promote healing in a modern, person-centered environment with complete access to all of our cancer experts and services in one place,” said Carbone. “This new Cancer Center demonstrates our commitment to providing the most advanced cancer prevention, detection, and treatment to the community, close to home.”

New Cancer Center Facility Timeline:

- Shimokawa Nakamura chosen as architect firm to design the project.
- The Research Corporation of the University of Hawai’i (RCUH) selects Kobayashi Group of Hawai’i as the project management firm to oversee the design and construction.
- Kobayashi Group of Hawai’i partners with Skyline Construction, a well-known developer of research laboratories in the United States, and A.C. Kobayashi, Inc., a Hawai’i-based general contracting company, for the actual construction of the building.
- October 2010, the University of Hawai’i began construction of the new cancer research facility in Kaka’ako.
- October 2012, project completed for $103 million, $16 million less than budgeted and three months ahead of schedule.
Spreading the Word about Clinical Trials

One of the continuing focuses for the University of Hawai‘i Cancer Center is to ensure that all cancer patients throughout the state have access to clinical trials. A clinical trial is a research study involving people that tests new ways to prevent, detect, diagnose, or treat cancer. Each study is designed to answer specific scientific questions and find new, safe, and effective ways to improve care for cancer patients. Most cancer clinical trials study ways to treat cancer. In fact, cancer treatments today are the results of earlier clinical trials.

People who take part in cancer clinical trials have an opportunity to contribute to scientists’ knowledge about a particular cancer and help make progress against this disease. In addition, they receive state-of-the-art care from a team of cancer experts. More than 60 percent of pediatric cancer patients participate in clinical trials, which has led to enormous improvements in treating childhood cancer. Yet only about three percent of adult cancer patients participate in clinical trials.

More work is needed to reach and educate adults about the importance of these trials, and the vital role the minority population plays in developing more tailored treatments for the individual. The UH Cancer Center’s Minority-Based Community Clinical Oncology Program provides a mechanism for community physicians to work with researchers to conduct NCI-supported clinical trials.

The only neighbor island with a local research associate serving cancer patients is Kaua‘i. Margaret Itami, a research nurse located at Kaua‘i Medical Clinic, is responsible for the recruitment and retention of clinical trials participants. Margaret opened her office on June 1, 2009, when there were few cancer patients on clinical trials from Kaua‘i, who were being monitored from Oahu. Today there are over 25 patients enrolled in various studies and receiving individualized care without the need to travel.

“I enjoy the patient contact and providing information so the cancer patient is aware that clinical trials are an option and they can make the best treatment decision,” said Itami. “Although patients may not benefit from clinical trials today, they are provided with the best care and may help future cancer patients.”

Itami also collaborates with oncologists and other health care professionals who are instrumental in helping accomplish her goals. But mostly, she is appreciative of the cancer clinical trials participants, like Millilani “Mels” Tejada. A cancer survivor, Tejada, enjoys singing and currently feels “pretty darn good!” She works in the food and beverage industry on Kaua‘i and is a reverend at her church. Her strong faith and the support of her loving family sustained her through her breast cancer diagnosis in March 2011 and her subsequent treatment. Tejada found out about clinical trials from another cancer patient who disclosed her positive experience with her oncologist and Itami.

“It [clinical trials] was a smart move on my part,” said Tejada. “Margaret is on her game and knows her stuff. Both she and my doctor helped me navigate my cancer treatment, and they have become part of my extended family. Having such exceptional care on island is truly a blessing. I have since shared my clinical trials experience with two friends who were recently diagnosed with cancer.”

Word about clinical trials continues to spread thanks to the efforts of Tejada, Itami, and the Minority-Based Community Clinical Oncology Program. The UH Cancer Center strives to increase clinical trials awareness and participation statewide. Provision of clinical trials staff on the neighbor islands, access to clinical trials, and quality cancer care — this is what every cancer patient in Hawai‘i deserves.
Excellence in cancer research is rewarded in several ways: publication in prestigious scientific journals, obtaining coveted grants, successful outcomes that translate to patient care, and kudos from colleagues.

But the Friends of the University of Hawai‘i Cancer Center wanted to extend their own support to the scientists of UH Cancer Center who work hard to prevent, diagnose, and treat cancer. In June, they began an “Excellence in Research” awards program where, once a month, they present a recently published researcher $1,000 dollars for a job well done.

“We know $1,000 dollars won’t do a lot to help them with their research, but is a means to incentivize the researchers — give recognition for all of their hard work and diligence to be able to publish in these journals,” said Diane Ono, president of the board for the Friends of the UH Cancer Center.

David Ward, PhD and associate director for basic sciences and translational research, selects the winners based on the publication’s impact factor in major scientific journals. After program directors submit lists of publications by their staff, Ward does some careful evaluating.

“David Ward, PhD and associate director for basic sciences and translational research, selects the winners based on the publication’s impact factor in major scientific journals. After program directors submit lists of publications by their staff, Ward does some careful evaluating.

The top journals—Science, Nature, Cell—all have impact factors above 30,” said Ward. “After those publications, the three next highest impacts are 16. These particular publications work for cancer cell biology, but they may not fit programs like prevention and control. I need to evaluate where a paper is published in relation to the journal’s importance in a specific program area.”

Ward proudly selects those with the highest ranking and since June 2012, the Friends have awarded eight scientists.

At a recent faculty and staff poster session, several awards were announced. One recipient was Joe Ramos, PhD, and co-director of the Cancer Biology Program. “First, the recognition alone is an important part of these awards,” said Ramos. “For me and others, it is a nice way to be reminded that quality work is appreciated by our peers, and it promotes good morale. I am very happy we have been able to do this — many thanks to the Friends for providing this fund.”

After Ward makes the selection, the chosen scientists give a short presentation of their work to the Friend’s Board of Directors at their monthly meeting. Here they receive personal recognition and appreciation from the Friends.

The faculty and staff of the University of Hawai‘i Cancer Center were deeply saddened to hear of the passing of Senator Daniel K. Inouye on December 17, 2012 at the age of 88.

The Medal of Honor recipient had served as a senator since 1963 and was the most senior United States Senator at the time of his death. He was also the second-longest serving U.S. Senator in history and had continuously represented Hawai‘i since it achieved statehood in 1959. Inouye served as Hawai‘i’s first U.S. Representative and was also the first Japanese American to serve in the U.S. House of Representatives. He later became a senator and served as the first Japanese American in the U.S. Senate. Prior to that, he served in the Hawai‘i territorial house from 1954 to 1958 and the territorial senate from 1958 to 1959. He never lost an election in 58 years as an elected official.

At the UH Cancer Center’s groundbreaking in October 2010, Senator Inouye spoke of how cancer had touched him personally, reflecting on his late wife Margaret “Maggie” Awamura Inouye, who died in 2006 after a prolonged battle with cancer. “Maggie and I were married for 57 years and I must say the last six months were the most horrible ones. I spent the last 30 days on a cot in her ward room, so I know what cancer is about.”

The UH Cancer Center will grieve the loss of one of its strongest political and personal advocates. His endorsement of the UH Cancer Center helped create the extraordinary facility.

Words cannot express the profound impact Senator Inouye had upon our state as well as the University of Hawai‘i. He helped shape the islands since their admission into statehood and devoted his life to public service. A great hero for the people of Hawai‘i past and present, he will always remain one of the greatest figures in Hawai‘i’s history.

Mahalo and aloha, Senator Daniel K. Inouye.
University of Hawai‘i Cancer Center Hosts Grand Opening Celebration

Curious about cancer? What does it look like, how do people get it, can you prevent it, can you cure it?

Come learn more about your UH Cancer Center and get a close look at the discoveries being made right here in Hawai‘i. You will learn about the types of cancer that affect Hawai‘i’s different ethnic groups. You can witness important strides in discovering novel anti-cancer drugs. Our scientists can show you research programs that focus on changing risky behaviors and minimizing cancer risks.

Today there are more than 13 million cancer survivors in the United States. Approximately 65 percent of adults diagnosed with cancer will be alive in five years.

We are making strides to reduce the burden of cancer through research, education, and service. Come take a close look at the quality research being done right here in your backyard.

February 23, 2013
• 10:00 am blessing
• 11:30 am – 2:00 pm Science Fair

701 Ilalo Street, Honolulu, HI 96813

More information is available at: www.uhcancercenter.org/about-us/grandopening

February 9
Xcel Race Against Skin Cancer

Join us for a fun, recreational standup paddle race along the world-famous Diamond Head/Waikiki skyline to raise awareness for skin cancer. The race will start at Kaimana Beach and end at Duke Kahanamoku Beach.

8:00 - 9:30 am – Check in and beach registration
10:00 am – Race start
11:15 am - 2:00 pm – Finish line activities, award presentations.

For more information go to: www.xcelwetsuits.com

February 23
University of Hawai‘i Cancer Center Grand Opening

The UH Cancer Center is hosting a Grand Opening Celebration.

You are invited to attend our special blessing at 10:00 am followed by a science fair from 11:30 am – 2:00 pm that will showcase some of our research and outreach programs.

Speakers at the blessing will include Nobel Laureate Dr. Elizabeth Blackburn, UH President M.R.C. Greenwood, and UH Cancer Center Director Michele Carbone.

More information is available at: www.uhcancercenter.org/about-us/grandopening

February 25
Translational Cancer Medicine Symposium

This annual cancer symposium offers education to scientists and health care professionals. It highlights different cancer topics. This year, the symposium will discuss the protein HMGB1.

Members of the public are welcome. Contact Sophia Khan at skhan@cc.hawaii.edu.