PBRC REORGANIZATION: Comments Received

Table of Contents
Lance Morgan: May 17, 2010               Page 1
Lanikea King: May 7, 2010               Page 2
Robert V. Cooney: May 3, 2010          Page 3
Jemily G. Juan: May 3, 2010             Page 4
Rachel Okabe: May 3, 2010               Page 6
Eric Wolanski: May 2, 2010              Page 8
Gabor Mocz: April 23, 2010             Page 10
Christy Ann Gilman: April 21, 2010    Page 14
Malia Rivera: April 19, 2010           Page 15
Henry Cheng: April 19, 2010            Page 16
Chrislyn Andres: April 18, 2010        Page 18
Ramon Go: April 18, 2010               Page 19
Marcus K. Iwane: April 17, 2010       Page 20
Lauren Javier: April 16, 2010          Page 21
Luc R.A. Rougee: April 12, 2010        Page 23
Holly Jessop: April 9, 2010            Page 25
Kira L. Krend: April 9, 2010           Page 26
Bruce Wilcox: April 9, 2010            Page 28
Robert G. Young: April 6, 2010        Page 29
PBRC: April 5, 2010                   Page 31
Attachments:
   1 - Current PBRC Personnel           Page 48
   2 - PBRC Student Training            Page 50
   3 - PBRC Timeline                    Page 57
   4 - Biodiversity Vision and Plan     Page 60
   5 - PBRC Biodiversity Initiatives    Page 76
   6 - NSF Dimensions in Biodiversity  Page 84
   7 - Documents Kewalo Marine Laboratory Page 93
   8 - Mānoa Faculty Senate Resolutions Page 113
   9 - PBRC Core Facilities             Page 116
PBRC Fiscal Staff: April 5, 2010       Page 120
Pat Couvillon: April 5, 2010           Page 126
Sheldon Plentovich: April 5, 2010      Page 127
Doris Ching: April 5, 2010             Page 128
Daniel Hartline: April 5, 2010         Page 129
Kenneth Y. Kaneshiro: April 5, 2010   Page 132
Brad Jones: April 5, 2010              Page 137
Suresh S. Patil: April 5, 2010         Page 142
Edward G. Ruby/Margaret McFall-Ngai: April 4, 2010 Page 144
Jeffrey T. Corwin: April 2, 2010      Page 147
Andrew Christie: April 2, 2010         Page 149
Petra Lenz: April 2, 2010              Page 151
Jennifer Kong: April 1, 2010           Page 152
<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monica Orcine</td>
<td>April 1, 2010</td>
<td>154</td>
</tr>
<tr>
<td>Matthew Iacchei</td>
<td>April 1, 2010</td>
<td>156</td>
</tr>
<tr>
<td>Ian M. Cooke</td>
<td>April 1, 2010</td>
<td>158</td>
</tr>
<tr>
<td>James Jackson</td>
<td>March 31, 2010</td>
<td>161</td>
</tr>
<tr>
<td>Robert H. Robichaux</td>
<td>March 31, 2010</td>
<td>162</td>
</tr>
<tr>
<td>Hawai‘i Conservation Alliance</td>
<td>March 31, 2010</td>
<td>163</td>
</tr>
<tr>
<td>Jaynee R. Kim</td>
<td>March 31, 2010</td>
<td>164</td>
</tr>
<tr>
<td>Yvonne Chan</td>
<td>March 31, 2010</td>
<td>165</td>
</tr>
<tr>
<td>Norine Wing Yeung</td>
<td>March 31, 2010</td>
<td>166</td>
</tr>
<tr>
<td>Daniel Rubinoff</td>
<td>March 31, 2010</td>
<td>168</td>
</tr>
<tr>
<td>Kenneth A. Hayes</td>
<td>March 31, 2010</td>
<td>169</td>
</tr>
<tr>
<td>David Sischo</td>
<td>March 31, 2010</td>
<td>171</td>
</tr>
<tr>
<td>Isabel Belloni Schmidt</td>
<td>March 31, 2010</td>
<td>172</td>
</tr>
<tr>
<td>Kelly S. Boyle</td>
<td>March 31, 2010</td>
<td>173</td>
</tr>
<tr>
<td>Anuradha Gupta</td>
<td>March 31, 2010</td>
<td>174</td>
</tr>
<tr>
<td>Lawrence T. Yamamoto</td>
<td>March 30, 2010</td>
<td>176</td>
</tr>
<tr>
<td>Philip M.C. Davy</td>
<td>March 30, 2010</td>
<td>178</td>
</tr>
<tr>
<td>Anna Cooke</td>
<td>March 30, 2010</td>
<td>180</td>
</tr>
<tr>
<td>Maile Cooke</td>
<td>March 30, 2010</td>
<td>182</td>
</tr>
<tr>
<td>Robert J. Blanchard</td>
<td>March 30, 2010</td>
<td>183</td>
</tr>
<tr>
<td>Lee H. Shannon</td>
<td>March 30, 2010</td>
<td>185</td>
</tr>
<tr>
<td>Frank Hays</td>
<td>March 30, 2010</td>
<td>187</td>
</tr>
<tr>
<td>Shannon Bennett</td>
<td>March 30, 2010</td>
<td>188</td>
</tr>
<tr>
<td>Ryan Long</td>
<td>March 30, 2010</td>
<td>190</td>
</tr>
<tr>
<td>Lisa M. Wedding</td>
<td>March 30, 2010</td>
<td>191</td>
</tr>
<tr>
<td>Gwendolyn S. Arbaugh</td>
<td>March 30, 2010</td>
<td>192</td>
</tr>
<tr>
<td>John N. (Jack) Kittinger</td>
<td>March 30, 2010</td>
<td>193</td>
</tr>
<tr>
<td>Alison K. Stimpert</td>
<td>March 29, 2010</td>
<td>194</td>
</tr>
<tr>
<td>Traci Erin Cox</td>
<td>March 29, 2010</td>
<td>195</td>
</tr>
<tr>
<td>Aaron Shiels</td>
<td>March 29, 2010</td>
<td>197</td>
</tr>
<tr>
<td>Lisa Mandle</td>
<td>March 29, 2010</td>
<td>198</td>
</tr>
<tr>
<td>Dan Eshel</td>
<td>March 29, 2010</td>
<td>199</td>
</tr>
<tr>
<td>Ulalia Woodside</td>
<td>March 29, 2010</td>
<td>200</td>
</tr>
<tr>
<td>Kanesa Duncan</td>
<td>March 25, 2010</td>
<td>201</td>
</tr>
<tr>
<td>David J. Asai</td>
<td>March 25, 2010</td>
<td>203</td>
</tr>
<tr>
<td>Ian Gibbons</td>
<td>March 24, 2010</td>
<td>204</td>
</tr>
<tr>
<td>Erin Baumgartner</td>
<td>March 23, 2010</td>
<td>205</td>
</tr>
<tr>
<td>Laurie Strommer</td>
<td>March 15, 2010</td>
<td>207</td>
</tr>
<tr>
<td>John Henshaw</td>
<td>March 15, 2010</td>
<td>208</td>
</tr>
<tr>
<td>Allen Tom</td>
<td>March 15, 2010</td>
<td>209</td>
</tr>
<tr>
<td>Christopher P. Dunn</td>
<td>March 11, 2010</td>
<td>211</td>
</tr>
</tbody>
</table>
May 17, 2010

Dr. Virginia S. Hinshaw, Chancellor
University of Hawaii at Manoa
Hawaii Hall
2500 Campus Road
Honolulu, HI 96822
Email: isam@hawaii.edu
cc: annyang@hawaii.edu, dunlap@pbrc.hawaii.edu

Dear Dr. Hinshaw,

I write to express Marine Conservation Biology Institute’s (MCBI) support for the continuation of the Pacific Biosciences Research Center’s Kewalo Marine Laboratory in its current location and its expansion into a multidisciplinary center of marine conservation excellence in the Pacific. Such integrated centers are rare and increasingly needed; in fact we needed them years ago.

MCBI is a national conservation organization whose policy goals are science driven. We are one of the foremost centers of thought and action on the preservation of marine biodiversity. Some of our key conservation initiatives focus on the marine ecosystems of Hawaii and other Pacific islands.

It is hard to pick up an issue of *Environment Hawaii* without seeing some serious marine issue displayed on its pages. Other sources of information present a cornucopia of marine issues throughout the Pacific that need to be addressed, ranging from overfishing to pollution to coral habitat destruction. That the university has such a fine research and problem-solving lab facility and staff near the main campus should be a source of pride -- one to be built upon, not torn down. Hawaii and the Pacific islands are in desperate need of scientific and educational assistance. The university could be a world-class leader if it chooses to build on what it has.

The proposal by the Vice Chancellor for Research and Graduate Education to “abolish” PBRC and close the Kewalo Marine Laboratory is ill-advised. It will reduce the capacity of the University of Hawaii to train local and Pacific Island undergraduate and graduate students in the critical areas of marine research that support conservation biology applications. I urge you to support the continuation of the Kewalo Marine Laboratory and support its growth and further maintain the Pacific Biosciences Research Center as a research unit that has proven to be an effective leader in research, education and service to the Hawaii and Pacific Islands communities.

Sincerely,

Lance Morgan, PhD
From: Lanikea King [mailto:king.lanikea@gmail.com]  
Sent: Friday, May 07, 2010 10:36 AM  
To: Michelle Isa  
Cc: dunlap@pbrc.hawaii.edu; healani@pbrc.hawaii.edu  
Subject: Opposed to the abolishment of the PBRC

Dear Chancellor Hinshaw:

I would like to express my deep appreciation for the experiences I had as a student research assistant in the PBRC as well as my opposition the proposed abolishment of the PBRC as an Organized Research Unit at UH Manoa.

I was a student in the MARC U*STAR program, run through the PBRC, from 2006-2008. During my time in the program I was a member of the laboratory of Drs. Robert and Caroline Blanchard, where I worked closely with the principle investigators, post-doctoral fellows and graduate students to learn a variety of critical skills. I was involved with many behavioral neuroscience projects focused on defensive behaviors and the role of corticotrophin releasing factor receptors in mediating those behaviors. This work is important to our understanding of neural networks and molecules involved in stress and anxiety and human psychiatric disorders such as generalized anxiety disorder, depression and others. While a student in the lab, I was trained in essential techniques such as: stereotaxic surgery to implant cannulae, behavioral testing, aortic perfusion, histological techniques and data analysis and interpretation. As a result of my work in the lab I am now a co-author on two peer-reviewed papers, I have included their bibliographic information below. I also attended two annual meetings of the Society for Neuroscience, where the Blanchards helped me to begin establishing a network of contacts, which has proved very valuable to the development of my scientific career and may be a benefit that is hard to rate on paper.

The support afforded by membership in the PBRC was not limited to my own lab however. The PBRC facilitated contact with many labs with diverse research backgrounds. Being exposed to research being performed by my fellow PBRC students and other PBRC member labs was a great opportunity to learn of different approaches and to develop a broader scientific outlook. Working with the PBRC administration was always easy, which I greatly appreciated as a busy student and researcher. I recall quick processing of stipend payments, travel reimbursement and tuition and fees as well as other services such as poster printing and supply requests from the workshop.

I am happy to report that I am now a second year graduate student at Emory University, in the laboratory of Dr. Larry Young, where I am studying transcriptional mechanisms that regulate neuropeptide receptor expression and individual variation in social behavior. The opportunities afforded me by the PBRC were instrumental to my acceptance here at Emory and I truly hope that the PBRC will continue to serve as an important resource to future UH students.

Best Regards,

Lanikea King

Publications:


May 3, 2010

Virginia Hinshaw, Chancellor
Hawaii Hall
University of Hawaii at Manoa

Dear Dr. Hinshaw:

This letter is in support of the preservation of PBRC as an independent research unit. Over the last several decades PBRC has been instrumental in building the reputation of the University of Hawaii at Manoa, through its diverse cutting edge research and through its role in the creation of both the John A Burns School of Medicine and the Cancer Research Center of Hawaii. PBRC has served as a nucleus for cell and molecular biological research for the Manoa campus and it is beyond comprehension why you would want to further the deterioration of the University by destroying such essential expertise. Despite your attempts to slowly strangle this research unit over time it still remains a viable institution that has much to offer students and other faculty at Manoa and more importantly it has the potential, with competent leadership, to help lift the University out of the abyss it finds itself in currently.

I urge you to reverse the unwise and destructive process you have initiated and restore PBRC to its rightful place as an important contributor to the mission of the University. There are many places money could be saved in the University and a few of these have been pointed out to you in various Senate resolutions. It is wrong to destroy a unit that has contributed so much to the success of the University of Hawaii over the decades and has so much to offer in the future.

Sincerely,

Robert V. Cooney, Ph.D.
Associate Researcher
Dear Chancellor Hinshaw,

My name is Jemily Juan, a current graduate student in CTAHR. I’m a student whose life has been impacted by the PBRC department of which I owe extreme gratitude towards.

I had a privilege of being an intern for PBRC’s PRIDE program in the summer of 2008. In the spring of that same year, I graduated with my Bachelor’s Degree in Biology not knowing what to do and where my life was heading. A couple of my friends recommended for me to apply for the PBRC’s PRIDE research program. As hesitant as I was, being that research and labs were on the bottom of my list of careers to have, it ended up being one of the best decisions I’ve ever made.

In one summer, I gained the experience I needed to find direction in my life, the skills I needed to further explore the different opportunities research has to offer, and the confidence I needed to believe that I could achieve my goals in a field in which it is rare to find successful minority Filipino women.

I owe most of my gratitude to PBRC for all the doors that have opened for me within the passed two years. My experiences in PRIDE helped me get a job as a lab assistant in JABSOM’s Molecular Medicine and Infectious Diseases Lab. With the help of Dr. Healani Chang, a faculty member of PBRC, I became a graduate student in CTAHR and a G.A. in that very lab.

Although it has been two years since I completed the PRIDE program, the influence of PBRC’s research continues to persist in my work. Publications from PBRC have been a resource for my current project, in which the MMID lab is reaching out into the Filipino community to help fight diabetes and cardiovascular disease. I believe that the research of PBRC can be used to formulate many community awareness projects, such as cardiovascular disease prevention and weight loss interventions, to inform our current society about life-changing health issues.

I am just one of the many students who have gained success from PBRC’s PRIDE program. Many of my fellow classmates have credited their positive research experience to PBRC and have encouraged other individuals who lack research experience to experience what PBRC has to offer.

I sincerely hope that you will reconsider to keep the PBRC department going. Their impact on the students, as well as the university, has not gone unnoticed.
Thank you for your time,

Jemily Juan

M.S. Graduate Student

Department of Molecular Biosciences and Bioengineering

Hawaii Center for AIDS/John A. Burns School of Medicine
From: Ann N A. Sakuma
Sent: Wednesday, May 05, 2010 11:19 AM
To: Ann N A. Sakuma
Subject: FW: Support for PBRC Student Training Programs

-----Original Message-----
From: Rachel Okabe [mailto:rokabe@rics.bwh.harvard.edu]
Sent: Monday, May 03, 2010 8:19 AM
To: Michelle Isa
Cc: Marilyn Dunlap; Healani Chang
Subject: Support for PBRC Student Training Programs

Dear Chancellor Hinshaw,

My name is Rachel Okabe, and as a former Minority Access to Research Careers(MARC) Fellow from 2001 to 2003, I strongly urge you not to cut funding to PBRC and the Haumana and MARC student training programs it houses.

The MARC program provided me an amazing opportunity to pursue research in the field of preterm birth pathologies in the laboratory of Dr. Gillian Bryant-Greenwood, from June of 2001 through the summer of 2003. Because of the MARC program, I had the opportunity to pursue a meaningful research project at the Pacific Biomedical Research Center (as it was then called) while attending school full-time. The MARC program developed my interest in science through the valuable mentoring of program directors Drs. Healani Chang, Patricia Couvillon and Jerme Garibay-Tupas. Dr. Healani Chang in particular has proven to be a wonderful mentor who has offered support, encouragement and letters of recommendation years after I had moved to Boston.

Through the MARC program, I was able to attend an international biotechnology research conference in San Diego as well as national scientific conferences for minority students in Anaheim, Orlando and New Orleans. Because of the MARC program, I was a competitive applicant for summer research programs and was accepted to 12 of the 14 programs I applied to in the summer of 2002, including programs at Johns Hopkins, UCSF, NYU, Washington University in St. Louis, Baylor, Mount Sinai, etc. I chose to participate in the Four Directions Summer Research Program (FDSRP) at Harvard Medical School. As a Native Hawaiian, the FDSRP had special appeal to me as it was the only program that was tailored for Native Students interested in a career in both medicine and research. Since the program's founding in 1993, I was the first Native Hawaiian student to be accepted and since then there have been two other Native Hawaiians that have participated. This program allowed me the opportunity to work with distinguished faculty and researchers at Harvard Medical School and was a stepping stone to my current position as a research assistant at Brigham and Women's Hospital.

After graduating from UH Manoa in 2003 with a B.A. in chemistry and a B.S in biology, I was hired by renowned hematologist/oncologist Dr. D. Gary Gilliland (currently head of global oncology research at Merck Research Laboratories) at Brigham and Women's Hospital and Harvard Medical School because of a letter of recommendation written by Dr. Rebecca Baron, my FDSRP mentor. Because of a family history of cancer, and the experience of caring for my terminally ill grandmother who died from lung cancer, I was particularly interested in cancer research and was enthused to join the the Gilliland Lab. I have had the honor of being a co-author on 10 publications in such journals as Cancer Cell, Cell Stem Cell and Proceedings of the National Academy of Sciences, with two additional co-authored publications currently in review at Cancer Cell and Nature. I was particularly honored to be involved in the development of a mouse model of a blood disorder, polycythemia vera,
resulting from the v617f point mutation in the JAK2 gene and the testing of a novel therapy that resulted in the drug currently being used in clinical trials at the Dana-Farber Cancer Center as well as teaching hospitals at Stanford and Mayo Medical Schools.

This fall I will be attending the NYU School of Medicine with the help of a $120K partial tuition scholarship. My goal is to become an oncologist and continue to pursue my interest in cancer research, with a long-term goal of a career in academic medicine.

I would not be where I am today were it not for the MARC program. Like many students from ethnic backgrounds underrepresented in medicine, I came from a disadvantaged background. As the oldest of six children, I had to postpone my college education to help my family and had to support myself through college, first attending Honolulu Community College and later transferring to UH Manoa. I owe everything that I have had the privilege of being involved with directly to the MARC program. The MARC and Haumana programs are an invaluable part of the UH Manoa system and I cannot stress enough how important it is for these programs to continue. I realize that in these tough economic times, budget cuts must be made, but getting rid of these programs for short-term benefit would definitely be a mistake.

It is my dream to one day return to Hawaii and serve on the faculty of the John A. Burns School of Medicine. As a Native Hawaiian from a disadvantaged background, I have a particular interest in health disparities among underserved populations. I chose to attend NYU because of the excellent hands-on experience I will gain in treating uninsured/underserved patients at Bellevue Hospital. I hope to bring this expertise to Hawaii and help the Native Hawaiian community as well as all underserved individuals become healthier and have equal access to care. The MARC program has helped me to realize my goals and I strongly urge you not to abolish the PBRC and the valuable MARC and Haumana student training programs for the sake of Hawaii's future and the health of its people.

Sincerely,

Rachel Okabe
Research Assistant
Benjamin Levine Ebert Lab
Brigham and Women's Hospital
Harvard Medical School

The information in this e-mail is intended only for the person to whom it is addressed. If you believe this e-mail was sent to you in error and the e-mail contains patient information, please contact the Partners Compliance Helpline at http://www.partners.org/complianceline. If the e-mail was sent to you in error but does not contain patient information, please contact the sender and properly dispose of the e-mail.
May 2, 2010

Virginia S. Hinshaw, Chancellor,  
University of Hawaii at Manoa  
Hawaii Hall  
2500 Campus Road  
Honolulu, HI 96822  
Email: isam@hawaii.edu  
cc: amnyang@hawaii.edu, dunlap@pbrc.hawaii.edu

Dear Dr. Hinshaw,

I am writing this letter to plead that you do not close the Kewalo Marine Laboratory.

I am a research associate at the Australian Institute of Marine Science, an Adjunct Professor at the School of Marine and Tropical Biology at James Cook University, Townsville, Australia, and a Principal Research Officer at the Australian Centre for Tropical Freshwater Research at James Cook University, Australia. I have received a Doctorate Honoris Causa from the University of Louvain and an Australian Centenary medal for services to estuarine and coastal oceanography.

The Kewalo Marine Laboratory has a prestigious international reputation for marine science, particularly for coral reefs and watershed-coral reef issues that involve human and economic developments and sustainability. I am very familiar with the Kewalo Marine Laboratory because I collaborate for the last eleven years with Professor Robert Richmond. Bob recognized long ago that multi-disciplinary research is needed to understand and quantify the mechanisms governing coral reef ecology, biogeography and sustainability. To make it happen, Bob is actually collaborating with physicists and economists – and ensuring this is successful by raising funds for that collaboration. The funds that Bob has raised are substantial; indeed his research budget is typically hundreds of thousands to US$1 Million per year over the last many years.

As a result of this collaboration, Bob and I have written twelve papers linking physics and coral reef ecology, with implications for ecosystem health and governance. I attach for your information the latest paper in that list, namely that dealing with Maunalua Bay, Oahu, Hawaii.

At the same time Bob is also working with biochemists in studying biomarkers of stress in corals, and with economists and social scientists and local communities in throughout Micronesia (American Samoa, Guam, Palau, Yap, and Pohnpei that I know of) on applications of his ecological research to ecosystem-based management and governance. This research program is central to the key issue of sustainable development that Hawaii faces. No other lab in Hawaii is addressing that question. In fact the Kewalo Marine Laboratory has developed such a program for Maunalua Bay (the bay next to Waikiki beach, hence very much central to the issue of sustainability for Hawaii) that involves biologists, biochemists, physicists at USGS and NOAA, the Hawaii state government, economists, sociologists AND the local community. This is proving to be very successful to the level that remediation measures are now being actually implemented in the field, managed by the local community with the Kewalo Marine Laboratory providing the scientific advice.

Through such actions the Kewalo Marine Laboratory is addressing practical problems of watershed developments and economic development not only throughout Micronesia – the US backyard in the Pacific – but also very close to home to issues that directly concern the people of Hawaii such as the science-based rehabilitation of Maunalua Bay. It is the only marine laboratory doing such splendid things!
The Kewalo Marine Laboratory at the same time has not forgotten science; indeed it has developed a most interesting and scientifically challenging scientific research program in coral reef molecular biology, biomarkers, and ecotoxicology, amongst many topics.

All this is leading marine science; indeed it reflects the Kewalo Marine Laboratory world leadership in coral reef science. It is also highly relevant to society and the very issues of sustainability that small islands such as Hawaii must solve while seeking economic development.

Enhancing the scientific reputation of Hawaii and ensuring the role of the University of Hawaii in science-based sustainable economic development in Hawaii will not come by transforming the Kewalo Marine Laboratory in a wedding chapel or whatever other plans are made by developers; indeed such a move would very much insult the scientific reputation of the University of Hawaii. I urge you not to close the Kewalo Marine Laboratory.

Do not hesitate to contact me if you have any questions.

Yours Sincerely,

Eric Wolanski

Dr. Eric Wolanski, PhD, DSc (Honoris Causa), FTSE, FIE Aust
Australian centenary medal
April 23, 2010

Dr. Virginia Hinshaw
Chancellor
University of Hawaii

RE: VCRGE's Proposal to Reorganize PBRC

Dear Chancellor Hinshaw,

I am writing to you not just as a member of the PBRC faculty and Director of the PBRC Greenwood Molecular Biology Facility (GMBF) but also as a two-time (2003, 2008) elected Chair of the American Chemical Society (ACS) Hawaii Section. The Hawaii chemistry- and bioscience-related research community has a direct interest in the existence and continuation of GMBF. Researchers from federal, state, and private organizations as well as from other educational institutions are regular users of the various bio-analytical services of this Facility. I enclosed a list of state-wide user groups at the end of this letter for your reference (Page 3). Many of these institutions have members in the Chemical Society and do collaborative research with various UH departments. GMBF is a prime example of how UH carries out its scientific outreach to the local research community. More often than not, the work of local researchers heavily depends on the availability of UH resources, even in the case of government agencies. GMBF offers unique services that are not available anywhere else in the Hawaii state outside this resource. While there are other service laboratories in the UH system, none of them has the breadth and depth of bio-analytical services and functionality of GMBF. I also enclosed a list of current services at the end of this letter (Page 4).

The cooperation of ACS with GMBF goes beyond the normal course of activities. Supported by a 2008-2009 National ACS Innovative Project Grant, GMBF and the UH Chemistry Department held state-of-the-art-instrumentation workshops for students and teachers from Oahu and Kauai high schools and Community Colleges. The successful program that fosters awareness of and appreciation for chemistry and biosciences in the larger community will be continued and extended to Maui and Big Island schools as well. GMBF is instrumental in implementing such programs as it has extensive, long-running experience in contributing to education, training, and minority honors programs of various UH departments by delivering lectures and running hands-on-workshops in modern technologies of molecular biology. For the past decade, GMBF has also provided agency judges on behalf of ACS at the Hawaii State Science and Engineering Fair.

As you may know GMBF is operated on a cost-reimbursed user-fee basis, specifically as a non-profit recharge center and one of the oldest RCUH revolving fund projects. Since its start in 1988, UH researchers spent nearly 2.5 million dollars on various GMBF services. Because the recharge rates of GMBF are, with very conservative estimation, about half of similar commercial bio-analytical services, GMBF effectively saved at least the same amount of funds, 2.5 million dollars, for UH researchers which
they could usefully spent elsewhere on other research activities. If these services will no longer be available and the UH researchers will have to turn to commercial alternatives, the overall cost of bioanalytical work will double up system-wide at UH. Non-UH researchers from the Hawaii state were always charged at commercial rates. For them the abolishment would consist of losing availability of and access to local resources.

It is also important that GMBF has acquired all of its major instrumentation from federal funding (NIH, NSF, DOD, and DOE) and not from central university support. The total value of currently available instrumentation exceeds 1 million dollars. After an initial joint support from PBRC and the Hawaii Institute of Tropical Agriculture and Human Resources, PBRC has been solely responsible for GMBF since 1994 and currently it provides support for 2 FTE. All other operational expenses are covered by user fees. Thus PBRC in effect subsidizes the research activities of all other departments via GMBF. A 2007-2008 NIH NCRR/RCMI site visit pointed out that the level of self-reliance of GMBF is exceptional and outstanding nation-wide. The central administrations of most Mainland universities support their core facilities to much larger extent than UH. Therefore any notion of inefficiencies that would justify the reorganization of GMBF is baseless and is without merit. The unfortunate fact is that the service that GMBF provides to the UH and Hawaii community is grossly underappreciated by the UH administration.

The reorganization proposal does not provide a specific plan for GMBF beyond the initial take-over by the office of the VCRGE. If GMBF were abolished subsequently, the termination would be counter-productive to the entire UH system. If it were attached to other service laboratories at UH, the step would be non-professional. While other service laboratories do an excellent job in their own fields, they currently do not possess the expertise needed to provide the same services as GMBF. Training, re-training, moving the instrumentation to new locations, and re-certifying the instruments would cost tens of thousands of dollars, possibly more, and would result in serious interruption of services while the expertise is newly developed in the new place by the new personnel. It is not clear where the savings would be for anyone at UH except for the savings by terminating the positions of highly-trained productive personnel. To bring GMBF under the control of other facilities which have smaller scopes than GMBF, professionally cannot be justified and is offensive. If reorganization is an issue at all, it should take place the other way around. Smaller or more one-sided core laboratories should be integrated into GMBF with permanent support from the university. But with the existing configuration, all facilities serve well their respective, often geographically separated user communities, and therefore there is no real need for their merging at this time.

In conclusion I urge you to consider carefully the choices you have as you plan the future of this university. Closing GMBF and PBRC would be detrimental to a large number of stakeholders in the Hawaii state. Paradoxically, the relatively small savings on personnel costs today would cost greatly more to the university tomorrow. Here the emphasis is not on a distant future, but on the very day of abolishment when the scientific and societal loss would start manifesting itself immediately. If I can be of any help in discussing this matter further, I would be glad to do so.

With best wishes,

Gabor Mocz, Ph.D.
Professor (Specialist)
808-956-9653
gmocz@hawaii.edu
Non-UH User Groups of GMBF Services

Brigham Young University
Chaminade University of Honolulu
Environmental Microbiology Section of State of Hawaii Department of Health
Hawaii Agricultural Research Center
Hawaii Biotech Inc
Hawaii Pacific University
Kuehnle Agrosystems Inc
Leahi Hospital
Marine Agritech Inc
Moana Technologies LLC
Oceanic Institute
PanThera Biopharma
Queen’s Medical Center
United States Geological Survey at Hilo
University of Virgin Islands

UH User Groups of GMBF Services

Cancer Research Center of Hawaii
College of Natural Sciences
College of Tropical Agriculture and Human Resources
Hawaii Water Resources Research Center
John A. Burns School of Medicine
Kapiolani Community College
Leeward Community College
Pacific Biosciences Research Center
School of Ocean and Earth Science and Technology
University of Hawaii at Hilo
Windward Community College

A total of 400 faculty, staff, and students annually.
Current Bioanalytical Services of GMBF

- Gene expression analysis for characterizing and quantifying the expression of nucleic acid in various genomes based on microarray technology and real-time polymerase chain reaction.

- Genetic analysis for fragment quantification and genotyping using capillary nucleic acid sequencing and related methods.

- Mutation detection for analysis of known and unknown mutations and single nucleotide polymorphisms to identify variations in nucleic acid sequences.

- Oligonucleotide synthesis and production of short strands of nucleic acid for genetic analysis and diagnostic tests.

- Protein analysis for peptide and protein sequencing and identification using chemistry-based platforms.

- Lab-on-a-Chip bio-analysis for characterization and quantification of nucleic acid and proteins.

- Bioinformatics for genetic and statistical analysis and data mining.

- Macromolecular modeling.

As a side activity, the Director of GMBF serves as the Editor-in-Chief of the journal *Biochemistry Insights* since 2008.
From: Christy Ann L Gilman [mailto:cagilman@hawaii.edu]  
Sent: Wednesday, April 21, 2010 1:32 AM  
To: Michelle Isa  
Cc: Marilyn Dunlap; Healani Chang  
Subject: Support for PBRC student training programs  

Dear Chancellor Hinshaw:

I submit my letter of opposition to the proposed abolishment of PBRC.

I am proud to be a former student research assistant at PBRC because of the valuable experiences I gained, which includes conducting several research projects with the following mentors: Dr. Pratibha V. Nerurkar, Dr. Jun Panee, Dr. Frederick P. Bellinger, and Dr. Marla J. Berry. I am competent in the following skills and techniques: western blotting, protein assays, quantitative real-time PCR, and cell culture work. The PBRC fiscal office processed my stipend, travel funds, and supply purchases in a timely and efficient manner which allowed me to focus on my research. I presented my abstract results at the following national and local conferences: National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) 2006, 2007 and 2008 Symposiums and the University of Hawai`i Honors Spring Symposium in 2008. I received the following awards for my research: Third Place Oral Presenter (NIDDK 2008) and Best Oral Presentation for the Biological Sciences (Honors Symposium 2008). My research contributions in 2007 led to my first publication as a co-author entitled, *A Novel Function of Bamboo Extract in Relieving Lipotoxicity*.

The PBRC research training program provided a nurturing environment for me to evolve as a scientist. I enjoyed my lab experiences and with the knowledge and skills acquired by participating in this program, I was inspired to continue into a graduate program. Currently, I am a master’s student in the Department of Cell and Molecular Biology at the John A. Burns School of Medicine and will graduate in the Spring of 2011. I plan to pursue a career in medicine and possibly a doctorate degree in Cell and Molecular Biology.

I would like the PBRC faculty and staff to remain intact as an organized research unit and continue to inspire and train future clinical and biomedical scientists.

Sincerely,
Christy Gilman
Dear Chancellor Hinshaw,

I am writing this letter to express how important I believe the Haumana and MARC undergraduate research and training programs administered by the Pacific Biomedical Research Center (PBRC) at the University of Hawai‘i at Mānoa have been for Hawai‘i’s students. As a local student born and raised in Hawai‘i and being a minority, I was fortunate enough to receive a MARC undergraduate scholarship from 1993-1995 where I worked in the laboratory of Dr. Stephen Palumbi at the Kewalo Marine Laboratory. Continuing as a graduate student at UHM, I also received Haumana program support from 1997-1998 while I pursued my Masters degree in Zoology with Dr. George Roderick. After going on to complete my Ph.D. in marine population genetics at the University of California at Berkeley, I am proud to say I now hold a faculty position at UH Mānoa’s Hawai‘i Institute of Marine Biology (HIMB).

The MARC and Haumana programs at PBRC have had a significant impact on my life, both personally and professionally. Despite my lifelong interest in science, I truly believe that I would not have even pursued a scientific research career if I had not been part of these programs, being greatly influenced by the mentoring provided to me by Haumana and MARC faculty during my college career. These programs gave me not only the hands on research experience I needed, but gave me that ‘leg up’ to succeed in this competitive field of study and demanding career track. More importantly, being a MARC and Haumana student gave me the confidence that local kids like myself so often lack, but truly need, in order to pursue careers in science and research.

Today as a faculty member at HIMB, much of my time is dedicated to creating pathways for local students into marine science studies and career tracks, a pursuit that is in many ways modeled after my experiences with MARC and Haumana. There is still much work to be done in closing the gap for Hawai‘i’s students in the science and math fields, and programs such as MARC and Haumana are crucial to this endeavor. I truly hope that this critically important program at PBRC continues for the University of Hawai‘i, and for our island students.

Aloha,
Malia Rivera

--

Malia Rivera, Ph.D.
Hawaii Institute of Marine Biology
P.O. Box 1346
Kanehoe, HI 96744
**PLEASE NOTE NEW PHONE NUMBERS**
Ann N A. Sakuma

From: Ann N A. Sakuma  
Sent: Monday, April 19, 2010 4:00 PM  
To: Ann N A. Sakuma  
Subject: FW: Letter of Opposition Towards the Abolishment of PBRC

---

From: Henry Cheng [mailto:hcheng55@gmail.com]  
Sent: Monday, April 19, 2010 11:14 AM  
To: Michelle Isa  
Cc: dunlap@pbrc.hawaii.edu; healani@pbrc.hawaii.edu  
Subject: Letter of Opposition Towards the Abolishment of PBRC

Aloha Dr. Hinshaw,

As a proud alumnus of the Pacific Research in Diabetes Education (PRIDE) and Minority Access to Research Careers Undergraduate Student Training in Academic Research (MARC U-STAR) programs, which has been a part of Pacific Biosciences Research Center (PBRC) for decades, I am writing to share my experience with PBRC and oppose the proposal to abolish the Pacific Biosciences Research Center (PBRC).

Without the opportunities that PBRC has been able to provide me, I am certain that I would not be where I am today. When I first entered UH Manoa as a Regents Scholar, I really had no idea what I was doing. But once I was able to gain my first research experience through PBRC’s PRIDE program with Dr. Ralph Shohet of JABSOM examining the molecular effects of air pollution on the cardiovascular system, I finally found my passion in biological research. This made all the difference as I continued to pursue a thesis with the Honors program, in conjunction with PBRC’s MARC U-STAR, with Dr. Daniel Jenkins of the Biological Engineering program developing portable electronic biosensors for agricultural pathogen detection. The MARC U-STAR program provided an incredible research experience for me, providing me with everything from graduate level research seminar courses to funding to travel to annual conferences to present my research.

After having these two research opportunities, I have gained so many incredible opportunities. In the last two summers, I was able to conduct Bioengineering research at the Massachusetts Institute of Technology involving portable lab-on-a-chip systems for protein and HIV diagnostics. Recently, I was one of 18 American college graduates awarded a Luce Scholarship to pursue a yearlong internship in Asia. (I will use my scholarship to pursue pandemic preparedness research from a public health perspective at Thailand’s top university starting in June). In Fall 2011, I will attend Stanford University’s Bioengineering PhD program, with full support provided by an NSF Graduate Research Fellowship that I was also awarded.

I must reiterate that I would not be able to have all of these amazing opportunities without the work of PBRC. The PRIDE and MARC U-STAR programs are very high quality programs, and have provided an very high level of mentorship and support that I couldn’t even find at my MIT summer research program. If it were not for these programs, it would have been much more difficult to gain quality research experience throughout my undergraduate years. Many of my classmates have not been able to pursue research opportunities until their senior year, and by that time, are not competitive for graduate school. Gaining research experience has been very hard for so many of my classmates. They don’t know where or how to find them, professors hardly advertise opportunities, and oftentimes funding is a huge issue.

PBRC provides such a unique opportunity for undergraduates to pursue research. Without the time-draining teaching responsibilities that are endowed on other professors, PBRC researchers can dedicate their full attention to training Hawaii’s next generation of researchers. The department truly cares about its undergraduate training—it’s even in PBRC’s mission statement!
As a former UH student researcher, I want the rest of UHM’s aspiring researchers to have the same opportunities that I did. I really hope that you allow PBRC to continue its strong record of training Hawaii’s student researchers!

With regards,

Henry Cheng
Class of 2009
Biological Engineering Program
University of Hawaii at Manoa
Mobile: 1-808-224-0991
Dear Chancellor Hinshaw:

I am proud to be a former student research assistant at PBRC, and I oppose the proposed abolishment of PBRC as an Organized Research Unit at UHM. During my two summers spent at PBRC, I gained invaluable research-lab experience. My PBRC project mentors were Dr. Jun Panee and Dr. Bruce Shiramizu. I was involved with projects that dealt with diabetes. I was provided with much support and encouragement by my research lab team. I learned numerous skills and techniques including culturing cells, processing magnetic cell separations, flow cytometry, DNA extractions, and running Real-Time PCR’s. I also learned how to analyze the data that found. I thought the PBRC fiscal office was timely in processing my stipend, travel funds, and supply purchase requests. I presented my abstract results at two conferences and the titles of my projects were "The Anti-Lipotoxicity Function of Bamboo Extract in 3T3-L1 Cells" and the second titled, "Monocyte HIV DNA as a Potential Factor Associated with Insulin Resistance and High Blood Glucose".

I am a junior in class standing and the PBRC research training program enabled me to evolve as a junior scientist. I enjoyed my lab experiences and was inspired to pursue my goal with a career in the medical field. I’m majoring in biology, and will hopefully graduate in 2012. I plan to pursue a career in pediatrics or possibly in research.

I hope you will take the time to speak with the PBRC faculty, staff and students to find an alternative solution to abolishing this highly productive research training unit. This program has definitely given me a valuable experience from which I have benefited from, and I hope it will continue so that it may be a benefit and a positive learning experience for future students.

Yours truly,

Chrislyn Andres
My name is Ramon Go, a former student researcher at PBRC, currently a 3rd year medical student at Jefferson Medical College in Philadelphia. I've been recently informed that the Pacific Biosciences Research Center is to be dissolved. I respectfully ask that due diligence for an alternative plan in reducing cost be done.

PBRC has housed several minorities associated research scholarships. One of which I participated in as an undergraduate, Pacific Region Diabetes Education research program (PRIDE). Through PBRC, I was able to conduct research and elevate my knowledge base. At PBRC I also worked with one of the few Filipino researchers, Dr. Meredith Hermosura. It was utterly inspiring to see someone with the same background as me achieving and excelling in science. She provided excellent mentorship and opportunity to travel to Stanford University to conduct experiments. My research through PBRC gave me the opportunity to win several awards at the JABSOM symposium and national presentations. My time spent at PBRC gave me the confidence and "can-do" attitude in research.

I can say with certainty that I would not be where I am today were it not for the PBRC. As a student, I was mentored by faculty to pursue science. They ignited a passion in biomedical research and most importantly provided the outlet. With the research experience and education I received, I was able to show to medical schools my passionate for basic science. Many applicants to medical school state that they love science, but due to the limited amount of research positions for students and opportunities for mentorship, less can SHOW that sense of passion. These programs allow students this valuable aspect of their application. Without the education I received at UH Manoa as a research assistant and graduate student in PBRC, I would not have been able to excel in my biochemistry class in the first year of medical school. Students and professors praised me for my knowledge of biochemistry and biophysics, which I solely attribute to the excellent instruction I received.

Once again, I respectfully ask that due diligence for an alternative plan be conducted.

Thank you very much.

Sincerely,

Ramon Go

--
Ramon Go
Aloha e Chancellor Hinshaw,

My name is Marcus Kawika Iwane. I’m writing in regards to the opposition of the abolishment of the Pacific Biosciences Research Center. I was born and raised here on Oahu and graduated from Kamehameha Schools in 2002. As an undergraduate biology major at UH Manoa, I was fortunate to participate in the Haumana student research program for two years.

As a Haumana student, I was exposed to the vast and exciting world of student conducted research. I was able to work under Dr. Michael Hadfield at the Kewalo Marine Lab where I conducted research analyzing settlement patterns for marine invertebrates. As a student researcher, I was able to build my critical thinking, time management and leadership skills. The Haumana program also taught me about responsibility and professionalism. These skills were key to help mold me into the medical student that I am today.

Through the Haumana program, I was given the opportunity to travel to the Intercultural Cancer Council meeting in Washington D.C, and present my research at both the UH Biomedical Sciences Symposium and the SACNAS conference in Austin, Texas. Further, my relationship and involvement with the Haumana program was instrumental in coaching me through the process and requirements of applying for the UH Manoa Presidential Scholarship which I was awarded as a junior in college.

After graduation from UH Manoa with a B.A. in Biology in 2006, I decided to further my studies and pursue my passion of being a physician. I was fortunate to have been accepted to the UH John A. Burns School of Medicine (JABSOM). Currently, I am a fourth year medical student at JABSOM awaiting my graduation in May 2010. Shortly thereafter, I will begin my Internal Medicine residency with the UH Internal Medicine Residency Program.

I am proud to say that I am an alumni of UH Manoa and will one day shortly use my ‘ike (knowledge) to provide primary care to Hawaii’s community as a Native Hawaiian physician. The Haumana program opened many doors for me and enhanced my education at the UH Manoa. The Haumana program has also instilled many skills and qualities within me that I will carry as I begin the next chapter in my life as Marcus Kawika Iwane, M.D. I urge you to please consider the continuation of PBRC, and thus the Haumana and MARC student research programs.

If you have any questions, I can be reached by email miwane@hawaii.edu, or cell 808-753-1990.

Mahalo nui loa.

Ke aloha no…Marcus Kawika Iwane
To: Ann N A. Sakuma  
Subject: FW: Support for PBRC Student Training Programs

-----Original Message-----
From: Lauren Javier [mailto:lkjavier@uci.edu]
Sent: Friday, April 16, 2010 10:17 AM
To: Michelle Isa
Cc: dunlap@pbrc.hawaii.edu; healani@pbrc.hawaii.edu
Subject: Support for PBRC Student Training Programs

Dear Chancellor Hinshaw:

Please count me with the PBRC faculty, staff and student research assistants in their opposition to the proposed abolition of PBRC as an Organized Research Unit at the University of Hawaii, Manoa.

I am a former student research assistant at PBRC now attending the University of California, Irvine, and I am pursuing a doctorate in Neuroscience. While attending UHM, I gained such a valuable mentored-lab experience under Dr. Robert Blanchard, that contributed to my current position. Through the Minority Access to Research Careers (MARC) Program, my PBRC project involved studying brain activation in mouse scent marking behavior through the expression of cFOS, an immediate early gene.

During my two years as a student research assistant, I learned the following skills and techniques. I learned to follow protocol in conducting experiments, how to score my results, analyze my data, make interpretations, and pose thoughtful implications on the results, and suggest future research directions. I have experienced the full spectrum of research from hypothesis testing, to design and methodology, implementation, data collection, and writing up the results and conclusions. With the research project that I was involved in, I was able to contribute my findings into a collaborative research publication in Neuroscience.

Throughout my undergraduate research in the MARC Program, the PBRC fiscal office processed my stipend, travel funds, and supply purchases in a timely and efficient manner. They were quick to answer any questions or concerns that I had. With their support, I presented my abstract results at various conferences including the Society for Neuroscience, which is a national conference and it is one of the most important in my field. The PBRC research training programs provided a safe environment for me to discover my skills as a scientist. When I first began my undergraduate education, I never saw myself as a scientist, nor did I consider it. I was one of the many medical school hopefuls using research as a means to attain my goal. However, when I started conducting research, I soon realized that I had the potential to succeed as a scientist. I enjoyed my lab experiences and was inspired to continue into a graduate program.

Currently, I am a first year graduate student at UCI conducting my lab rotations under the direction of the Interdisciplinary Neuroscience Program (INP). INP is a gateway program that allows me to have laboratory rotations during my first year in various departments related to the neuroscience field. The projects I was involved in thus far was looking at the molecular mechanisms involved in learning and memory, specifically how learning is affected during an innate immune response. I was also given the opportunity to study Huntington's Disease and study the role that BDNF plays since people with HD produce low amounts of this neurotrophic factor. I am currently doing my final rotation in Dr. John Middlebrooks' lab studying sound localization in cats. I plan to pursue a doctorate in Neuroscience and pursue a career in academia, where I can teach students and hopefully inspire them to pursue research careers.
I believe that I would not have accomplished what I have done thus far without the support of PBRC. The MARC program as well as PBRC, I feel is a valuable and integral research unit and it has helped a lot of students such as myself, continue to succeed in various research fields. The greatest thing that I have learned from participating in the MARC program is that the research I do can help not only myself, but many others. It is my hope that other students have the same opportunity that I had and are able to realize their potential for greatness through research training programs from PBRC.

I fully oppose the abolishment plan of PBRC. I ask that you engage in dialog with the PBRC faculty, staff and students to keep the unit intact and continue its successful student training programs.

Yours,

Lauren Javier
Graduate Student Researcher
Interdepartmental Neuroscience Program
Univ. of California, Irvine
TO:
Dr. Virginia Hinshaw
Chancellor
University of Hawaii at Manoa
Hawaii Hall

Dear Chancellor Hinshaw,

I have been a graduate student at UH Manoa, working out of Kewalo Marine Laboratory, for over four years now. During this time I have been incredibly fortunate to be a part of PBRC and to have been exposed to all the resources it has to offer. I can safely say that I would not have come so far in my PhD career without it. In light of the proposed reorganization of PBRC, I strongly urge that you and the UH administration find a way to keep PBRC intact. While I understand that you must make difficult decisions in response to budgetary contractions, the decision to abolish PBRC would be contrary to the goal of promoting and maintaining an environment for innovative research.

The proposed reorganization of PBRC review provides rationale that states “There are no anticipated impacts to students as there are no degrees or certificate programs in PBRC…” This rationale is false. As a graduate student completing my dissertation research at the Kewalo Marine Laboratory (KML) I can state that the reorganization of PBRC and hence the abolishment of KML will have a significant impact on my ability to complete my degree. I am coral researcher and a significant part of my research relies on the resources provided by KML, namely the constant access to fresh running seawater, large tanks and individual space for researchers. Without these resources I, as well as many other student and faculty, cannot complete our experiments. While it is possible to conduct and maintain such experiments in other locations, it is not as simple as it has been made out to be. The lack of fresh running seawater would require producing artificial seawater, which is costly both monetarily and in time. Another option would be to get fresh seawater from other facilities such as the Waikiki Aquarium or HIMB. However, this would require a great deal of travel time and limits the quantity that can be reasonably transported. Additionally the time required to breakdown and reestablish a laboratory would put a halt on research for a significant amount of time. Students like me, who are nearing the end of their research and on a strict time table, would be negatively affected. Essentially forcing us to delay our experiments and hence the completion of our degrees.

The argument has been made that “existing faculty members have been advised of opportunities to move their programs to a number of locations at UH Manoa to include the Hawaii Institute of Marine Biology (HIMB) as well as multiple locations on the main campus.” While this reason is sound in theory, it is neither practical nor realistic. Resources and space on the UH Manoa campus and HIMB are severely limited, making relocation of a complete laboratory at KML to another location unfeasible. Building regulations and space will not allow the instillation of large saltwater tanks in order to perform our research. Additionally, providing only a fraction of the space will limit the resources that are needed in the lab to complete the research.
I urge you and the UH administration to reconsider the reorganization of PBRC and to keep PBRC intact. From the standpoint of a graduate student, the prospect of completing my PhD dissertation and producing exemplary work at the University of Hawaii would be significantly diminished if PBRC were to be abolished.

Best Regards,
Luc Rougee
University of Hawaii at Manoa
Kewalo Marine Laboratories
Pacific Biomedical Research Center
41 Ahui St.
Honolulu, HI 96813
Lab: 808-539-7321
Mobile: 808-271-2254
Chancellor Virginia Hinshaw  
University of Hawaii at Manoa  
Hawaii Hall 202  
Honolulu, Hawaii 96822

Dear Chancellor Hinshaw,

I am writing to you regarding the proposal to abolish the Pacific Biosciences Research Center (PBRC). As a graduate student member of the Ecology, Evolution and Conservation Biology (EECB) program, as well as a National Science Foundation (NSF) Integrative Graduation Education and Research Traineeship (IGERT) Fellow, I have benefited immensely from PBRC and strongly urge you not to abolish it.

In 2007, the NSF established a new grant funding review criterion intended to motivate “transformative concepts” in all proposed research projects, thereby redefining the emphasis of NSF-funded scientific research. One way in which such transformative research may be achieved is through transcending traditional discipline boundaries, in order to significantly change existing scientific fields or to create new paradigms of scientific inquiry. To train the next generations of scientists to meet this transformative research challenge, the NSF conducts the IGERT program. The IGERT program at the University of Hawai‘i at Manoa (UHM) is specifically aimed at providing integrative training in ecology & evolution, conservation biology, and pathogen biology, for better understanding and response to the globally growing threats of emerging diseases. Such interdisciplinary work, and successful implementation of this unique and important training program, has been made possible by PBRC. Thus, PBRC has been instrumental in enabling UHM to train future scientists for the NSF’s new mandate.

I urge you to maintain UHM’s cutting-edge training abilities such as IGERT, by finding a way to keep PBRC intact.

The resources, faculty expertise (e.g. Dr. Healani Chang, Dr. Durrell Kapan), and services that PBRC provides are important to my success as a graduate student.

Sincerely,
Holly Jessop  
NSF UHM IGERT Fellow  
UHM Doctoral Student Zoology; M.S. Student Epidemiology  
jessop@hawaii.edu  
2361 East Manoa Road  
Honolulu, HI 96822
Dr. Virginia Hinshaw  
Chancellor  
University of Hawaii at Manoa  
Hawaii Hall

Dear Chancellor Hinshaw,

I am a graduate student in the Department of Zoology, and a member of the Ecology, Evolution, and Conservation Biology program. Additionally, I was an NSF IGERT fellow 2006-2008. Thus I have worked closely with PBRC to receive funding over my years as a PhD student, and my experience with them has been exemplary. They maintain an organized, cohesive program with fiscal and HR management that functions better than any other department/school I have worked with at University of Hawaii.

EECB and the NSF IGERT often require complex and unusual travel logistics and equipment needs, and these were largely made possible by PBRC staff's remarkable ability to work through issues and problems. For example, one of the projects for my study of avian malaria in Hawaii required that I purchase canaries through a local breeder. Purchasing from a small business that was only a breeder (and not a company or corporation) was one challenging factor, and the fact that I was buying live vertebrates was another large hurdle.

Yet working through PBRC, I was able to purchase the canaries in a timely, efficient manner. The results of this study are groundbreaking, and my presentation at the Department of Zoology’s Tester Symposium this year was awarded best paper. Honestly, it could not have been completed without the competence and willingness to go the extra mile exhibited by PBRC.

I realize the budgetary situation is dire, and we are all making sacrifices. Decisions must be so difficult, I cannot imagine having to determine which programs at UH are less “worthy” than others to be maintained. You are likely focusing on eliminating inefficient programs, and PBRC absolutely does not fall into this category.

I urge you to please try to find a way to keep PBRC in place. Graduate students like myself have a greatly benefited from this organization. If it were redistributed we would have more difficulties receiving and using grant funds, which is vital to completing our degree programs, publishing papers in top journals, and eventually moving on to prestigious positions.

Thank you for your time.
Sincerely,

Kira Krend  
Ph.D. candidate  
Department of Zoology  
University of Hawaii at Manoa  
2538 McCarthy Mall, Edmondson 152  
Honolulu, HI 96822  
808-741-3607  
krend@hawaii.edu
Dr. Virginia Hinshaw  
Chancellor  
University of Hawaii at Manoa  
Hawaii Hall

Dear Chancellor Hinshaw,

I've had the opportunity to work with PBRC for nearly 15 years, including becoming acquainted with its visionary director the late Fred Greenwood. Over this stretch of time I've always been impressed with its staff and faculty alike, especially their science and the remarkable cohesiveness and organizational functionality. PRBC's grants, fiscal, and HR management capability is truly legendary on our campus.

In 2006 I led a team that proposed and was awarded UH's first NSF IGERT grant. I strongly feel that had we not done this through PBRC the likelihood of us producing such a competitive grant would have been diminished. Moreover, once we were awarded the grant, I similarly feel that without it PBRC administering it, we could not have been nearly as successful with it as we have been. We've even received public accolades from NSF for our innovative graduate research activities in the field. These activities, which require very complex and unusual travel logistics and equipment needs, for example, were largely made possible by PBRC staff's remarkable ability to work through issues and problems. PBRC has a culture of competence and willingness to go the extra mile that is rare in academia.

I understand that you and your administrative team must make some very hard decisions in light of the currently unprecedented budgetary contraction. You're obviously basing these on best management practice in terms of eliminating inefficiency and programs of low priority. Breaking up PBRC would clearly be contrary to this principle.

I urge you to find a way to keep PBRC intact. From the standpoint of my own program I feel the prospect of renewing our NSF IGERT award, and bringing in another $3 million plus to the University, would definitely be diminished if the current reorganization put forward were implemented.

Aloha,

Bruce Wilcox

Bruce A. Wilcox, Ph.D.
Professor, Division of Ecology & Health
Global Health Program, Office of Public Health Studies
University of Hawaii at Manoa
1960 East West Road
Honolulu, HI 96822
Ph: 808-692-1602; Fax: 808-440-0381
Gary Ostrander, Ph.D.
Vice Chancellor for Research & Graduate Education
University of Hawai'i at Mānoa
2500 Campus Road, Hawai'i Hall 211
Honolulu, HI 96822
(808) 956-7837
(808) 956-2751

----- Original Message ----- 
From: Virginia Hinshaw 
Sent: Tuesday, April 06, 2010 6:18 AM 
To: Gary K. Ostrander 
Subject: Fw: Opposition to abolishment of PBRC 

Virginia S. Hinshaw 
Chancellor 
University of Hawaii at Manoa 
2500 Campus Road 
Hawaii Hall 202 
Honolulu, HI 96822 
Tel: 808-956-7651 
Fax: 808-956-4153 
Email: vhinshaw@hawaii.edu 

----- Original Message ----- 
From: Robert G Young <rgyoung@hawaii.edu> 
To: Virginia Hinshaw 
Sent: Tue Apr 06 02:59:05 2010 
Subject: Opposition to abolishment of PBRC 

Greetings Virginia Hinshaw,
I am currently an undergraduate at UH Manoa and had first entered the Pacific Biosciences Research Center (PBRC) through a new mathematical biology research program funded by the National Science Foundation (NSF), a supporter of interdisciplinary research. My experience here has been overwhelmingly positive. In this one department, over a few months, I became more proficient in physics, psychology, biology, chemistry, mathematics, neuroscience, computer programming etc. than most second or third year students in these respected fields. I believe this is all due to the diversity and synchrony of the faculty and staff present at the PBRC. Nowhere else can I enter a department with a neurological question and leave with a thorough electrochemical, physiological, and psychological understanding of the answer. I can even continue on to another professor in the building and learn about the mathematics or the biochemistry behind the answer. Next, I can discuss this with the present staff who'll teach me how to solder, cut, drill, and construct elaborate apparatuses for experimenting and testing the concepts I learned.

Thus, I am deeply saddened, disturbed, and shocked to hear that there are plans to abolish the PBRC. I feel that this move would severely undermine science and science education in Hawaii. Though currently, there are attempts to argue that the diversity within the PBRC makes it obsolete, I enthusiastically beg to differ. It is in my opinion (and apparently also the NSF's) that this diversity is fundamentally important to education of the highest caliber. History as also supported this with the invention of MRI machines (via collaboration between physicists and physicians), the Human Genome Project (via biologists and mathematicians), the advancement of neuroscience, and many more examples.

As a pre-medical student, double-majoring in mathematics and psychology, I know all too well the difficulties of bouncing between a half dozen segregated disciplines. If these proposals are to be enacted, the difficulty of obtaining a broad, thorough education would increase; and I can't help but to have a grim outlook on science in Hawaii. Without some integration, we risk more "nature vs. nurture"-esque periods than necessary. We also risk producing an entire generation of scientists who only know how to solve a few problems with a limited amount of tools. However, with increased support for more interdisciplinary programs, such as those present in the PBRC, periods of relative educational stagnancy can be minimized and scientific progress can be cultivated.

Thank you very much for your time

-Robert Young
MEMORANDUM

TO: Howard H. Karr  
    Chairperson, Board of Regents

VIA: M.R.C. Greenwood  
    President

VIA: Virginia S. Hinshaw  
    Chancellor, University of Hawai‘i at Mānoa

VIA: Gary K. Ostrander  
    Vice Chancellor for Research and Graduate Education

FROM: Executive Team, Pacific Biosciences Research Center (PBRC)  
    Marilyn Dunlap, Interim Associate Director  
    Daniel Hartline, Director, Bekesy Laboratory of Neurobiology  
    Kenneth Kaneshiro, Director, Center for Conservation Research & Training  
    Mark Martindale, Director, Kewalo Marine Laboratory  
    Gillian Bryant-Greenwood, Director, Molecular Endocrinology Program  
    Healani Chang, Director, Native Hawaiian Health Research Program  
    Dave Au, Fiscal Officer  
    Patricia Couvillon, Core Facility Representative, Faculty member  
    Robert Cowie, Mānoa Faculty Senate Representative, Faculty member  
    Robert Richmond, Mānoa Faculty Senate Representative, Faculty member

SUBJECT: OPPOSITION TO PROPOSAL TO ABOLISH THE PACIFIC BIOSCIENCES RESEARCH CENTER (PBRC)

SPECIFIC ACTIONS REQUESTED:

It is requested that the Board of Regents reject the proposal to abolish the Pacific Biosciences Research Center (PBRC).

It is requested that PBRC be reaffirmed as an Organized Research Unit (ORU) of the University of Hawai‘i at Mānoa.

Also requested is that the Vice Chancellor for Research and Graduate Education, Dr. Gary Ostrander, step down as the Interim Director of PBRC (as requested by the Mānoa Faculty Senate in both December 2009 and January 2010).
PBRC OPPOSITION TO REORGANIZATION PROPOSAL

EXECUTIVE SUMMARY

The Pacific Biosciences Research Center (PBRC) faculty, staff and students are unanimous in their opposition to the proposal to abolish PBRC and disperse its personnel, programs and core research support facilities.

PBRC is an Organized Research Unit (ORU), which fulfills the BOR mandate of providing the university a catalyst for interdisciplinary research and training, not easily found in conventional departments. PBRC is stronger together than apart: we have a culture of working together with a can do spirit to engage in world class research, initiate and sustain innovative training programs and serve the UH and State community with technical expertise and management strategies in the biological fields. PBRC’s “uniqueness” lies in our faculty’s combined abilities and talents, rather than the empty “unique opportunity” Gary Ostrander touts in the proposed plan. We are a strong, fully functioning unit already embarked on programs that fulfill the goals of the UHM Strategic Plan as well as those recently articulated by Chancellor Hinshaw. Breaking apart this productive team would significantly dilute the effectiveness of trans-disciplinary biological research and training.

The key information presented by the VCRGE/PBRC Interim Director in support of abolishment of PBRC is factually incorrect, exaggerated, presented in a false light and unfairly discredits PBRC. The proposal was prepared without substantive consultation and fails to address the “temporary” faculty and staff.

PBRC is fiscally sound. During fiscal year 2010, PBRC has already attracted $5.9 million in funding, representing 34 extramural grants against an operating budget of $3.4 million. Abolishing PBRC will lead to an inevitable loss of grant funding.

Kewalo Marine Laboratory (KML) faculty members were specifically hired to work at facilities that are essential to their research and that are not available elsewhere. The proposal fails to address the substantial costs associated with vacating the KML and relocating faculty to available or adequate research sites.

Dissolution of PBRC will have many other negative impacts, it will:
1) deprive the University and the State of Hawaii of a premier, internationally recognized and respected research unit;
2) force the abandonment of PBRC’s Biodiversity Program;
3) disperse tenured faculty to units with fewer compatible colleagues and less specialized research infrastructure;
4) jeopardize undergraduate training in research, including NIH and NSF programs targeted for special groups, such as Native Hawaiians and Pacific Islanders;
5) disperse a highly supportive, experienced grants management staff;
6) destroy the synergy among existing core facilities, which depend on each other to maintain optimal function;
7) marginalize soft money faculty (30% from underrepresented groups; over 50% female), who depend on PBRC for research and administrative support and mentoring and provide strength and breadth to its programs;
8) compromise the ability of PBRC faculty to engage in complex collaborative interdisciplinary projects and center grants for which they have a track record;
9) damage the University’s reputation and result in greater reluctance of funding agencies and private foundations to invest in the University.
PBRC Opposition to Reorganization Proposal

PBRC OPPOSITION TO REORGANIZATION PROPOSAL

The Pacific Biosciences Research Center (PBRC), an organized research unit (ORU) of the University of Hawai‘i at Mānoa (UHM), has continued to fulfill the expectation of an ORU to “foster and support interdisciplinary faculty research activities, and … assist undergraduate, graduate and postgraduate students by giving them access to research opportunities, facilities and equipment.” (University of Hawai‘i Executive Policy – Administration – E5.213.III.B).

The PBRC faculty, staff and other personnel are strongly opposed to the Reorganization Proposal to abolish PBRC. The VCRGE’s proposal is based on misrepresentations, factual inaccuracies, and flawed logic of the overall rationale, and many of the key specifics including financial costs are missing. There are numerous overt contradictory statements in the proposal itself. The VCRGE has notable conflicts-of-interest and we take issue with his lack of adherence to process.

PBRC disagrees strongly with the two key assertions/conjectures made in the VCRGE’s proposal, as follows.

- There is no logic in the VCRGE’s conjecture that transferring the PBRC faculty to other units makes any academic sense, creating new synergies.
  - Synergies have existed for many years and PBRC faculty have a long history of collaborating with faculty from other units. Being in PBRC has been absolutely no impediment to collaboration. Rather, PBRC provides a nexus for promotion of the transdisciplinary research envisioned at the national (funding) level.

- Similarly, there is no logic in, or evidence for, the VCRGE’s assertion that dissolving the unit and dispersing its research and training programs, core research support facilities and fiscal staff to other units makes fiscal sense, increasing cost-effectiveness and productivity of research overall at UHM.
  - Dispensers PBRC’s grants management support personnel seriously threatens the future ability of PBRC faculty to obtain extramural funding at the high level they have for many years. This is especially the case regarding Kewalo Marine Laboratory (KML) faculty, should KML be closed. In addition, closure of KML will entail huge costs in relocating personnel to appropriate lab space elsewhere (which does not currently exist) and building a new seawater system. This entire issue is glossed over in the proposal.

In addition, PBRC is seriously concerned about the flawed process of the VCRGE’s office in attempting to implement abolishing PBRC (including lack of consultation with PBRC personnel), and the VCRGE’s conflicts of interest and lack of leadership in his role as Interim Director of PBRC.
PBRC Opposition to Reorganization Proposal

RATIONALE

Fiscal issues not adequately addressed

The VCRGE states (pages 1, 8, 9, 10) that there are no significant additional costs or resource requirements associated with abolishing PBRC, as any costs incurred “will be covered with existing PBRC resources” (page 1), although the proposal also states (page 10) that costs will actually be covered by PBRC or the OVCRGE or the receiving unit.

There may in fact be considerable costs (as well as major changes in space utilization), most notably regarding the proposed closure of the Kewalo Marine Laboratory (KML) (although the proposal is disingenuous and contradictory, as it discusses (page 6) moving KML faculty (albeit to unsuitable alternative locations) yet states (pages 7, 9) that there will be no relocation of faculty). These costs would include the costs to relocate faculty, research programs, students and provision of comparable seawater facilities. Such facilities alone are estimated as costing ~$3 million, and in fact no suitable location for them is identified in the proposal. The Hawaii Institute of Marine Biology and the Waikiki Aquarium are mentioned briefly (page 6), but the VCRGE’s office and the Directors of both facilities know that suitable space does not currently exist in either of them, and indeed research previously undertaken at the Aquarium has had to be relocated to KML for lack of space. Furthermore, the KML faculty members are slated to be transferred to the Zoology Department and the Environmental Center of the Water Resources Research Center. Neither of these units has access to running seawater and the Zoology Department (Edmondson Hall) is scheduled to be closed for major remodeling. Thus, no options exist for relocation of PBRC faculty, staff and students to other existing buildings/facilities. PBRC certainly does not have the “existing resources” to replace these facilities at another location and it is not clear that either the OVCRGE or the various receiving units have the necessary resources either, or indeed that those units may be asked to come up with such resources.

Thus, although the VCRGE states that there will be no additional costs associated with the proposal, in fact he implicitly assumes that there will be, without explicitly identifying them or identifying a specific source of the necessary funding. And those costs will be substantial.

In addition, the loss of dedicated and highly experienced grants management fiscal support personnel will seriously detract from the ability of PBRC faculty to secure the major grant funding that they have done consistently for many years. This would be the case especially for KML faculty who in addition to losing this support would also lose the facility that allows them to do this cutting-edge and high profile research. Furthermore, abolishing PBRC and closing KML would impact recruitment of top scientists and graduate students and could even lead to some of the leading PBRC faculty leaving the University for more supportive institutions. The loss of KML will negatively impact both present and future potential collaboration, for instance with JABSOM and the Cancer Research Center of Hawaii (CRCH) in the area of marine natural products chemistry (“drugs from the sea”).

The VCRGE has not demonstrated that abolishing PBRC and closing the Kewalo Marine Laboratory will save any money. His argument that elimination of the Director position would
save money (page 9) is the only explicit statement about fiscal savings in the entire proposal. Yet this statement is false if the Director were hired from within the ranks of the PBRC faculty, a move that the VCRGE initiated in December 2009, under pressure from the Manoa Faculty Senate to step down as PBRC Interim Director (see section below on Process), when he asked PBRC to come up with the names of 3 candidates for that position, all of which he then rejected. [Note that previously, on December 7, 2007, the Director of KML applied for the position of Director of PBRC but his application was never acknowledged by the VCRGE.]

It is clear therefore that the VCRGE’s proposal will cost the university a substantial amount of money rather than save funds.

PBRC does have a common academic research theme

The VCRGE’s proposal states (page 2) that “there is no common academic theme uniting the PBRC faculty” (see also pages 5, 7, 8). This is a gross misrepresentation of PBRC’s past history and present focus. As an independent ORU, PBRC has had the flexibility to respond rapidly to changing University, funding agency (NSF, NIH), and scientific community priorities and trends, as expected by the University (University of Hawai‘i Executive Policy – Administration – E5.213.III.F). PBRC has been an innovator and engine for change that has reinvented itself programmatically to take advantage of changing state and federal research and training funding opportunities. This is one of the best and most unique aspects of PBRC in particular but speaks to the need to have ORUs like PBRC at UHM. Thus, for example, while PBRC had a strong but diverse biological/biomedical/biobehavioral focus in the early years of its existence, its focus became increasingly biomedical until much of this was spun off to form the nucleus of the JABSOM research enterprise, permitting development of the more focused biodiversity vision under which PBRC currently operates.

PBRC was the incubator for a number of biomedical endeavors including the 2-year medical school spun off in 1965 and the Cancer Research Center of Hawaii that was started in PBRC and then became independent. Then in the late 1980s through the 1990s PBRC initiated a number of biomedical center grants pulling together faculty and staff from a number of other units. The grants included the Research Centers in Minority Institutions (RCMI) program, the RCMI Clinical Research Center, the Specialized Neurosciences Research Program (SNRP), and the COBRE Center for Cardiovascular Research, and were developed in PBRC at a time when JABSOM concentrated largely on physician training and offered little support for biomedical research. Once JABSOM undertook to develop its own research agenda, and to help justify support for the new Kaka‘ako campus, these large center grants were transferred to JABSOM. Once these programs transferred, PBRC again returned to a more basic science focus and voted to change its name from the Pacific Biomedical Research Center to the Pacific Biosciences Research Center (see PBRC Addendum – PBRC Timeline).

Now, PBRC has a coherent, cohesive and well-considered focus on biodiversity (that is perhaps even more focused than the previous biomedical focus), developed especially over the last two years, and that is not the primary focus of any other UHM unit (see PBRC Addendum – PBRC Biodiversity Vision and Plan). Within this biodiversity focus the PBRC vision is transdisciplinary (“interdisciplinary”) in scope, as is expected of an ORU (University of Hawai‘i
Executive Policy – Administration – E5.213.III.D). PBRC’s core vision provides a clear direction for future development and hiring. The plan integrates PBRC’s three largest programs—Kewalo Marine Laboratory, Bekesy Laboratory of Neurobiology, and the Center for Conservation Research and Training—into a focus on integrative biodiversity studies “from the ‘mountains to the sea’. This vision fosters research and training on integrative understanding of Hawaiian biodiversity and is a natural outgrowth of PBRC’s key strengths. It is far more focused than the research activities in any of the major units to which faculty are slated to be transferred.

PBRC has already initiated activities to further this biodiversity vision, including an annual biodiversity symposium (the first in May 2008 and the next scheduled for May 6, 2010), a monthly PBRC Biodiversity Seminar series that started in September 2008, and a graduate “neurodiversity seminar” (Zoology 712) offered in Spring 2009 and Spring 2010 (see PBRC Addendum – PBRC Biodiversity Initiatives). PBRC submitted an application to the VCRGE’s “Sustainability Initiative” that involved researchers from across PBRC, other UHM programs, as well as outside entities in a comprehensive study of the Ala Wai watershed in which UHM is located. Although not selected for internal funding by the VCRGE’s office, related applications to extramural sources are under development.

PBRC is thus positioned to move forward in transdisciplinary efforts that once again serve the University strategic plan, match well with new initiatives especially at the National Science Foundation (see PBRC Addendum – NSF Dimensions in Biodiversity), and serve both the scientific and local communities in the integration of biodiversity and social issues in a “mountain to the sea” approach. Indeed PBRC has a more focused and integrated research agenda than many of the units to which the proposal suggests faculty should be dispersed (e.g., the Zoology Department, the only common theme of which is that they work on “animals”), yet retains the diversity that stimulates innovation and collaboration.

Thus the statement (page 4) that “Presently, PBRC is comprised [sic] of a diverse group of faculty and programs without a core research focus” is a clear misrepresentation of the situation.

PBRC is not a small unit

The VCRGE implies that PBRC is a small unit of no critical mass (page 5), with only 11.5 FTE of tenured faculty and no tenure-track faculty (presumably meaning probationary faculty) (page 4). However, there are an additional 6 faculty positions that are unfilled, and that have been unfilled for at least 5 years, long before the present fiscal crisis – unfilled because the VCRGE (Gary Ostrander), since he became Interim Director of PBRC (Gary Ostrander) in late 2004, refused to allow them to be filled.

Nonetheless, even excluding the unfilled positions, PBRC has as many or more permanent faculty than many departments. In some cases PBRC is larger than the units to which faculty are slated to be transferred (e.g., the Environmental Center). And, most importantly, what the VCRGE’s proposal further ignores is that PBRC also has a similar number of highly experienced non tenure-track faculty members who are an integral part of its operation, with many of them having been on the PBRC faculty for many years (see PBRC Addendum – Current PBRC Personnel). Ignoring the non tenure-track faculty seriously misrepresents the size and vitality (in
obtaining extramural funding to support these faculty) of the PBRC enterprise and seriously
downplays the impact of abolishment. [The lack of a plan to relocate these faculty and staff is
addressed elsewhere in this response.]

The funding table included in the proposal (page 7) substantially under-reports the extramural
funds awarded to PBRC faculty to support their research, training, service activities and
infrastructure development. The exclusion of awards to faculty who may be in other units but
have their grants awarded/administered via PBRC, ignores the importance of the PBRC research
support (through laboratory space, core facilities and grants development and administration)
provided to these faculty or that PBRC faculty were instrumental in the development of these
awards. The list below also includes awards to PBRC faculty and administered in PBRC that
come via various mechanisms including the Pacific Cooperative Studies Unit, Sea Grant,
EPSCoR, Hawaii Coral Reef Initiative, Research Centers in Minority Institutions (RCMI)
program and others.

PBRC Grant Productivity Fiscal Years 2007-2009

<table>
<thead>
<tr>
<th></th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>2,922,256</td>
<td>3,580,886</td>
<td>2,949,127</td>
<td>3,150,756</td>
</tr>
<tr>
<td>Training/Infrastructure/Equipment Acquisition</td>
<td>1,451,530</td>
<td>1,792,028</td>
<td>2,062,300</td>
<td>1,768,619</td>
</tr>
<tr>
<td>RCUH Direct / Revolving</td>
<td>529,680</td>
<td>574,157</td>
<td>540,308</td>
<td>548,048</td>
</tr>
<tr>
<td>Total</td>
<td>4,903,466</td>
<td>5,947,071</td>
<td>5,551,735</td>
<td>5,467,424</td>
</tr>
</tbody>
</table>

In addition, PBRC has provided grants administration for the entire EPSCoR grant (Dr. James
Gaines, PI) that has averaged about $3 million per year over the last five years which is not
included in the table above.

Unclear plan for vacant positions and future hires

Unclear in the proposal is the future of the 6 vacant faculty positions in PBRC, which have been
unfilled because the VCRGE refused to allow them to be filled, as well as those of 2 faculty
members about to retire. The rate of retirement in PBRC has not been extraordinary when
compared with other units of similar size.

The VCRGE’s proposal states that replacement of retiring faculty and filling of vacant faculty
positions will be expensive (start-up costs, etc.) (pages 5, 6), the implication being that these
faculty will not be replaced either in PBRC or elsewhere, and that this is an argument for closure
of PBRC.

But the VCRGE’s proposal clearly suggests (page 8) that future hires in the units to which PBRC
faculty are to be dispersed (although not making it clear whether these are PBRC FTEs) will
complement PBRC’s research interests. Even if these positions are eventually to be refilled, by
breaking up PBRC as a unit, PBRC faculty will not have a strong voice in the proposed units to
sway decisions on future hires and so will lose the ability to control the direction of new research
initiatives. In contrast, with PBRC’s current biodiversity focus, consensus within the PBRC
community regarding future hires will be more straightforward to achieve and under PBRC control.

The “Evo-Devo” scenario posited by the VCRGE (page 9) exemplifies the flawed logic of the VCRGE’s proposal. For instance, if two members of PBRC were transferred to the Zoology Department, what are the odds that the Zoology faculty would put as a priority hiring another individual in the same subdiscipline when the department has so many other pressing needs? Yet with PBRC intact and with a well focused vision, hiring of new faculty to complement PBRC initiatives would be both straightforward and productive.

Although the VCRGE’s “Evo-Devo” scenario is so impenetrably confused as to be meaningless, it concludes with a statement that PBRC vacancies could be used to hire within the department to which a PBRC faculty member is moved, in another school or even elsewhere in the University.

However, there is an unspoken cost-saving implication in the VCRGE’s proposal (page 7) suggesting that existing and future vacancies will not be filled at all, but also (page 8) a statement that there will be “no elimination of any currently filled [PBRC italics] faculty or staff positions”, the implication being that vacant positions will indeed be eliminated. But then (further on page 8), there is mention of future hires, and (page 9) mention of replacements for future retirements. This is contradictory and extremely confusing, and demands much more explicit explanation in this (and any) reorganization/abolishment proposal.

Overall, therefore, the VCRGE’s proposal regarding current and future PBRC vacancies is unclear and lacking in substantive details.

Reorganization will effectively dilute research productivity and collaboration

The VCRGE’s proposal would transfer faculty to units with a “critical mass of complementary researchers” and a “similar research mission” (pages 2, 3, 7, 8). However, none of the proposed units, and no other ORU, has a greater critical mass of researchers in the particular research areas of PBRC faculty (i.e., studying local biodiversity “from the mountains to the sea” with cutting edge technology) than does PBRC itself, and in fact some have little or no suitable match at all (e.g., most of the Center for Conservation Research and Training (CCRT) personnel are to be moved to the Environmental Center within the Water Resources Research Center, even though most of CCRT’s activities are terrestrial in focus). According to the ORS website, the Environmental Center had no extramural funding in fiscal years 2007, 2008 and 2009. So arguably the reciprocal move of the Environmental Center to CCRT would seem more logical!

The VCRGE’s proposal also fails to mention or recognize that most of the proposed faculty transfers are to academic units that have no R faculty and whose mission is primarily instructional. Such moves have the potential to cause tension in those units, not only specifically regarding instructional responsibilities but also more generally in terms of promotion, application of tenure and post-tenure review criteria, assignment of research and office space, and priorities for access to departmental administrative support. Such concerns have already been expressed to PBRC by potential receiving units.
One of the most important academic benefits touted by the VCRGE’s proposal is the creation of new “synergisms” that will result from the reorganization. This is difficult to imagine because there are currently absolutely no barriers to inter-unit collaboration and synergy, as demonstrated by the numerous collaborative efforts among PBRC researchers and others in a variety of units (and not just those to which the VCRGE suggests the PBRC faculty be moved).

Moreover, the dissolution of PBRC may well destroy ongoing collaborations. For over 30 years PBRC’s Bekesy Laboratory of Neurobiology has collaborated with the Department of Psychology in the behavioral neurosciences. PBRC provides laboratory space, salary support and grants administration for several Psychology faculty members who do animal-based behavioral research, because their department did not have the wherewithal to do so. The future of this collaboration is endangered if the proposal is implemented.

In fact, as a transdisciplinary ORU, PBRC acts as a catalyst – a nexus – for developing programs and grant proposals cutting across many other units (for example, a recent graduate student training proposal included faculty from 6 colleges/schools/research units, including 10 academic departments). Initiatives at the national level are pushing for a more transdisciplinary approach to research and education especially in biology (e.g., see PBRC Addendum – NSF Dimensions in Biodiversity). PBRC as a unit is at the forefront of such an initiative at UHM, aligned strongly with the national (and indeed international) vision. Dissolution of PBRC would be a major step backwards.

Thus, while the VCRGE argues that his proposal will increase research productivity (page 8), dispersal of PBRC faculty to other units with no dedicated grants management administration and with other (i.e., instructional) priorities, and breaking up PBRC’s highly effective grants management team (arguably the best at UH) will in fact have the opposite effect on collaboration and research competitiveness, discouraging collaboration and submission of complex, high dollar amount proposals. The VCRGE’s contention is a wholly unsubstantiated conjecture.

And finally, there is no intention to relocate faculty laboratories (other than the Kewalo Marine Laboratory faculty), so even the possibility of increased collaboration resulting from physical proximity to similar researchers within a new unit is moot.

Overall, it is totally illogical to assume that breaking up a highly successful research unit will somehow improve research productivity of the University as a whole. Critical mass will not be achieved by dividing and diffusing ongoing successful research programs.

Loss of control of RTRF disbursement

Currently PBRC controls disbursement of RTRF associated with grants it secures, thereby enhancing its ability to target PBRC priorities. By dispersing PBRC faculty to multiple units, with RTRF generated by them then to “follow the formula for the unit” to which the faculty member has been moved (pages 3, 7), may result in a less direct line from the researcher to the disbursement of RTRF, thereby reducing the ability to target PBRC faculty priorities, including reinvestment into research infrastructure.
Leadership from the Interim Director of PBRC [= VCRGE Gary Ostrander] has been lacking

The VCRGE (Gary Ostrander) criticizes the “style of prior leadership” (page 5) in PBRC. In itself that statement is so vague as to be meaningless, yet what it fails to mention is that the VCRGE (Gary Ostrander) himself has been the PBRC Interim Director since late 2004.

Since that time, the Interim Director of PBRC/VCRGE Gary Ostrander has not recruited a single new faculty member, has not initiated any new research or training programs, has undertaken no fund raising activities on behalf of PBRC, has not taken on the faculty development, leadership and support role expected of a director and has had only limited contact with individual faculty, or made any commitment to the success of the program that he heads. All these activities should be important responsibilities of the PBRC Director.

In December 2009, the VCRGE, and under pressure from the Manoa Faculty to step down as PBRC Interim Director (see section on Process, below), asked PBRC to submit the names of 3-5 candidates for that position. The PBRC faculty then nominated 3 faculty members, but the VCRGE found none of them acceptable, while refusing to provide specific details of their deficiencies.

Geographic distribution of faculty and staff not resolved

According to the VCRGE’s proposal (pages 7, 9), no faculty are to be physically relocated (although proposed closure of the Kewalo Marine Laboratory absolutely necessitates the relocation of its faculty). Thus, to imply (pages 2, 5) that the current wide distribution of PBRC faculty in various buildings both on and off campus supports closing of PBRC, is actually irrelevant since the proposal states that the physical location of faculty will not change. This proposal will in fact make the location of the faculty/staff in the receiving units more dispersed, the exact opposite of the argument the VCRGE makes for closing PBRC.

Furthermore, the statement in the proposal regarding the declining state of PBRC facilities (page 4) is misleading since (again with the exception of Kewalo Marine Laboratory faculty) no faculty are to be moved physically from the facilities in which they currently work. In any case, almost all UHM facilities are deteriorating, and in fact some of the departments to which faculty are proposed to be transferred, such as the Zoology and Psychology Departments, have much worse facilities, Edmondson Hall (soon to be vacated for renovation) and Gartley Hall (now vacated), respectively. The PBRC/Bekesy Laboratory of Neurobiology building on the UHM campus is currently undergoing a $500K project for reroofing/exterior renovation.

In addition, the proposal is so vague as to be totally uninformative regarding the final location of administrative and computer support personnel. It is suggested (page 3) that these personnel will follow the faculty, but it is hard to see how this will happen effectively given that the faculty are to be dispersed widely. Again, the support now available to all PBRC faculty will be diluted and dispersed, to the detriment of PBRC’s programs.
Detrimental impact on students

The VCRGE states (pages 3, 7, 8) that there will be no impact on students because PBRC does not award degrees. However, this ignores the huge role PBRC has played and continues to play in both graduate and undergraduate research training, as well as its impact on the K-12 community (see PBRC Addendum – PBRC Student Training).

Research grants support many assistantships (graduate and undergraduate) and undergraduates undertake directed research in PBRC laboratories. With the probable reduced ability to secure research grants if the VCRGE’s proposal is implemented, support for these activities will diminish. The VCRGE’s premature public announcements of the KML closure have already had negative consequences on recruitment of graduate students and postdoctoral trainees.

But perhaps more importantly, PBRC has secured numerous prestigious training grants, for example, an NSF GK-12 grant and the only ever accomplishment-based renewal of such a grant. Over the 10 years of the GK-12 program, 35 graduate students in the Ecology, Evolution and Conservation Biology (EECB) graduate program received salary as graduate research assistantships, and around 120 graduate students received research and/or travel awards to support their work toward completion of their degrees. PBRC spawned EECB in the early 1990s, and the program has grown to a current size of about 40 regular faculty members and over 60 students from 9 UHM units. In addition, within the K-12 community about 270 teachers and 7,000 students have been impacted by this program. PBRC’s grants management flexibility and experience with these and similar large training grants (e.g., NSF IGERT, NSF URM, NSF ATE, NIH MARC and NIH IMSD grants) are key to the success of these programs, which, contrary to the VCRGE’s assertion, have a huge impact on students (see PBRC Addendum – PBRC Student Training).

In addition, PBRC has private endowments of over $500k that support three prestigious graduate student scholarship programs in EECB in perpetuity.

Asserted benefits are in fact detrimental

The VCRGE states (page 8) that the major benefits will be “more efficient use of resources and strengthening of the core research mission of the University” but provides no data to support this assertion. Currently PBRC is a highly productive research unit with a dedicated support staff exceptionally experienced in proposal preparation and grant management. His statement (pages 3, 7) that administrative efficiencies will accrue if the proposal is implemented is not substantiated by any logical argument – it is simply one person’s assertion. It is difficult to imagine how research and training output will be improved by transferring PBRC faculty to other units that are not research dedicated and dispersing PBRC’s administrative support to other units. The proposal, rather than strengthening the University’s research mission, in fact would seriously dilute it.

The very success of PBRC is its dedicated research mission and experienced staff that serve a highly focused constituency. It is for this reason that PBRC faculty have been able to play an instrumental role in securing NSF EPSCoR funding for UH (VP for Research Dr. Jim Gaines is
the administrator selected as the PI for this UH system award), as well as the GK-12 grant 1999-2009, and the current IGERT grant, all of which are administered by PBRC primarily because of the effectiveness of its grants management team, which implementation of this proposal will destroy.

Additionally, if the PBRC electronics, carpentry and machine shop personnel are moved to the Chemistry Department, PBRC researchers will no longer have ready access to their services, further weakening their research effectiveness.

Kewalo Marine Laboratory (KML)

The reorganization proposal includes closing PBRC’s immensely successful Kewalo Marine Laboratory (KML), a recommendation that makes no logical sense. KML, located in Kaka‘ako on the Ewa side of the Kewalo Basin channel, began operations in 1972 and has a world renowned reputation for its research, which has generated hundreds of peer-reviewed scientific journal articles and brought in millions in research and training dollars.

- Although the KML building is showing its age, the building is essentially in sound condition and can be repaired for about $500K (according to the engineering report from HiArch LLC, dated August 2008). Its projected life is considerably longer than the maximum of 10 years asserted by the VCRGE’s proposal (pages 2, 5).
- The current UH lease on the KML property is valid until 2030. Although the VCRGE has entered into a written agreement with the Hawaii Community Development Authority (HCDA) that would lead to a shortened lease and closure of Kewalo Marine Laboratory in 2013, documentation obtained from the HCDA unambiguously states that they have not “pushed to have UH vacate before the end of the lease” (page 5), nor do they intend to. The statement in the proposal (pages 2, 5) that “HCDA has unambiguously stated that the [KML] site will be unavailable...long-term” [whatever “long-term” means] cannot be verified and is contradictory to verified HCDA documentation (see PBRC Addendum – Documents Pertaining to Kewalo Marine Laboratory). Vacating the KML lease requires approval by the Board of Regents, and is not under the authority of the VCRGE.
- In documents dated August 17, 2004 (PBRC Addendum – Documents Pertaining to Kewalo Marine Laboratory), prior to Dr. Ostrander’s involvement, the KML site was still identified as “retained property”. The effort to change its status was initiated since the arrival of Gary Ostrander as VCRGE.
- PBRC is not aware of any diligent efforts by the University (including by the VCRGE) to explore “a number of private foundations, legislative, congressional and federal agency groups [to obtain resources] to maintain the KML facility” (pages 3, 5). In fact, one faculty member’s efforts to get funding from the Castle Foundation to develop a business plan for a new KML building in Kaka’ako that would have served multiple constituencies was quashed by the VCRGE/PBRC Interim Director.
- The cost of operating the KML is reasonable. It is far less costly to operate KML on a per investigator basis than, for instance, to operate the Hawaii Institute of Marine Biology (HIMB), another successful UHM marine research enterprise. During FY2009 KML generated about $278,000 in total indirect costs. If the entire amount had been returned to PBRC, it would have more than covered the KML’s operating costs.
The four researchers at the Kewalo Marine Laboratory have been awarded new grants totaling $3.1 million so far in FY2010 for research, training and equipment acquisition in addition to their ongoing funding. This brings KML’s total active extramural funding to over $7.5 million.

If the Kewalo Marine Laboratory were allowed to recruit to fill its two vacant faculty positions and house its full complement of researchers, it could further leverage its unique opportunities as an interface to the marine environment.

KML serves as a valuable training site for undergraduate, graduate and postdoctoral trainees. It houses the highly rated NSF-funded Undergraduate Research Mentoring (URM) program in the Biological Sciences, which focuses on training undergraduate students from Hawai‘i and the Pacific Islands in environmental biology. The NSF-funded ATE Partnership for Advanced Marine and Environmental Science Training for Pacific Islanders works to improve technological education at the undergraduate and secondary school levels through the community colleges in the Pacific Islands (see PBRC Addendum – PBRC Student Training).

No viable alternative location has been proposed to which KML faculty, staff and other personnel could be moved, notwithstanding the VCRGE’s statement (page 6). HIMB is already over-crowded and although it does indeed have more expansive facilities than KML, it does not have the space to house all the KML personnel, nor does it have the specialized flow-through seawater facilities required by KML research programs. The Waikiki Aquarium has no space to house large research programs; indeed, a UHM faculty member who previously used space at Waikiki Aquarium had to move her studies on coral propagation to KML because of space limitations at the aquarium.

A major motivation for closing KML was in exchange for a lease from HCDA for space for the new Cancer Research Center of Hawaii (CRCH) building and other improvements in Kaka‘ako. Since the new CRCH building has been downsized and will now be built on Lot A instead of Lot C, the closing of KML is no longer necessary.

Concerns about the handling of the proposed KML closure and the VCRGE’s perceived conflicts of interest related to this matter led the Manoa Faculty Senate to adopt a resolution opposing closure of the KML and requesting that VCRGE step down as PBRC’s Interim Director in January 2010 (see PBRC Addendum – Manoa Faculty Senate Resolutions).

As a direct result of the pall of closure hanging over KML resulting from the VCRGE’s inappropriate, premature and damaging public announcements of the closure of KML, a number of excellent researchers have been lost to the University because they are concerned that KML will close or that senior faculty mentors will leave the University because of the possible closure. In addition, the slated date for closure (2013) has already hindered the securing of major grants and may have been a factor in other grants being turned down as a result of perceived lack of support for KML researchers by the University and the uncertainty of the future of the facilities necessary to undertake the proposed research.

By closing the well-functioning Kewalo Marine Laboratory the University and the State would lose a unique, productive and strategically valuable facility with an estimated replacement cost of over $30 million (including the flow-through seawater system, which would cost ~$3 million and involve lengthy environmental permitting procedures to replace), with no apparent financial
benefit. Also lost would be the large research and training grants secured by PBRC faculty and
which depend on the facilities provided by the KML, an active training venue for undergraduate
and graduate students and postdoctoral fellows in the marine sciences, and the chance of
attracting additional funding that takes advantage of the state’s natural resources in the marine
sciences. Located in central Honolulu, KML is the nation’s only urban marine research and
training facility, providing ready access and flexibility to researchers and the community alike.
Considering UH has ~280 undergraduate Marine Biology majors with limited access to seawater
tanks, destroying KML would result in the further diminishing of these limited resources and of
the capability and opportunities to serve students, the community, the State and the region. Loss
of the KML would be devastating to all aspects of marine sciences research and training in
Hawaii, and would reduce the competitive advantage UH has in marine sciences that accrues
from its very location in the middle of the Pacific Ocean.

There has been no credible or cost-effective plan proposed for the relocation of the 39
researchers, staff and students currently at the KML. The Hawaii Institute of Marine Biology,
suggested as a suitable location in the VCRGE’s proposal, is not a viable option as it does not
have enough space or adequate sea water systems and is not sufficiently readily accessible.

KML faculty bring in a large proportion of PBRC’s extramural funding and the VCRGE
explicitly recognizes the excellent abilities of KML faculty to bring in large extramural grants
(page 5; although the proportion differs depending on what is and is not included). But although
KML is an important part of PBRC, the VCRGE’s implication that closure of KML would make
PBRC non-viable is sheer assertion, since other PBRC faculty members are also accomplished at
obtaining extramural funding. And in any case, his proposal does not suggest firing of KML
faculty. Thus, the argument that closing KML, as per the VCRGE’s proposal, would necessitate
closing PBRC as a whole is spurious.

**PROCESS**

The Manoa Reorganization Process as applied to the abolishing of PBRC has been flawed in a
number of ways.

**Step I of the Manoa Reorganization Process not followed**

Step I.C. of the Manoa Reorganization Process states that “RA [Responsible Administrator, in
this case the VCRGE] will prepare proposal in accordance with [UH Administrative Procedure]
A3.101 and discuss with appropriate parties (faculty, staff, students, etc.) within their
school/college/unit.” The PBRC faculty and staff were not shown the proposal in any form prior
to its posting on the UHM website on March 5, 2010. There has been essentially no discussion
with the PBRC faculty, staff and students, nor with most of the units targeted to receive new
faculty and staff under the proposed plan. Two meetings were held (August 20, 2009, October 7,
2009) between the VCRGE and some senior PBRC faculty to explore alternative ideas for the
future of PBRC but suggestions from PBRC were summarily dismissed. Specifically, the
VCRGE has not discussed the identified receiving units with the great majority of PBRC tenured
faculty (never mind non-permanent faculty), and, very few faculty members have been asked by
the VCRGE to identify a suitable unit to which they could be moved.
Step I.C. further states that “RA will include the concerns/issues raised by affected units/parties and how the points were resolved or addressed in the proposal.” None of the concerns of the PBRC faculty/staff are even alluded to in the proposal, never mind resolved or addressed. Thus, the process for preparation of the proposal has not been properly followed and this constitutes a major breach of effective consultation and shared faculty/administration governance.

VCRGE’s conflicts of interest

Dr. Gary K. Ostrander has served both as the Interim Director of PBRC and as Vice Chancellor for Research and Graduate Education (VCRGE) since late 2004. (He was also Interim Dean of JABSOM for part of this time.) After losing confidence in his dedication to leadership, the PBRC faculty asked in late 2007 to have Dr. Ostrander replaced as PBRC’s Interim Director because of real and perceived conflicts of interest among his multiple roles.

As Interim Director of PBRC he has done little to promote the mission of PBRC, or provide support to its faculty and staff. As Interim Director, Dr. Ostrander has not initiated any faculty or faculty/staff meetings. Instead the only such meetings that have taken place have been at the request of the faculty. In January 2005 a meeting was held to discuss changing the name of PBRC. On March 6, 2008, the PBRC leadership team (not including Gary Ostrander) presented the Biodiversity vision to Chancellor Hinshaw at Kewalo Marine Laboratory; and on March 28, 2006, the Biodiversity vision was presented to Interim Director/VCGRE Ostrander and the PBRC faculty.

Specifically, as an instance of the conflicts of interest of Interim Director/VCRGE Ostrander, the proposal states that in his capacity as Interim Director of PBRC (with his PBRC “advisory committee”) he recommended most PBRC units/programs should be maintained as is or targeted for growth and investment in the first step of the Prioritization Process. Then in his role as VCRGE, Ostrander made the contrary recommendation that these same units/programs be reorganized, restructured, merged, or consolidated at the Vice Chancellor’s review level. Finally, as a member of the Chancellor’s Prioritization Advisory Committee, he supported a decision calling for the dissolution of PBRC. It is not clear how he rationalizes this.

Because of these concerns and others, on December 10, 2009, an e-mail from the chair of the Manoa Faculty Senate Committee on Administration and Budget (David Chin) was sent to the VCRGE, stating “we strongly urge you to appoint an acting director of PBRC, separate from yourself. This should be someone with the confidence of the faculty.” A similar request was also made at this time to the VCRGE by the chair of the Manoa Faculty Senate Executive Committee (David Ross). The VCRGE then asked PBRC to submit the names of 3-5 candidates for that position within a very short timeline (one week) and refused PBRC’s request for an extension of his deadline (December 24, 2009, Christmas Eve). In compliance with this request, PBRC’s program directors and faculty met with prospective candidates they considered well-qualified to serve as Interim Director and submitted 3 names to the VCRGE, all of which he then rejected, while refusing to give specific explanations for why. Thus the conflict of interest, inevitable mistrust and lack of “checks and balances” continues.
Impacts on non-permanent personnel not addressed

The Reorganization Process, per Administrative Procedure A3.101, does not require the proposal to address faculty and staff in non-permanent positions. While this might be appropriate for some instructional departments in which most personnel are in permanent positions (the guidelines may have been developed primarily with instructional departments in mind), it is woefully inadequate for an organized research unit in which there are numerous individuals in non-permanent positions.

The VCRGE’s reorganization proposal identifies the transfer of 30 permanent personnel but completely ignores the fact that PBRC has a large number of non-permanent faculty and staff funded in whole or part by extramural funds and who are an integral part of its operation and contribute greatly to the research and training missions of the University, with many of them having been productive members of PBRC for many years. Not included in the current VCRGE’s reorganization proposal are 13 faculty members, 13 APT personnel, 26 Graduate Assistants and 11 RCUH personnel (see PBRC Addendum – Current PBRC Personnel). Many of the staff members are local residents (and UHM graduates) employed by PBRC for 10-15 years or more.

The group of “temporary” faculty members in PBRC includes more than 50% women and 30% under-represented minorities. Most of these individuals bring in extramural funding to support some or all of their salaries and/or are essential collaborators in ongoing research. Their research expertise also supplies breadth and vitality to PBRC’s programs. These individuals also support the educational and training missions of UHM through their participation in the Honors Program, the Undergraduate Program in Math and Biology, the IGERT graduate program and others. This group of faculty also represents an important resource for filling faculty vacancies in PBRC and elsewhere over the next few years when the expected wave of faculty retirements occurs campus-wide.

PBRC also has an outstanding record of developing and fostering core research support facilities that service not only PBRC researchers and students, but support the academic and research enterprises of the entire UHM campus and beyond. These facilities include the following: the Biological Electron Microscope Facility, the Greenwood Molecular Biology Core Facility, the Computer Network Support Facility and the Machine, Carpentry and Electronics shops (see PBRC Addendum – PBRC Core Facilities). There is major concern that the transfer of these facilities to other units has not been adequately addressed in the proposal. There is also a strong interdependence among these facilities that is not considered. For instance, all of the major microscopes in the Biological EM Facility are operated via computer. Whenever a computer-related problem develops with one of the instruments, the BEMF staff can call upon the staff of the Computer Network Support Facility (CNSF) staff to diagnose and usually resolve the problem in short order.

Likewise, the “temporary” grants management personnel are also neglected in the proposal and they are critical to the entire grants management team developed in PBRC.
PBRC Opposition to Reorganization Proposal

Ignoring the non tenure-track faculty, staff and other personnel, giving no consideration to their support and future home is a serious omission from the proposal, clearly underestimates the effects of PBRC reorganization on research productivity at UHM, and leaves many questions unanswered.

Changes made to the proposal after it was originally posted on the website

The proposal was originally posted on March 5, 2010 on the OVCAFO website. The cover memorandum and the proposal subsequently changed (March 11, 2010) in a number of ways:

1. “Reorganize” changed to “Abolish” in the cover memorandum and elsewhere.
2. Reference to Appendix 8 (List of all PBRC permanent and temporary positions) was deleted from the cover memorandum.

This has resulted in a “moving target” to which to respond, although the deadline for response remains the same (April 5, 2010). But it is simply not possible to check daily to see if the VCRGE has made changes to his 117 page proposal. This potentially compromises any response to the proposal.

List of additional documents submitted separately in support of this response.

1. PBRC Addendum – Current PBRC Personnel
2. PBRC Addendum – PBRC Student Training
3. PBRC Addendum – PBRC Timeline
4. PBRC Addendum – PBRC Biodiversity Vision and Plan
5. PBRC Addendum – PBRC Biodiversity Initiatives
6. PBRC Addendum – NSF Dimensions in Biodiversity
7. PBRC Addendum – Documents Pertaining to Kewalo Marine Laboratory
8. PBRC Addendum – Manoa Faculty Senate Resolutions
9. PBRC Addendum – PBRC Core Facilities
## PBRC Addendum - Current PBRC Personnel

### PERSONNEL COVERED BY PBRC REORGANIZATION PROPOSAL

<table>
<thead>
<tr>
<th>EMPLOYEE NAME</th>
<th>TITLE</th>
<th>PROGRAM</th>
<th>TRANSFER TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frances Okimoto</td>
<td>Secretary</td>
<td>PBRC Director's Office</td>
<td>OVCRGE</td>
</tr>
<tr>
<td>Marilyn Aihara</td>
<td>Rsch Support</td>
<td>Biological EM Facility</td>
<td>OVCRGE</td>
</tr>
<tr>
<td>Richard Chock</td>
<td>Rsch Support</td>
<td>Kewalo Marine Lab</td>
<td>OVCRGE</td>
</tr>
<tr>
<td>Marilyn Dunlap</td>
<td>Interim Assoc Director</td>
<td>PBRC Director</td>
<td>OVCRGE</td>
</tr>
<tr>
<td></td>
<td>Specialist</td>
<td>Biological EM Facility</td>
<td></td>
</tr>
<tr>
<td>Lynn Hata</td>
<td>Secretary</td>
<td>Bekesy Lab</td>
<td>Dean's Office CNS</td>
</tr>
<tr>
<td>Marissa Stone</td>
<td>Secretary</td>
<td>Kewalo Marine Lab</td>
<td>Dean's Office CNS</td>
</tr>
<tr>
<td>Dave Au</td>
<td>Institut Support</td>
<td>PBRC Admin</td>
<td>Dean's Office CNS</td>
</tr>
<tr>
<td>Laura Shinto</td>
<td>Institut Support</td>
<td>PBRC Admin</td>
<td>Dean's Office CNS</td>
</tr>
<tr>
<td>Susan Woo</td>
<td>Institut Support</td>
<td>PBRC Admin</td>
<td>Dean's Office CNS</td>
</tr>
<tr>
<td>Sharyl Tom</td>
<td>Personnel Officer</td>
<td>PBRC Admin</td>
<td>Dean's Office CNS</td>
</tr>
<tr>
<td>Ted Murphy</td>
<td>Rsch Support</td>
<td>Bekesy Shop</td>
<td>Dept of Chemistry (CNS)</td>
</tr>
<tr>
<td>Hinano Akaka</td>
<td>Rsch Support</td>
<td>Bekesy Shop</td>
<td>Dept of Chemistry (CNS)</td>
</tr>
<tr>
<td>Mark Martindale</td>
<td>Researcher</td>
<td>Kewalo Marine Lab</td>
<td>Dept of Zoology (CNS)</td>
</tr>
<tr>
<td>Michael Hadfield</td>
<td>Professor</td>
<td>Kewalo Marine Lab</td>
<td>Dept of Zoology (CNS)</td>
</tr>
<tr>
<td>Tom Humphreys</td>
<td>Professor</td>
<td>Cell &amp; Molec Biol</td>
<td>Dept of Zoology (CNS)</td>
</tr>
<tr>
<td>Dan Hartline</td>
<td>Researcher</td>
<td>Bekesy Lab</td>
<td>Dept of Zoology (CNS)</td>
</tr>
<tr>
<td>Elaine Seaver</td>
<td>Assoc Researcher</td>
<td>Kewalo Marine Lab</td>
<td>Dept of Zoology (CNS)</td>
</tr>
<tr>
<td>Robert Cowie</td>
<td>Researcher</td>
<td>CCRT</td>
<td>Dept of Zoology (CNS)</td>
</tr>
<tr>
<td>Patricia Couvillion</td>
<td>Assoc Professor</td>
<td>Bekesy</td>
<td>Dept of Psychology (CSS)</td>
</tr>
<tr>
<td>Healani Chang</td>
<td>Assoc Specialist</td>
<td>PRIDE/Native Hwn Hlth</td>
<td>Dept of Public Health Science (JABSOM)</td>
</tr>
<tr>
<td>Sandy Yamamoto</td>
<td>Rsch Support</td>
<td>Molec Endo</td>
<td>Dept of Cell &amp; Molecular Biology (JABSOM)</td>
</tr>
<tr>
<td>Caroline Blanchard</td>
<td>Researcher</td>
<td>Bekesy</td>
<td>Dept of Cell &amp; Molecular Biology (JABSOM)</td>
</tr>
<tr>
<td>Alvin Yoshinaga</td>
<td>Jr Researcher</td>
<td>CCRT</td>
<td>Lyon Arboretum</td>
</tr>
<tr>
<td>Janice Tamanaha</td>
<td>Institut Support</td>
<td>CCRT</td>
<td>Enviromental Center (WRRC)</td>
</tr>
<tr>
<td>Kevin Kaneshiro</td>
<td>Rsch Support</td>
<td>CCRT</td>
<td>Enviromental Center (WRRC)</td>
</tr>
<tr>
<td>Kelvin Kanegawa</td>
<td>Rsch Support</td>
<td>CCRT</td>
<td>Enviromental Center (WRRC)</td>
</tr>
<tr>
<td>Michael Kido</td>
<td>Rsch Support</td>
<td>CCRT</td>
<td>Enviromental Center (WRRC)</td>
</tr>
<tr>
<td>Robert Richmond</td>
<td>Researcher</td>
<td>Kewalo Marine Lab</td>
<td>Enviromental Center (WRRC)</td>
</tr>
<tr>
<td>Kenneth Kaneshiro</td>
<td>Researcher</td>
<td>CCRT</td>
<td>Enviromental Center (WRRC)</td>
</tr>
</tbody>
</table>
## PERSONNEL NOT COVERED BY THE PBRC REORGANIZATION PROPOSAL

<table>
<thead>
<tr>
<th>EMPLOYEE NAME</th>
<th>TITLE</th>
<th>PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FACULTY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marilou Andres</td>
<td>Asst Researcher</td>
<td>Bekesy Laboratory</td>
</tr>
<tr>
<td>Ann Castelfranco</td>
<td>Assoc Researcher</td>
<td>Bekesy Laboratory</td>
</tr>
<tr>
<td>Adrian Dunn</td>
<td>Professor</td>
<td>Bekesy Laboratory</td>
</tr>
<tr>
<td>Meredith Hermosura</td>
<td>Asst Researcher</td>
<td>Bekesy Laboratory</td>
</tr>
<tr>
<td>Petra Lenz</td>
<td>Assoc Researcher</td>
<td>Bekesy Laboratory</td>
</tr>
<tr>
<td>John Starkus</td>
<td>Researcher</td>
<td>Bekesy Laboratory</td>
</tr>
<tr>
<td>Angel Yanagihara</td>
<td>Asst Researcher</td>
<td>Bekesy Laboratory</td>
</tr>
<tr>
<td>Brenden Holland</td>
<td>Asst Researcher</td>
<td>CCRT</td>
</tr>
<tr>
<td>Durrell Kapan</td>
<td>Asst Researcher</td>
<td>CCRT</td>
</tr>
<tr>
<td>Kenneth Hayes</td>
<td>Asst Researcher</td>
<td>CCRT</td>
</tr>
<tr>
<td>Bradley Jones</td>
<td>Assoc Specialist</td>
<td>Computer Network</td>
</tr>
<tr>
<td>Gabor Mocz</td>
<td>Specialist</td>
<td>Molec Biol Facility</td>
</tr>
<tr>
<td>Ronald Paik</td>
<td>Jr Specialist</td>
<td>IGERT</td>
</tr>
<tr>
<td><strong>APT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deanna Spooner</td>
<td>Acad Support</td>
<td>CCRT</td>
</tr>
<tr>
<td>Dwight Matsuwaki</td>
<td>Rsch Support</td>
<td>CCRT</td>
</tr>
<tr>
<td>Roy Kam</td>
<td>Rsch Support</td>
<td>CCRT</td>
</tr>
<tr>
<td>Jennifer Ho</td>
<td>Institut Support</td>
<td>CCRT</td>
</tr>
<tr>
<td>Mariza Silva</td>
<td>Institut Support</td>
<td>CCRT</td>
</tr>
<tr>
<td>Patrice Moriyasu</td>
<td>Rsch Support</td>
<td>CCRT</td>
</tr>
<tr>
<td>Audrey Asahina</td>
<td>Rsch Support</td>
<td>Kewalo Lab</td>
</tr>
<tr>
<td>Janice Matsuura</td>
<td>Institut Support</td>
<td>Kewalo Lab</td>
</tr>
<tr>
<td>Kathy Souza</td>
<td>Institut Support</td>
<td>Kewalo Lab</td>
</tr>
<tr>
<td>Stanford Togashi</td>
<td>Info Tech</td>
<td>Computer Network</td>
</tr>
<tr>
<td>Scott Niimoto</td>
<td>Info Tech</td>
<td>Computer Network</td>
</tr>
<tr>
<td>Charina Julian</td>
<td>Rsch Support</td>
<td>Molec Biol Facility</td>
</tr>
<tr>
<td>Lori Kuriyama</td>
<td>Institut Support</td>
<td>PBRC Admin</td>
</tr>
<tr>
<td>Stacy Yamasaki</td>
<td>Institut Support</td>
<td>PBRC Admin</td>
</tr>
</tbody>
</table>

GRADUATE STUDENTS (26)

RCUH PERSONNEL (11)
PBRC Addendum -- PBRC Student Training

The mission of PBRC almost from its inception has included training in research. In 1974, due to the efforts of the PBRC Director, the University of Hawaii was recognized by the National Institutes of Health as a minority school. As a result PBRC successfully competed for grants to train minority undergraduates in research leading to graduate study. The Minority Access to Research Careers (MARC) and the Minority Biomedical Research Support (MBRS) programs have been a cornerstone of PBRC’s undergraduate research training mandate since 1974, with nearly 500 students of Hawaiian, Pacific Island, and Filipino heritage obtaining mentored research experiences in University of Hawaii laboratories.

PBRC’s grants management flexibility and experience with these grants led PBRC researchers to expand the training efforts. With the development of the Center for Conservation Research and Training in PBRC, the Ecology, Evolution and Conservation Biology (EECB) graduate program was spawned and has enjoyed phenomenal success, now with about 40 regular faculty and over 60 students from 9 UHM units. With the support of a National Science Foundation GK-12 grant, 155 graduate students received salary and/or research support while working with the K-12 community. About 270 teachers and 7,000 students have been impacted by this program.

The Kewalo Marine Laboratory has an international reputation for research excellence and since its very beginnings has attracted visiting scientists from all over the world for shorter- or longer-term periods of research/training. More recently, the Kewalo researchers developed a unique training focus in marine studies (such as coral reef ecology and conservation) for Pacific Island students and community college faculty. Since then more than a dozen faculty and more than 50 students have had mentored research experiences with Kewalo and UHM faculty, with support of a series of National Science Foundation grants to Kewalo investigators.

For many years now, undergraduate research training has been articulated as a goal in the UHM strategic plans. PBRC not only embraces that goal but has served as a model for other training programs at UHM and across the country. It is the synergy of the PBRC administration, the grants management flexibility, and the commitment of PBRC to research training, particularly to those groups underrepresented in the sciences, that explains the phenomenal success of these programs. Abolishing PBRC will destroy that synergy and negatively impact student training in the biological sciences at UHM.

The following pages list the names of students at all stages of career development who have been trained in PBRC laboratories and/or under the sponsorship of training grants to PBRC faculty. The time period is only for the past 5 years unless otherwise noted.
PACIFIC BIOSCIENCES RESEARCH CENTER:
STUDENTS TRAINED DURING THE PERIOD 2005-2010

UNDERGRADUATE STUDENTS

Undergraduate Students Trained in PBRC Laboratories

<table>
<thead>
<tr>
<th>Aaron Amano</th>
<th>Alan Lee</th>
<th>Matthew Shipley</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sigurdur Arnason</td>
<td>Brandon Loo</td>
<td>Svenja Skarke</td>
</tr>
<tr>
<td>Jennah Bedrosian</td>
<td>Andrew Marshall</td>
<td>Travis Skelton</td>
</tr>
<tr>
<td>Constance Brown</td>
<td>Scott Nikaido</td>
<td>Ann Skipper</td>
</tr>
<tr>
<td>Taylor Chock</td>
<td>Daniel Nitta</td>
<td>Tyler Smith</td>
</tr>
<tr>
<td>John DeLapp</td>
<td>Larry Oasay</td>
<td>Maxwell Tally</td>
</tr>
<tr>
<td>Agnes Elias</td>
<td>Lisa Oliveira</td>
<td>Jane Tavares</td>
</tr>
<tr>
<td>Jana Enokawa</td>
<td>Monica Orcine</td>
<td>Jenna Tomasa</td>
</tr>
<tr>
<td>Vinny Gian</td>
<td>Mark Pascua</td>
<td>Chuong Tran</td>
</tr>
<tr>
<td>Ryan Hoan</td>
<td>Jaselle Perry</td>
<td>Thomas Trinh</td>
</tr>
<tr>
<td>Marcus Iwane</td>
<td>Mark Pilar</td>
<td>Nicolas Velasco</td>
</tr>
<tr>
<td>Sherrilyn Kanno</td>
<td>Donna Poscablo</td>
<td>Leighton Villa</td>
</tr>
<tr>
<td>Carina Kelly</td>
<td>Lynna Ramos</td>
<td>Travis Weber</td>
</tr>
<tr>
<td>Dominic Kick</td>
<td>James Rowland</td>
<td>Kerri Wizner</td>
</tr>
<tr>
<td>Jaynee Kim</td>
<td>Jenna Rowland</td>
<td>Celeste Yee</td>
</tr>
<tr>
<td>Jomkuan Laophongsit</td>
<td>Michael San Jose</td>
<td>Brad Yuen</td>
</tr>
<tr>
<td>Anna Lechner</td>
<td>Francois Seneca</td>
<td></td>
</tr>
</tbody>
</table>

Pacific Region Diabetes Education (PRIDE) Program, NIDDK, NIH, Undergraduate Research Training Summer Program - 2005-2008

<table>
<thead>
<tr>
<th>Sharon Agacid</th>
<th>Timothy Ho</th>
<th>Joylyne Quitagua</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chrislyn Andres</td>
<td>Jacob Ishibashi</td>
<td>Brandie Reyes</td>
</tr>
<tr>
<td>Christine Caraang</td>
<td>Jemily Juan</td>
<td>Joshua Santos</td>
</tr>
<tr>
<td>Henry Chen</td>
<td>Tui Lauilefue</td>
<td>Scott Serrano</td>
</tr>
<tr>
<td>Nikki Chong</td>
<td>Moncayo Marissa</td>
<td>Mililani Trask-Batti</td>
</tr>
<tr>
<td>Christy Gilman</td>
<td>George Myers</td>
<td>Robin Williams</td>
</tr>
<tr>
<td>Ramon Go</td>
<td>Elizabeth Palmer</td>
<td>Mikela Yarawamai</td>
</tr>
</tbody>
</table>

Initiative for Minority Student Development (IMSD), NIGMS, NIH, Undergraduate Research Training Program – 2005-2006

<table>
<thead>
<tr>
<th>Jennifer Anwar</th>
<th>Ritchie Mae Delara</th>
<th>Joshua Santos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peter Chang</td>
<td>Diem Huyn</td>
<td>Erika Sayson</td>
</tr>
<tr>
<td>Christie Chew</td>
<td>Nichol Moikeha</td>
<td>Azhmaliiyyih Teal</td>
</tr>
<tr>
<td>Yasmin Dar</td>
<td>Joel Sabugo</td>
<td>Amy Vasconcellos</td>
</tr>
</tbody>
</table>
Minority Access to Research Careers (MARC) Program, NIGMS, NIH, Undergraduate Honors Research Training Program – 2005-2008

<table>
<thead>
<tr>
<th>Osler Andres</th>
<th>Joshua Irvine</th>
<th>Mark Pilar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark DeBlois</td>
<td>Kristine Ito-Smith</td>
<td>Joel Sabugo</td>
</tr>
<tr>
<td>Angelique Cercillieux</td>
<td>Laren Javier</td>
<td>Ryan Salvador</td>
</tr>
<tr>
<td>Meredith Cardenas</td>
<td>Lanikea King</td>
<td>Michelle Varize</td>
</tr>
<tr>
<td>Kerri Chock</td>
<td>Aaron Lani</td>
<td>Van-Nicholas Velasco</td>
</tr>
<tr>
<td>Anne Garrido</td>
<td>Matthew Medeiros</td>
<td>Leighton Villa</td>
</tr>
<tr>
<td>Jenni Higashiguchi</td>
<td>Amber Mira</td>
<td>Laura Wong</td>
</tr>
</tbody>
</table>

Undergraduate Biology/Math Interdisciplinary Training Program (UBM), NSF - 2008-2010 (For undergraduate training)

<table>
<thead>
<tr>
<th>Michael Andonian</th>
<th>Michael Derocher</th>
<th>Orion Rivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atma Bhawuk</td>
<td>Mary Desjardins</td>
<td>Andrew Salazar</td>
</tr>
<tr>
<td>John Branigan</td>
<td>Andrew Itsuno</td>
<td>Donald Tagawa</td>
</tr>
<tr>
<td>Geraldine Cadalin</td>
<td>Cameron Olson</td>
<td>Robert Young</td>
</tr>
</tbody>
</table>

Undergraduate Research and Mentoring in the Biological Sciences (URM), NSF - 2009. (For training undergraduate and Pacific Island students)

<table>
<thead>
<tr>
<th>Nikita Adachi</th>
<th>Jacobson Kibby</th>
<th>Mailie Ngiriou</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noel Afalava</td>
<td>Bethany Kimokeo</td>
<td>Mark Pascua</td>
</tr>
<tr>
<td>Jorg Anson</td>
<td>Alik Mongkeya</td>
<td>Peltin Pelep</td>
</tr>
<tr>
<td>Mac Aviena</td>
<td>Leinson Neth</td>
<td></td>
</tr>
<tr>
<td>Paulino Balagot</td>
<td>Nelson Ngirairikl</td>
<td></td>
</tr>
</tbody>
</table>

Undergraduate Mentoring in Environmental Biology (UMEB), NSF - 2005-2008 (For training undergraduate and Pacific Island students)

<table>
<thead>
<tr>
<th>Alphonso Alexander</th>
<th>Amata Kabua</th>
<th>Victor Nestor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jorg Anson</td>
<td>Sierra Isalias</td>
<td>Larson Palsis</td>
</tr>
<tr>
<td>Ngedikes Ellen Benedict</td>
<td>Menoleen Jacob</td>
<td>Peltin Olter Pelep</td>
</tr>
<tr>
<td>Melodie Boyd</td>
<td>Rendy Johnny</td>
<td>Kaipo Perez III</td>
</tr>
<tr>
<td>Keib Delemel</td>
<td>Bethany Kimokeo</td>
<td>Guadalupe Ruiz-Jones</td>
</tr>
<tr>
<td>Jimmy Galen</td>
<td>Tobikle Lomwe</td>
<td>Maile Sanford</td>
</tr>
<tr>
<td>Imelda Gebauer</td>
<td>Julius Lucky</td>
<td>Jansen Santos</td>
</tr>
<tr>
<td>Eugene Gold</td>
<td>Milton Manase</td>
<td>Bond Segal</td>
</tr>
<tr>
<td>JacquesIdechong</td>
<td>Chris Nakahashi</td>
<td>Mike Sofarh</td>
</tr>
<tr>
<td>Kristina Hadley</td>
<td>Evadne Nakamura</td>
<td>Gerda Ucharm</td>
</tr>
<tr>
<td>Branden Iriarte</td>
<td>Jeannie Nanpei</td>
<td>Jonathan Williams</td>
</tr>
</tbody>
</table>
GRADUATE STUDENTS

Graduate Students Trained in PBRC Laboratories

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christopher Bird</td>
<td>Angela Johnson</td>
<td>Rebecca Prescott</td>
</tr>
<tr>
<td>Rachel Blaser</td>
<td>James Jackson</td>
<td>Luc Rougee</td>
</tr>
<tr>
<td>Michael Boyle</td>
<td>Ashley Jensen</td>
<td>Austin Shelton</td>
</tr>
<tr>
<td>Christina Bradley</td>
<td>Willow Jorgenson</td>
<td>Nicholas Shikuma</td>
</tr>
<tr>
<td>Kurt Chambers</td>
<td>Jaynee Kim</td>
<td>Brian Shipley</td>
</tr>
<tr>
<td>Patrick Curry</td>
<td>Jorik Loeffler</td>
<td>Gentaro Shishimi</td>
</tr>
<tr>
<td>Erwin Defensor</td>
<td>Sean MacDuff</td>
<td>David Simmons</td>
</tr>
<tr>
<td>Timothy DuBuc</td>
<td>Heather Marlow</td>
<td>David Sischo</td>
</tr>
<tr>
<td>Mary Erskine</td>
<td>Johnathan Martinez</td>
<td>Katrin Thamm</td>
</tr>
<tr>
<td>Anuschka Faucci</td>
<td>David Matus</td>
<td>Cawa Tran</td>
</tr>
<tr>
<td>Lara Franco</td>
<td>Wallace Meyer</td>
<td>Gene Uenishi</td>
</tr>
<tr>
<td>Kevin Funk</td>
<td>Brian Nedved</td>
<td>Kyle VanderLugt</td>
</tr>
<tr>
<td>Kenneth Hayes</td>
<td>Kevin Olival</td>
<td>Emi Yamaguchi</td>
</tr>
<tr>
<td>Michelle Heinecke</td>
<td>Kevin Pang</td>
<td>Norine Yeung</td>
</tr>
<tr>
<td>Jaime Horton</td>
<td>Meaghan Parker</td>
<td></td>
</tr>
<tr>
<td>Ying Huang</td>
<td>Brandon Pearson</td>
<td></td>
</tr>
</tbody>
</table>

Initiative for Minority Student Development (IMSD), NIGMS, NIH, Graduate Research Training Program – 2005-2006

Coty Gonzales
Russell Ili
Dawn Ueda

National Science Foundation (NSF) Graduate Teaching Fellows in K-12 Education (GK-12) Program Fellows

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dawn Adams</td>
<td>Dan Gruner</td>
<td>Meaghan Parker</td>
</tr>
<tr>
<td>P. Anderson-Wong</td>
<td>Anuradha Gupta</td>
<td>Hector Perez</td>
</tr>
<tr>
<td>Daniel Barshis</td>
<td>William Haines</td>
<td>Joanna Philippoff</td>
</tr>
<tr>
<td>Erin Baumgartner</td>
<td>Alex Handler</td>
<td>Sheldon Plentovich</td>
</tr>
<tr>
<td>Gustav Bodner</td>
<td>Aaron Hebshi</td>
<td>Laura Rodman</td>
</tr>
<tr>
<td>Sarah Burgess</td>
<td>Jennifer Hoof</td>
<td>Laura Sharkey</td>
</tr>
<tr>
<td>Traci E. Cox</td>
<td>Kathrine Howard</td>
<td>Heather Spalding</td>
</tr>
<tr>
<td>Toby Daly-Engel</td>
<td>Matthew Knope</td>
<td>Kimberly Rice</td>
</tr>
<tr>
<td>Kanesa Duncan</td>
<td>Wendy Kuntz</td>
<td>Nourine Yeung</td>
</tr>
<tr>
<td>Jeff Eble</td>
<td>Shelly Lammers</td>
<td>Chela Zabin</td>
</tr>
<tr>
<td>Candace Felling</td>
<td>Georgina Lillich</td>
<td>Sandra Zicus</td>
</tr>
<tr>
<td>Elaine Franklin</td>
<td>Wallace Meyer</td>
<td></td>
</tr>
</tbody>
</table>
Ecology, Evolution and Conservation Biology (EECB) Graduate Specialization, NSF Training Grant. Students who received research and/or travel grants or scholarships – 2001-2010

Patrick Aldrich
Anthony Amend
Kim Andrews
Courtney Angelo
Shahin Ansari
Orville Baldos
Dan Barshis
Laura Bergman
Jessica Berryman
Joanne Birch
Chris Bird
Jeremy Bisson
Gus Bodner
Jeff Boutain
Kelly Boyle
Michael Boyle
Sarah Burgess
Ramana Callan
Charles Chimera
Mark Chynoweth
Jeremy Claisse
Elizabeth Cody
David Cole
Greg Concepcion
Erin Cox
Meghan Dailer
Jon Dale
Toby Daly-Engel
John Delay
Jan Dierking
Michael Dunford
Kanesa Duncan
Stephanie Dunbar
Jeff Eble
Tim Edmonds
Jesse Eiben
Heather Eijzenberg
Michelle Elmore
Anuschka Faucci
Candace Felling

John Fitzpatrick
Elaine Franklin
Danielle Frohlich
Michelle Gaither
Orou Gaoue
Dan Gruner
William Haines
Kevin Hall
Alex Handler
Kenneth Hayes
Aaron Hebshi
Veronica Hotton
Katherine Howard
Matthew Iacchi
Holly Jessop
Stephanie Joe
Angela Johnson
Aurora Kagawa
Nicholas Kalodimos
Mahealani Kaneshiro
Jaynee Kim
Cynthia King
Matthew Knope
Tobias Koehler
Kira Krend
Wendy Kuntz
Huang-Chi Kuo
Shelly Lammers
Ross Langston
Heather Leba
Tim Male
Lisa Mandle
Sean Mark
Heather Marlow
Wendy McDowell
Heather McMillan
Sarah McCleary
Amanda Meyer
Wallace Meyer
Randall Moorman
Cynthia Nazario
Ling Ong
Meaghan Parker
Hector Perez
Kimberly Peyton
Sheldon Plentovich
Katherine Postelli
John Puritz
Shimona Quazi
Dawn Reding
Teresa Restom
Randi Rhodes
Jennifer Rodwell
Jennifer Salerno
Isabel Schmidt
Jennifer Schultz
Laura Sharkey
Aaron Shiels
Jennifer Smith
Heather Spalding
Maggie Spork
Sonia Stephens
Alison Stimpert
Laurie Strommer
Nellie Sugii
Kimberly Tice
Cawa Tran
Clay Trauernicht
Jillian Ward
Lisa Wedding
Alexander Wegman
Amber Whitehead
Amber Whittle
Mindy Wilkinson
Tamara Wong
Mike Wysong
Norine Yeung
Lindsay Young (Cooper)
Chela Zabin
Sandra Zicus
NSF Integrative Graduate Education and Research Traineeship (IGERT): Integrative Training in Ecology, Conservation and Pathogen Biology (ECPB) Fellows

**Samuel Bader**  
**Siobahn Burns**  
**Angela Fa'anunu**  
**Amy Henry**  
**Holly Jessop**  
**Angela Johnson**  
**Jack Kittinger**  
**Kira Krend**  
**Jordan Kueneman**  
**Sean Macduff**  
**Brandi Mueller**  
**Michael Norris**  
**Rodolf Pan**  
**Kaipo Perez**  
**Rebecca Prescott**  
**Luc Rougee**  
**Jennifer Schultz**  
**Mark Speck**  
**Argon Steel**  
**Mayee Wong**

**OTHER STUDENTS**

Others (high school, summer interns, post-baccalaureate)

**Kawakahi Amina**  
**Maureen Bannigan**  
**Chloe Brahmi**  
**Andrew Burch**  
**Tara Chandrasekharan**  
**Amy Chang**  
**Ashley Gard**  
**Taylor Haines**  
**Chrissy Huffard**  
**Dinea Kane**  
**Lori Kaneshige**  
**Sun Wook Kim**  
**Jenn Kong**  
**Elizabeth Mitchell**  
**Grace Morita**  
**Paul Ohno**  
**James Patterson**  
**Gemma Richards**  
**Nathan Tanoue**  
**Kekoa Taparra**  
**Lorenzo Vaughn**  
**Olivia Veatch**  
**Trisha Yamato**

**POSTDOCTORAL FELLOWS**

Postdoctoral Trainees in PBRC Laboratories

**Aldine Amiel**  
**Cory Bishop**  
**William Browne**  
**Luciano Chiaverano**  
**Kariena Dill**  
**Casey Dunn**  
**William Goh**  
**Kenneth Hayes**  
**Andreas Hejinol**  
**Brenden Holland**  
**Megan Huggett**  
**Vijayavel Kannappan**  
**Andras Kern**  
**Michael Layden**  
**Craig Magie**  
**Dave Matus**  
**Neva Meyer**  
**Patricia Murata**  
**Mattias Ormestad**  
**Yale Passamanack**  
**Elizabeth Perotti**  
**Roger Pobbe**  
**Eric Roettinger**  
**Shinji Sugiura**  
**Claire Kendal Wright**  
**John Zardus**
FACULTY

Advanced Technological Education (NSF-ATE) - Partnership for Advanced Marine and Environmental Science Training for Pacific Islanders (for training Pacific Island faculty)

Karolyn Braun, American Samoa Community College
Frank Camacho, Guam Community College
Asher Edwards, College of Micronesia-FSM
Don Hess, College of the Marshall Islands
Glenn Keaton, Northern Mariana College
Frankie Harris, College of the Marshall Islands
Brian Lynch, College of Micronesia-FSM
Shelly Ngermeril, Palau Community College
Vernice Yuji, Palau Community College
PBRC Addendum -- PBRC Timeline

The entries in the table are snapshots of PBRC's nearly 50-year history at UH Manoa. PBRC researchers continue to be extremely successful in attracting millions of dollars in extramural funds to the University of Hawaii. While the research contributions of individual researchers and specific PBRC programs are remarkable, consistent, and internationally recognized, for the most part, they are not chronicled here. This timeline instead details events in PBRC's institutional history. The entries highlighted (in yellow) are relevant to Vice Chancellor Ostrander's role as PBRC's Interim Director.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>Institute of Health Research established by the Board of Regents as an Organized Research Unit; renamed Pacific Biomedical Research Center by BOR in 1963</td>
</tr>
<tr>
<td>1965</td>
<td>Two-year medical school spun off of PBRC as a separate program</td>
</tr>
<tr>
<td>1972</td>
<td>Kewalo Marine Laboratory completed; PBRC cell biology program created</td>
</tr>
<tr>
<td>1973</td>
<td>Program in cancer research initiated; PBRC spins off the Cancer Research Center of Hawaii, in 1981</td>
</tr>
<tr>
<td>1974</td>
<td>Awarded federal funds to train minority undergraduate students (Hawaiian, Filipino, Pacific Islander) in biomedical research in the MARC and Haumana programs</td>
</tr>
<tr>
<td>1974</td>
<td>Békésy Laboratory of Neurobiology joins PBRC (formerly the Sensory Science Institute developed by Nobel Laureate Georg von Békésy)</td>
</tr>
<tr>
<td>1984</td>
<td>Hawaiian Evolutionary Biology Program initiated with State and extramural funding</td>
</tr>
<tr>
<td>1986</td>
<td>Awarded funding from NIH Research Centers in Minority Institutions (RCMI) Program (to date an investment of more than $50 million in UHM) to support PBRC research programs and PBRC core facilities for electron microscopy and molecular biology</td>
</tr>
<tr>
<td>1989</td>
<td>Awarded supplemental RCMI funds to initiate clinical AIDS research program</td>
</tr>
<tr>
<td>1991</td>
<td>PBRC faculty catalyze two new interdisciplinary graduate programs: Cell, Molecular and Neuro Sciences (CMNS) and Ecology, Evolution and Conservation Biology (EECB)</td>
</tr>
<tr>
<td>1993</td>
<td>Center for Conservation Research and Training (CCRT) created, with linkage to state, federal and private agencies through a Secretariat (Hawaii Conservation Alliance)</td>
</tr>
<tr>
<td>1995</td>
<td>Awarded NIH funding to develop the RCMI Clinical Research Center</td>
</tr>
<tr>
<td>1999</td>
<td>Awarded NIH funding for Center of Clinical Research Excellence (CCRE) and Specialized Neuroscience Research Program (SNRP)</td>
</tr>
<tr>
<td>1999</td>
<td>Awarded NSF funds for the Undergraduate Mentoring in Environmental Biology (UMEB) with focus on Hawaii and Pacific Islands</td>
</tr>
<tr>
<td>1999</td>
<td>Awarded NSF training funds for graduate students to mentor GK-12 teachers through the Ecology, Evolution and Conservation Biology program</td>
</tr>
<tr>
<td>2000</td>
<td>Dr. Frederick C. Greenwood, PBRC Director since 1973, passes away</td>
</tr>
<tr>
<td>Year</td>
<td>Event</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>2001</td>
<td>Awarded NIH funding to create the <strong>COBRE Center for Cardiovascular Research.</strong></td>
</tr>
<tr>
<td>2001</td>
<td>Awarded NIH funding for <strong>Biomedical Research Infrastructure Network (BRIN)</strong></td>
</tr>
<tr>
<td>2001</td>
<td>Awarded NIH funding to create <strong>NeuroAIDS SNRP program.</strong></td>
</tr>
<tr>
<td>2003</td>
<td>PBRC’s standing as an independent Organized Research Unit reaffirmed. PBRC clinical programs and center grants moved to the John A. Burns School of Medicine as foundation for new research focus.</td>
</tr>
<tr>
<td>2005</td>
<td>Gary K. Ostrander, VCRGE, named Interim Director of PBRC</td>
</tr>
<tr>
<td>2005</td>
<td>Formally changes name to <strong>Pacific Biosciences Research Center</strong></td>
</tr>
<tr>
<td>2005</td>
<td>PBRC administers the statewide NSF-funded <strong>EPSCoR program</strong> and NSF-funded <strong>IGERT</strong> graduate program for the ecology of infectious diseases</td>
</tr>
<tr>
<td>2007</td>
<td><strong>VCRGE Ostrander halts the PBRC Director search</strong> after failed negotiation with top candidate</td>
</tr>
<tr>
<td>2007</td>
<td><strong>VCRGE Ostrander transfers his locus of tenure to the Cancer Research Center from PBRC</strong></td>
</tr>
<tr>
<td>2007</td>
<td>PBRC faculty request that Chancellor Hinshaw replace VCRGE Ostrander as PBRC Interim Director, citing <strong>conflict of interest and lack of advocacy for PBRC</strong>; no formal response from Chancellor Hinshaw; VCRGE Ostrander reports back that she denied the request</td>
</tr>
<tr>
<td>2008</td>
<td>PBRC faculty create <strong>vision and plan for a new Biodiversity Focus</strong> with a functional merger of PBRC’s three major research programs and continued emphasis on research training and core facilities</td>
</tr>
<tr>
<td>2008</td>
<td>PBRC faculty launch <strong>new initiatives in Biodiversity</strong> (seminars, symposia, partnerships)</td>
</tr>
<tr>
<td>2008</td>
<td><strong>VCRGE Ostrander announces intent to close Kewalo Marine Lab</strong> (with early termination of lease) in exchange for new Cancer Research Center.</td>
</tr>
<tr>
<td>2008</td>
<td>Chancellor Hinshaw and VCRGE Ostrander announce <strong>intention to dissolve PBRC</strong></td>
</tr>
<tr>
<td>2008</td>
<td>PBRC Electron Microscope Facility awarded <strong>NSF grant for new scanning electron microscope</strong></td>
</tr>
<tr>
<td>2009</td>
<td><strong>UHM prioritization process begins</strong></td>
</tr>
<tr>
<td>2009</td>
<td>National Science Foundation invites PBRC program director, Ken Kaneshiro, to policy-making workshop on biology in the 21st century</td>
</tr>
<tr>
<td>2009</td>
<td>PBRC faculty submit <strong>Biodiversity/sustainability grant proposals</strong></td>
</tr>
<tr>
<td>2009</td>
<td><strong>UHM Faculty Senate resolves that UHM must follow policy and procedures for abolishing PBRC</strong></td>
</tr>
<tr>
<td>2009</td>
<td>Kewalo Marine Lab awarded <strong>two NSF grants for new scientific instruments</strong></td>
</tr>
<tr>
<td>2009</td>
<td>UHM Faculty Senate Executive Committee and Committee on Administration and Budget <strong>urge VCRGE Ostrander to step down as PBRC Interim Director</strong></td>
</tr>
<tr>
<td>Year</td>
<td>Event</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>2009</td>
<td>PBRC faculty member files <em>Freedom of Information Act</em> request regarding Kewalo Marine Lab agreements.</td>
</tr>
<tr>
<td>2010</td>
<td>PBRC faculty explore new <em>Biodiversity research partnerships</em> with Lyon Arboretum, the Waikiki Aquarium, and the School of Hawaiian Knowledge (to enhance “mountains-to-the-sea” Biodiversity Focus).</td>
</tr>
<tr>
<td>2010</td>
<td>UHM Faculty Senate adopts a resolution opposing closure of Kewalo Marine Lab and asking that VCRGE Ostrander step down as Interim Director of PBRC.</td>
</tr>
<tr>
<td>2010</td>
<td>VCRGE Ostrander posts formal plan to abolish PBRC.</td>
</tr>
</tbody>
</table>
Present and Future

A presentation for
Dr. Virginia Hinshaw, Chancellor
University of Hawaii at Manoa
March 6, 2008

Why Organized Research Units (ORUs) at UH?

• Key contributor to UH leadership in research

• Tailored to specific needs of research (administration; facilities)

• Attract high-quality researchers

• Attract funding targeted at training-through-research

• Facilitate research-oriented partnering with other units

• Increase research base and funding competitiveness with “soft-money” faculty

• More flexible and nimble than other organizational units
PBRC: Who we are

PBRC started 45 years ago

33 faculty
19 tenure track FTE
(5 of these are vacant)

CCRT
Center for Conservation Research and Training

Core facilities

Békésy Laboratory
of Neurobiology

Training:
MARC MBRS

Native Hawaiian Health Molecular Endocrinology

Kewalo Marine Lab

PBRC = Excellence in Research

PBRC faculty are internationally-respected leaders in their fields

Publications
• 54 publications in 2006
• 59 publications in 2007
PBRC: Who we are
CCRT
Center for Conservation Research and Training

Research:
• Ecology, Evolution and Conservation Research Lab
• Hawaiian Evolutionary Biology Program
• Hawaii Stream Biology

Training:
• NSF GK-12
• EECB
• IGERT

Resources:
• Biodiversity & mapping
• Seed conservation
• Drosophila Stock Center
• Intelesense Technologies

PBRC: Who we are
Békésy Laboratory of Neurobiology

Research:
• Behavioral neuroscience
• Computational neuroscience
• Neuroecology
• Toxin biochemistry
• Ion channel physiology

Training:
• UBM (Undergraduate Mentoring in Mathematical Biology)
PBRC: Who we are
Kewalo Marine Laboratory

Research:
- Evolutionary developmental biology
- Larval settling and metamorphosis
- Reproductive ecology
- Marine conservation biology

Training:
- UMEB (Undergraduate Mentoring in Environmental Biology)
- ATE (Environmental Science Training for Pacific Islanders)

PBRC = Quality Core Research Facilities

Serve users throughout the University and the State

- Biological Electron Microscopy Facility – houses only transmission EM on Oahu; State bioterrorism back-up
- Molecular Biology Facility – provides instrumentation, training and services for genomics, proteomics and bioinformatics
- Computer Network Support Facility – leading edge bioinformatic and research support
- Cyberinfrastructure Facility – state-of-the-art environmental sensing technology
- Live Cell Imaging Facility (proposed) – utilizing state of the art microscopy to image living cells
PBRC = Excellence in Research

PBRC supplies expertise, collaboration and research training for other UHM units:

- Cancer Research Center of Hawai‘i
- College of Education
- College of Engineering
- College of Natural Sciences
- College of Social Sciences
- College of Tropical Agriculture and Human Resources
- John A. Burns School of Medicine
- Lyon Arboretum
- School of Ocean and Earth Science and Technology

PBRC = Training through Research

Students in faculty labs (2007)

- 34 undergraduate students
- 55 graduate students
- 24 post-docs
PBRC = Training through Research

• NSF GK-12 – program in evolutionary biology that places graduate students in K-12 classrooms

• NSF IGERT (Interdisciplinary Graduate Education and Research Traineeship Program) – graduate training in ecology, conservation and pathogen biology

• NSF ATE (Advanced Technological Education) – program to improve marine and environmental science education for Pacific Islanders through broad training and infrastructure support, from secondary school through community colleges

PBRC = Training through Research

• NIH MARC (Minority Access to Research Careers) – a program to provide minority honors undergraduates with biomedical research experience

• NIH PRIDE (Pacific Region Diabetes Education program) – diversity program encouraging undergraduates to pursue careers in biomedical science

• NSF UMEB (Undergraduate Mentoring in Environmental Biology) – interdisciplinary program in environmental studies for undergraduate students from the Pacific Islands

• NSF Ka ‘imi ‘īke – initiative to recruit and retain Native Hawaiian and Pacific Islanders undergraduates in geosciences.
PBRC = Protecting Hawaii’s Natural Resources

PBRC houses unique programs:

Cyberinfrastructure Program – the most advanced program for environmental monitoring and data analysis in Hawai‘i (Kaneshiro)
Endangered Hawaiian Tree Snail Captive Breeding Program (Hadfield)
Hawai‘i Biodiversity and Mapping Program – the most comprehensive database of Hawai‘i’s endangered species (Kaneshiro)
Hawai‘i Seed Conservation Laboratory (Yoshinaga)
Hawaiian Drosophila Research Stock Center -- the only conservatory for endangered species (Kaneshiro)
Pacific Island Forest and Wildlife Ecosystem Restoration
Pacific Plant Propagators – 25,000 silverswords established in wild
Hawaii Stream Research Center – the most comprehensive database on watershed health in Hawai‘i (Kido)
Maunalua Bay Watershed project (Richmond)
PBRC = Partnerships with Outside Groups

Castle Foundation
Hawaii Academy of Science
Hawaii Attorney General’s Office
Hawaii Conservation Alliance
Hawaii Coral Reef Initiative
Hawaii Dept. of Agriculture
Hawaii Dept. of Health
Hawaii Dept. Land Nat. Res.
Honolulu Advertiser – International Year of the Reef
Joint Ocean Commission
Kamehameha Schools
Malama Hawaii
Malama Maunalua
Native Hawaiian Legal Corp.
NOAA/NMFS
Office of Hawaiian Affairs
Pacific Islands Regional Office Surfrider Fndn
Palmyra Atoll Research Consortium
American Samoa Dept. of Marine & Wildlife Resources
The Nature Conservancy
U.S. Army
U.S. Coral Reef Task Force
Waianae Intermediate School

Nothing in BIOLOGY makes sense except in light of EVOLUTION.

Theodosius Dobzhansky
Nothing in **EVOLUTION** makes sense except in light of **BIOLOGY**.

---

**PBRC: Planning for the Future**

**FACT**: The University of Hawaii sits in the center of the most diverse - and THREATENED – marine, freshwater and terrestrial ecosystems in the world.

**FACT**: Hawaiian BIODIVERSITY ranging from rainforests to reefs exists along a gradient of human impact forming a natural laboratory for understanding coupled human-natural ecosystems.

**FACT**: Modern approaches, techniques, and technologies exist to study the PATTERNS and PROCESSES that regulate BIODIVERSITY in real-world settings.
Ahupuaʻa

We will use our established research experience and knowledge of local flora/fauna to fulfill the Native Hawaiian concept of ahupuaʻa and develop an integrated and culturally relevant understanding of Hawai‘i biological diversity “from the mountains to the sea”.

Ahupuaʻa are coupled human-natural systems containing Hawaiian biodiversity ranging from molecules and organisms to human dominated and wild ecosystems.

Integrative Biodiversity Studies in Hawaiian Ahupuaʻa

- “Biodiversity” includes molecular biodiversity, developmental, phylogenetic and behavioral diversity, at all organizational levels

- Characterization of Hawaiian Biodiversity
  - evolutionary origins
  - historic mechanisms affecting temporal trajectories
  - future fate under changing environmental conditions naturally-occurring change
direct human impact (overfishing, habitat destruction)
indirect effects (invasive species, emergent disease, pollution, global climate change)
Integrative Biodiversity Studies
PBRC: Planning for the Future

PBRC: Who we were..
PBRC ahupua‘a
Integrative Biology: From the mountains to the sea
From molecules to ecosystems

Future
PBRC ahupua‘a
Integrative Biology: From the mountains to the sea
From molecules to ecosystems

Addressing transdisciplinary problems of the 21st Century
To fulfill this vision, PBRC needs:

1. Strong support from the UHM administration.

2. Appointment of a permanent PBRC Director.

3. Authorization to fill its vacant tenure-track positions to implement new research focus. These include:
   - applied systems level ecologist
   - ecotoxicologist
   - marine and terrestrial neuroethologists
   - microbial ecologist
   - bioinformatician
   - comparative molecular neurobiologist

To fulfill this vision, PBRC needs:

4. New **Biodiversity** building in Kaka’ako as an **urban marine lab** to anchor the ahupua’a and to foster intellectual collaborations/inspirations.
   - The building must contain:
     - access to the marine environment
     - modern molecular research lab space
     - teaching space for UHM and outreach
     - conference (50-100 people) facilities
   - Funding opportunities: Office of Hawaiian Affairs, Kamehameha Schools, private fundraising (“Year of the Reef”), lease/share (EPA, NOAA, etc..), ‘legacy’ projects
Using the integrative system of ahupua'a PBRC will:

Expand UHM’s international research prominence
Provide important resources to national, state and local communities

Initiate and support integrative curricular reform in important areas (e.g. neurobiology, conservation biology, developmental biology, environmental health)

Develop new integrative K-12 training program
Renew MARC program and enhance training of underrepresented groups
Maintain/renew EPSCoR and IGERT programs

Increase research infrastructure, e.g. with shared instrumentation grants

---

Present and Future...

- PBRC immediately initiated biodiversity activities.
- The UH strategic plan targets sustainability and diversity.
- National Science Foundation targets biodiversity for 21st century training and research.
PBRC Addendum -- PBRC Biodiversity Initiatives

PBRC presented a vision and plan for the future directions of PBRC's research and training to Chancellor Hinshaw in the spring of 2008. (A powerpoint presentation of the plan is contained in the PBRC Addendum -- PBRC Biodiversity Vision and Plan.) The plan addressed broad areas of biodiversity "from the mountains to the sea." It directly addressed: the National science priorities in biodiversity, the University of Hawaii strategic plan, Chancellor Hinshaw's proposed initiatives to incorporate concepts of ahupua'a into the curriculum, and Chancellor Hinshaw's goal to hire faculty in cross-disciplinary core areas. PBRC's plan presented a synthesis of the strengths of PBRC's current faculty and staff and identified areas of future hire. The plan was enthusiastically embraced by all in PBRC, and implementation began immediately.

The National Science Foundation has announced two national priorities for research and training in the biological sciences for the 21st century: Transdisciplinary Life Sciences and Dimensions of Biodiversity (see PBRC Addendum -- NSF Dimensions in Biodiversity).

Chancellor Hinshaw has announced the future directions of the UH Manoa campus.

A. "... faculty positions each in two priorities that have continually emerged in campus planning and discussions: (a) faculty who are Native Hawaiian and from other underrepresented groups and (b) faculty whose scholarship and teaching are focused on sustainability efforts that enable UH Manoa to model and lead such efforts for Hawaii and beyond."

B. "partnerships...generating benefits related to our unique environment; research - cross-campus efforts to secure stimulus money and large program grants."

PBRC is already moving ahead on the National and UHM priorities. The following documents provide a snapshot of some of the measures that PBRC already has taken to implement the Biodiversity Focus of the vision and plan.

Included in the following pages are:
1. Timeline of PBRC Biodiversity activities
2. Biological Diversity seminar series--list of topics and speakers for 2008-2010
3. Annual campus-wide Biodiversity Symposium programs--for 2008 and 2009
   (The 2010 symposium will be held on May 6, 2010.)

Note: Vice Chancellor Ostrander serves as the Interim Director of PBRC but:
1. His proposal as the Vice Chancellor of Research and Graduate Education (VCRGE) to abolish PBRC makes no mention at all of PBRC's vision and plan.
2. He does not mention any of these faculty-initiated activities to advance UHM's and PBRC's focus in biodiversity and sustainability.
3. He has not participated in or even attended any of PBRC’s Biodiversity Focus activities, seminars of symposia.
4. Most disturbing, given his role as Interim Director, is that he has not provided leadership and advocacy for PBRC faculty pursuing extramural funds for biodiversity and sustainability projects.
TIMELINE OF PBRC BIODIVERSITY INITIATIVES
2008 - present

March 2008  PBRC Vision and Biodiversity Plan presented to the Chancellor

May 2008    PBRC Launched first annual campus-wide Biodiversity Symposium

October 2008 PBRC Began monthly Biodiversity public seminar series

Fall 2008   PBRC faculty began a new Zoology course in Neurodiversity

Spring 2009 PBRC researchers applied for UH Manoa sustainability grant

May 2009    PBRC held second annual campus-wide Biodiversity Symposium

May 2009    PBRC faculty applied for NIH grant (MARC) to train minority honors students in cross-disciplinary biosciences

July 2009   PBRC researcher, Dr. Ken Kaneshiro, invited to NSF meeting on biology in the 21st century

Fall 2009   PBRC faculty catalyzes discussions with UHM biosciences colleges and departments for developing a new structure for life sciences at UHM (including zoology, microbiology, botany, psychology, College of Tropical Agriculture and Human Resources, College of Engineering, School of Hawaiian Knowledge)

Spring 2010 PBRC Leadership team met with Dr. Andy Rossiter of the Waikiki Aquarium to explore partnerships for "mountains-to-the-sea" research and student training

Spring 2010 PBRC Leadership team met with Dr. Chris Dunn of the Lyon Arboretum to explore partnerships for “mountains-to-the sea” research and student training

Spring 2010 PBRC faculty joined the Chancellor's task force to look at incorporating the traditional Hawaiian ahupua'a concept into the UHM curriculum
Dr. Kevin Montgomery, National Biocomputation Center, Stanford University, “Cyberinfrastructure for Biodiversity and Ecosystem Research,” October 8, 2008, POST 127, 3:30 pm

Dr. Kenneth Kaneshiro, Researcher, PBRC, Center for Conservation Research and Training, “Dynamics of Sexual Selection in Hawaiian Drosophila: A Paradigm for Evolutionary Change,” November 6, 2008, Kewalo Marine Laboratory Library, 3:30 pm

Dr. Robert Richmond, Researcher, PBRC, Kewalo Marine Laboratory, “Coral Reef Biodiversity: From Ecosystems to Molecules,” December 1, 2008, POST 127, 3:30 pm

Dr. Patricia Couvillon, Associate Professor, PBRC, Bekesy Laboratory and Department of Psychology, “Similarity of Learning and Memory in Honeybees and Vertebrates,” January 12, 2009, Kewalo Marine Laboratory Library, 3:30 pm

Mr. Alvin Yoshinaga, Junior Researcher, PBRC, Center for Conservation Research and Training, “Seed Desiccation Tolerance and Island Plant Geography,” February 2, 2009, Kewalo Marine Laboratory Library, 3:30 pm

Dr. Neva Meyer, Postdoctoral Researcher, PBRC, Kewalo Marine Laboratory, “Molecular and Cellular Analysis of Brain Development in the Polychaete Annelid Capitella sp.,” March 2, 2009, Biomedical Sciences Bldg., T-208, 3:45 pm

Dr. Angel Yanagihara, Assistant Researcher, PBRC, Bekesy Laboratory, “Biodiversity in Toxins,” April 6, 2009, Kewalo Marine Laboratory Library, 3:30 pm

Dr. Andrew Christie, Investigator/Director, Imaging Core, Center for Marine Functional Genomics, Mount Desert Island Biological Laboratory, “Identification and Physiological Actions of an Insect Calcitonin-like Diuretic Hormone in Decapod Crustaceans,” October 12, 2009, Kewalo Marine Laboratory Library, 3:30 pm

Dr. Mark Martindale, Researcher and Director, PBRC, Kewalo Marine Laboratory, “Evolutionary Innovation: A Developmental and Comparative Genomic View of the Role of Basal Metazoan Taxa in Understanding the Origin of the Nervous System and Mesodermal Tissues,” November 2, 2009, POST 126, 3:00 pm

Dr. Michael M. Walker, Professor, School of Biological Sciences, University of Auckland, “Animal Magnetism: Structure, Function and Use of the Magnetic Sense,” December 10, 2009, Kewalo Marine Laboratory Library, 3:30 pm

Mr. Cory L. Yap, Environmental Research Assistant, PBRC, Center for Conservation Research and Training, “Feeding Ecology of the Hawaiian Freshwater Fish, Eleotris sandwicensis (‘O’opu akupa), in Limahuli Stream, Kauai,” January 11, 2010, Kewalo Marine Laboratory Library, 3:30 pm
Dr. Margaret McFall-Ngai, Professor of Medical Microbiology and Immunology, School of Medicine and Public Health, University of Wisconsin, Madison, “Waging Peace: the Molecular Underpinnings of Diplomacy in Beneficial Symbioses,” January 25, 2010, Kewalo Marine Laboratory Library, 3:30 pm

Dr. Robert Cowie, Researcher, and Dr. Kenneth Hayes, Assistant Research Affiliate, PBRC, Center for Conservation Research and Training, “Snails: Evolution, Biodiversity and Alien Species,” April 5, 2010, Biomedical Sciences Bldg, T-208, 3:30 pm
PACIFIC BIOSCIENCES RESEARCH CENTER SYMPOSIUM ON BIODIVERSITY
Friday, May 9, 2008
Keoni Auditorium, Hawaii Imin Conference Center - East-West Center

Program

8:30 AM Marilyn Dunlap Welcome and Awards
8:40 AM **Keynote** "Shaking the roots of our family tree: recent revisions of deep phylogenies"

**Session I: Terrestrial diversity**
9:00 AM Kenneth Kaneshiro "Biodiversity of the insect fauna in Hawaii with special emphasis on the Hawaiian Drosophilidae"
9:20 AM Brenden Holland "Large radiations on small islands: preserving endemic Hawaiian gastropod biodiversity"
9:40 AM Durrell Kapan "Understanding evolution of insect biodiversity from selection to genomics"
10:00 AM Patricia Couvillon "Evolutionary diversity in learning?"
10:20 AM Robert and Caroline Blanchard "Biological diversity in neural systems regulating fear, anxiety and aggression"
10:40 AM Coffee Break

**Session II: Marine diversity**
11:00 AM Elaine Seaver "Animal body plan diversity in annelids, a developmental perspective"
11:20 AM Tom Humphreys "Heads and tails, arses, mouths and brains; evolution of the animal body axis"
11:40 AM Angel Yanagihara "Venomic biodiversity: investigating the toxinology and taxonomy of cnidarian nematocyst venoms"
12:00 PM Dan Hartline "Evolutionary diversity of crustacean myelin"
12:20 PM Ann Castelfranco "Modeling nerve conduction in axons evolving myelin"
12:40 PM Petra Lenz "Biogeography and ecology of myelin in marine copepods"
1:00 PM Lunch on your own and Posters

**Session III: Human impacts**
2:00 PM Robert Cowie "Apple snails--evolutionary radiations and invasive species"
2:20 PM Michael Kido "An advanced cyberinfrastructure for environmental research and education"
2:40 PM Robert Richmond "Watershed impacts on coral reef biodiversity in Hawai'i and Micronesia"
3:00 PM Alvin Yoshinaga "Plant conservation programs of the Center for Conservation Research and Training"
3:20 PM Coffee Break

**Session IV: Human health**
3:30 PM Gillian Bryant-Greenwood "The relaxin dialogue at the maternal-fetal interface"
3:50 PM Meredith Hermosura "Genetic variants of ion channels--susceptibility factors for complex diseases?"
4:10 PM Marilou Andres "SK channel regulation of insulin secretion"
4:30 PM Adrian Dunn "Chronic stress as a model for depression in rodents"
4:50 PM Healani Chang "Health disparities in an ethnically diverse cohort in rural Hawai'i"

**Session V: Techniques**
5:10 PM Gabor Mocz "A new measure of fluorescence based on information theory"
5:30 PM End
POSTERS

   Michael Boyle and Elaine Seaver; Kewalo Marine Laboratory

2. "Transduction of the Hypoosmotic Stimulus for Prolactin Secretion in Tilapia Pituitary Cells".  
   Ian M. Cooke, Takeshi Shimahara and Andre Seale; Bekesy Laboratory

3. "The Horticultural Industry as a Vector of Alien Snails and Slugs in Hawaii".  
   Robert H. Cowie, Kenneth A. Hayes, Chuong T. Tran and Wallace M. Meyer, III;  
   Center for Conservation Research and Training

   Population Structure in Hawaiian Land Snails".  
   Brenden S. Holland; Center for Conservation Research and Training

5. "Molecular Phylogeography of the Endemic Hawaiian Amber Snails (Succineidae)".  
   Brenden S. Holland and Robert H. Cowie; Center for Conservation Research and Training

   Durrell D. Kapan, Marla Fisher, Yvonne Chan, Cam Muir; Center for Conservation Research and Training

7. "Impacts of Apple Snails on Taro Culture in Hawaii: Predictors of Aquatic Invasive Species  
   Control Choices".  
   Penny Levin, Robert H. Cowie, Carol Ferguson, Justin Taylor, Kimberly Burnett, Kenneth A. Hayes,  
   and Chuong T. Tran; Center for Conservation Research and Training

8. "Development of the Nervous System in Nematostella vectensis, an Anthozoan Cnidarian".  
   Heather Marlow; Kewalo Marine Laboratory

9. "The Evolution of Bilateral Symmetry Outside the Bilateria, Insights from Nematostella  
   vectensis, the Starlet Sea Anemone".  
   David Q. Matus, Eric Roettinger, Patricia N. Lee, Craig Magie, Kevin Pang and Mark Q. Martindale;  
   Kewalo Marine Laboratory

    Wallace M. Meyer, III, Brenden S. Holland, and Robert H. Cowie; Center for Conservation Research and Training

11. "Regulation of TRPM2 by Extra and Intracellular Calcium".  
    John Starkus, Andreas Beck, Andrea Fleig, and Reinhold Penner; Bekesy Laboratory

12. "The Development of Calanoid Copepod Myelin".  
    Caroline Wilson; Bekesy Laboratory

    Eleotris sandwicensis (‘O’opu akupa) in Limahuli Stream, Kauai".  
    Cory L. Yap, Michael H. Kido, Kathleen S. Cole and Robert A. Kinzie III;  
    Center for Conservation Research and Training
Program

8:30 AM  Registration

8:45 AM  Marilyn F. Dunlap  Welcome and Awards

9:00 AM  Michael G. Hadfield  Keynote: Multiple approaches to conserving Hawaii’s severely endangered achatinelline tree snails

Session I. Invasive Species (Moderator: Petra Lenz)
9:30 AM  Robert H. Cowie  Introduction pathways, spread and impacts of snails and slugs in Hawaii (copresenters Kenneth Hayes, Wallace Meyer, Chuong Tran, Jaynee Kim, Travis Skelton and Norine Yeung)

9:50 AM  Jaynee Kim  The prevalence of the rat lungworm, Angiostrongylus cantonensis, in the main Hawaiian Islands (copresenters Kenneth Hayes, Norine Yeung and Robert Cowie)

10:10 AM  Patricia Couvillon  Varroa mites and other honeybee perils

10:30 AM  Coffee Break

Session II. Vertebrate and Human Health (Moderator: Healani Chang)
11:00 AM  Gillian Bryant- Greenwood  From bench to bedside: a journey

11:20 AM  Adrian Dunn  Mechanisms by which the immune system communicates with the brain: focus on the role of cytokines (copresenters Artur H. Swiergiel and Marek Wieczorek)

11:40 AM  Gabor Mocz  Models of ornithine decarboxylase inhibition for neuroblastoma therapy

12:00 PM  Lunch on your own

1:00 PM  Poster session  Poster titles on next page

Session III. Invertebrate Evolution and Diversity (Moderator: Brenden Holland)
1:40 PM  Elaine Seaver  Co-linear gene expression in lophotrochozoans (copresenters Andreas Froebius and Olivia Veatch)

2:00 PM  Andreas Hejnol  Developmental diversity and the evolution of the bilaterian CNS

2:20 PM  Daniel K. Hartline  Diversity in amine immunolabeling in crustacean nervous systems: a copepod case

2:40 PM  Heather Q. Marlow  Evolution of photoreception in the Metazoa: new insights from Cnidaria and annelids (copresenters D. Speiser, E. Seaver, and M.Q. Martindale)

3:00 PM  Coffee Break

Session IV. Conservation and Mitigation (Moderator: Mark Q. Martindale)
3:20 PM  Alvin Yoshinaga  Developing storage methods for seeds of native Hawaiian plants

3:40 PM  Robert H. Richmond  Watershed impacts on the ecological integrity of Maunalua Bay (copresenters Jonathan Martinez and Eric Wolanski)

4:00 PM  Marilyn F. Dunlap  Volunteer efforts to protect the endangered Hawaiian monk seal, Monachus schauinlandsi

4:20 PM  Mark Q. Martindale  Wrap up and discussion
Posters

1. "Transduction of the hypoosmotic stimulus for prolactin secretion in tilapia pituitary cells"
   Ian M. Cooke, Takeshi Shimahara, Shenghong Xu and Andre Seale

2. "The gain and loss of myelin in malacostrocan crustaceans"
   Daniel K. Hartline and Jennifer H. Kong

3. "Relaxin action at the maternal-fetal interface"
   Jaime S. Horton, Sandra Y. Yamamoto and Gillian D. Bryant-Greenwood

4. "Quantifying gene expression in the cnidarian Nemastella vectensis"
   Timothy Q. DuBuc, Heather Q. Marlow and Mark Q. Martindale

5. "Early evolution of Hox genes and Hox code"
   Jorik Loeffler and Mark Q. Martindale

6. "Role of the Nodal signaling pathway in the hemichordate Ptychodera flava"
   Eric Röttinger, Timothy DuBuc and Mark G. Martindale

   Amber Mira and Patricia Couvillon

8. "Structure and biodiversity of soft-bottom benthos from the western coast of Baja California, Mexico"
   Victoria Díaz-Castañeda
Dimensions of Biodiversity

PROGRAM SOLICITATION
10-548

National Science Foundation
Directorate for Biological Sciences
Directorate for Geosciences

Letter of Intent Due Date(s) (required) (due by 5 p.m. proposer’s local time):
May 07, 2010

Full Proposal Deadline(s) (due by 5 p.m. proposer’s local time):
June 08, 2010

IMPORTANT INFORMATION AND REVISION NOTES

Please be advised that the NSF Proposal & Award Policies & Procedures Guide (PAPPG) includes revised guidelines to implement the mentoring provisions of the America COMPETES Act (ACA) (Pub. L. No. 110-69, Aug. 9, 2007.) As specified in the ACA, each proposal that requests funding to support postdoctoral researchers must include a description of the mentoring activities that will be provided for such individuals. Proposals that do not comply with this requirement will be returned without review (see the PAPPG Guide Part I: Grant Proposal Guide Chapter II for further information about the implementation of this new requirement).

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:
Dimensions of Biodiversity

Synopsis of Program:
The Dimensions of Biodiversity initiative seeks to characterize biodiversity on Earth by using integrative, innovative approaches to fill rapidly the most substantial gaps in our understanding of the diversity of life on Earth. This campaign will take a broad view of biodiversity, and in its initial phase will focus on the integration of genetic, taxonomic, and functional dimensions of biodiversity. Successful proposals should integrate these three dimensions to understand interactions and feedbacks among them. While this focus complements several core NSF programs, it differs by requiring that multiple dimensions of biodiversity be addressed simultaneously, in innovative or novel ways, to understand the roles of biodiversity in critical ecological and evolutionary processes.

Despite centuries of discovery, most of our planet's biodiversity remains unknown. The scale of the unknown diversity on Earth is especially troubling given the rapid and permanent loss of biodiversity across the globe. With this loss, humanity is losing links in the web of life that provide ecosystem services, forgoing an understanding of the history and future of the living world, and eliminating future beneficial discoveries in the domains of food, fiber, fuel, pharmaceuticals, and bio-inspired innovation. This reality has stimulated a campaign to characterize key but little known dimensions of biodiversity on Earth.

By 2020, the Dimensions of Biodiversity campaign is expected to have transformed how we describe and understand the scope and role of life on Earth. The campaign promotes novel, integrated approaches to identify and understand the evolutionary and ecological significance of the dimensions, of biodiversity amidst the changing environment of the present day and in the geologic past.

Investigators wishing to inquire about the suitability of potential projects for Dimensions of Biodiversity are encouraged to email a brief summary and contact information to Dimensions@nsf.gov.

Cognizant Program Officer(s):
- Scott D. Snyder, BIO/DEB, telephone: (703) 292-7158, email: Dimensions@nsf.gov
- George W. Gilchrist, BIO/DEB, telephone: (703) 292-7138, email: Dimensions@nsf.gov
- Reed Beaman, BIO/DBI, telephone: (703) 292-8167, email: Dimensions@nsf.gov
- David L. Garrison, GEO/OCE, telephone: (703) 292-7588, email: Dimensions@nsf.gov
- Richard Inouye, BIO/DEB, telephone: (703) 292-4974, email: Dimensions@nsf.gov
Dimensions of Biodiversity
Penny Firth, DEB, NSF
Peter Arzberger, DBI, NSF
Scott Snyder, DEB, NSF

Changes in the Biosphere

- Humans are putting the biosphere in the blender (Andy Revkin, NYT)
- Rate of translocations, extirpations, extinctions, and habitat and climate change exceed our capacity to document, understand, and arrest
- 2.4 billion children alive on the planet today
DIMENSIONS OF BIODIVERSITY

A 10-year campaign to characterize the dimensions of biodiversity on Earth.

PHOTO: P. FIRTH
A 10-year campaign to characterize the dimensions of biodiversity on Earth.

Integrative approaches
Innovative concepts
Rapid advances

Partnerships

"an inexact first pass"
A 10-year campaign to characterize the dimensions of biodiversity on Earth.

Integrative approaches
Innovative concepts
Rapid advances

Focus on key but little-known dimensions
A 10-year campaign to characterize the dimensions of biodiversity on Earth.

The campaign strategy includes four overlapping streams of activity:
1. NSF investments and strategic planning
2. Getting advice
3. Interagency coordination
4. International partnerships

FY09 ARRA $9M to nucleate the activity (proposals already in house) + ~$11M digitization

FY10 – est. $20M for special competition

Solicitation in clearance.
Research projects
Partnerships
Facilitation of permitting
Coordination of observatory networks (including museums)

Cyberinfrastructure
Physical infrastructure
Synthesis hubs and nodes
Education

STRATEGIC PLANNING

Workshops and other activities to involve:
• Scientific community
• Non-governmental organizations
• U.S. federal agencies
• International biodiversity entities
• Others

Highlight existing support
Identify significant gaps
Avoid duplication
Increase leveraging
"Baseline" the campaign
Plan for assessment

GETTING ADVICE
NSF is interested in interagency partnerships, for in-kind or financial support of Dimensions of Biodiversity and related activities.

Ideas include joint funding of Research Coordination Networks; facilitation of access for investigators; targeted workshops; exchanges of junior and mid-career researchers.
Information and Cyberinfrastructure Considerations

• FY10: Planning Year, with workshop
• Issues to address
  – Determining and setting standards for metadata and data access
  – Providing options for hosting data being collected, including tools for annotation
  – Accessing existing (relevant) data
    • Digitizing (some) collections
  – Designing appropriate infrastructure for access to data
  – Others
PBRC Addendum – Documents Pertaining to Kewalo Marine Laboratory

1. The UH system had agreed to give up the Look Lab site, but NOT the “PBRC Site” in 2002. This was reaffirmed in writing in August 2004 and again in 2008 (see two attached documents, “MOU 2002” and “2004, 2008 2nd withdrawal”). The “PBRC Site” houses the Kewalo Marine Laboratory (KML).

2. Interim Director of PBRC and UHM Vice Chancellor for Research and Graduate Education (VCRGE), Dr. Gary Ostrander transferred his locus of tenure from PBRC to the Cancer Research Center of Hawaii in 2007.

3. For "several years" before August 2008 (see attached document which contains portions of the "Minutes of a Regular Meeting of the Members of the Hawaii Community Development Authority, August 6, 2008"), the VCRGE Gary Ostrander had already made a deal with HCDA to vacate the PBRC-Kewalo site in exchange for parking privileges related to the construction of the new Cancer Center. The VCRGE here acknowledges that the BOR must approve any action to vacate the KML lease.

4. Chancellor Virginia Hinshaw and VCRGE Ostrander announce to the PBRC leadership their decision to dissolve PBRC (August 28, 2008).

5. On September 2, 2008, Dr. Ostrander writes a formal letter to Hawaii Community Development Authority (see attached document) informing it of the University's intent to enter into an agreement to vacate the PBRC Site and surrender the Look Lab/PBRC Site housing KML within 5 years.

6. This is BEFORE the current budget "crisis", BEFORE the independent building assessment of KML was performed that verified its structural integrity, and BEFORE any "Manoa Prioritization Process" committee ever met that might have provided any kind of reliable, unbiased assessment of the situation/role/future of the KML needed for UHM future planning.

7. The VCRGE (Ostrander) clearly states in the Proposal to Abolish the Pacific Biosciences Research Center that "The Hawai‘i Community Development Authority (HCDA) has stated that the (KML) site will not be available to the UH long-term and has pushed to have UH vacate before the end of the lease. Even though there are 20 years left on the 65-year lease of this site…”(page 5). Contrary to the VCRGE's statement, correspondence between the Kaka‘ako Makai Community Planning Advisory Council and the HCDA (see attached correspondence) claims that “The HCDA and its staff has not and is not considering eminent domain action to evict the PBRC Kewalo Marine Lab from its current location.” The HCDA cannot force UH to vacate the remaining years on its lease.

Conclusion: The VCRGE (Ostrander) appears to have made unilateral decisions with no unbiased assessment or faculty input on the fate of KML. Furthermore, to our knowledge VCRGE Ostrander has not obtained BOR approval to vacate the lease. Premature public statements about the Kewalo lease (for one example, see attached article dated 17 October 2008 from the scientific journal Science) have damaged the careers of KML faculty, diminished their ability to recruit talent to UH, tarnished the international reputation of UH, and raised disturbing issues about leadership and due process.
MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING is entered into this _____ day of __________, 2001, between the University of Hawaii ("UH") and the Hawaii Community Development Authority ("HCDA")

WITNESSETH THAT:

WHEREAS, the Department of Land and Natural Resources, State of Hawaii, awarded General Lease No. S-3864 to the UH by instrument dated February 10, 1965 ("Lease"), conveying land situate at Kaakaukukui, Honolulu, Oahu, Hawaii ("Property"); and

WHEREAS, by Withdrawal from General Lease No. S-3864 dated August 28, 1978, 27,070 square feet of land were withdrawn from the Property; and

WHEREAS, by Act 86, Session Laws of Hawaii 1990, the Legislature of the State of Hawaii transferred to the HCDA certain State lands situated on the makai side of Ala Moana Boulevard, which included the Property; and

WHEREAS, the Property is presently occupied by Look Laboratory and the Pacific Biomedical Research Center, both of which are entities of the UH; and

WHEREAS, Look Laboratory desires to vacate the portion of the Property that it currently occupies, outlined herein and attached hereto as Exhibit A ("Premises"); and

WHEREAS, UH desires to withdraw a portion of the Property under the Lease and to continue the Lease as to that portion of the Property occupied by the Pacific Biomedical Research Center and the parking lot it is currently using; and

WHEREAS, HCDA consents and approves of such withdrawal.

NOW, THEREFORE, HCDA and UH agree as follows:

1. The Premises shall be vacated no later than November 1, 2002.

2. UH shall remove the following from the Premises:
   a. Two portable buildings
   b. Rolling stock
   c. Portable ramp
   d. All personal property
3. UH will leave the diving bell and the permanent structures on the site.

4. UH shall conduct an inventory of all hazardous materials found above ground on site, remove all hazardous materials that are portable or easily removable, or have been utilized in the conduct of experiments or other activities of UH. UH understands that the Premises may be occupied following the departure of UH and that the Premises are to be made safe for such occupancy.

5. The Premises shall be left in a clean, safe, and sanitary condition. The main plumbing and electrical lines into the portable buildings shall be disconnected and capped as necessary.

6. HCDA acknowledges that Dr. Steve Masutani may be delayed in his move and may require additional time to move. HCDA agrees to grant an extension for Dr. Masutani to move from the Premises but to no later than December 1, 2002.

7. HCDA shall issue a Withdrawal from General Lease No. S-3864 to withdraw the portion of the Property that will be vacated by the UH. The parking lot adjoining the Property that is now reserved for visitors to the Kakaako Waterfront Park and the public right-of-way along the shoreline adjacent to the Pacific Biomedical Research Center will also be withdrawn. The portion of the land to remain in the Lease shall be the land occupied by the Pacific Biomedical Research Center, including the parking lot currently used by its employees and visitors.

8. UH shall be permitted, by way of a revocable lease with no lease rent, to use a secured, covered area of approximately five hundred (500) square feet within the Premises ("New Area") for computers that are connected to a cable running from the Premises to an offshore test range. The lease may be terminated by either party with a sixty (60) day notice. HCDA has the right to relocate UH from the New Area to another area within the Premises. Should UH hold over beyond the termination date, UH shall immediately pay to HCDA ten thousand dollars.
($10,000) for liquidated damages. HCDA shall not be responsible or obligated to perform any repairs or maintenance on the New Area and the cable. UH shall pay all utility costs attributable to its use of the New Area and cable.

9. As long as UH continues to occupy the New Area, UH shall indemnify, defend and hold HCDA, the State of Hawaii, and any of their agents, employees, directors, contractors, affiliates, and related entities harmless from and against any action, claim or demand for loss, liability or damage arising out of, or in connection with, the use or occupancy of the New Area by UH, its agents, employees, contractors, and guests, or occasioned by any act, fire or nuisance made or suffered by UH, including claims for property damage, personal injury or wrongful death, and UH shall reimburse HCDA with respect to any such loss, liability, or damage, including costs in connection with the defense of such claims.

IN WITNESS WHEREOF, HCDA and UH have executed this Memorandum of Understanding on the date and year first written above.

APPROVED AS TO FORM:

UNIVERSITY OF HAWAII

James R.W. Sloane, Vice President for Administration and Chief Financial Officer

HAWAII COMMUNITY DEVELOPMENT AUTHORITY

Jan S. Yokota, Executive Director
STATE OF HAWAII  
CITY AND COUNTY OF HONOLULU  

On this ___ day of _____________, 2002, before me personally appeared ________________ to me personally known, who, being by me duly sworn, did say that he is the ________________ of the UNIVERSITY OF HAWAI'I, and that the instrument was signed and sealed in behalf of said University of Hawaii by authority of its Board of Regents and that the said __________________ acknowledged the instrument to be the free act and deed of said University.

Notary Public, State of Hawaii
My commission expires on: ________

STATE OF HAWAII  
CITY AND COUNTY OF HONOLULU  

On this ___ day of _____________, 2002, before me personally appeared JAN S. YOKOTA, Executive Director of the Hawaii Community Development Authority, State of Hawaii, to me known to be the person described in and who executed the foregoing instrument and acknowledged that she executed the same as her free act and deed as such Executive Director.

Notary Public, State of Hawaii
My commission expires on: ________
SECOND WITHDRAWAL OF LAND FROM GENERAL LEASE NO S-3864

THIS AGREEMENT, made and entered into this _____ day of ________, 2008, by and between the HAWAII COMMUNITY DEVELOPMENT AUTHORITY, a body corporate and a public instrumentality of the State of Hawaii, whose address is 677 Ala Moana Boulevard, Suite 1001, Honolulu, Hawaii 96813, hereinafter referred to as "HCDA" and the UNIVERSITY OF HAWAII, the State university and body corporate established by the constitution and laws of the State of Hawaii, whose principal place of business and post office address is 2444 Dole Street, Honolulu, Hawaii 96822, hereinafter referred to as "UH,"
WITNESSETH:

WHEREAS, on February 10, 1965, the State of Hawaii, by its Board of Land and Natural Resources, demised to the UH, all of that certain parcel of land situate at Kaakaukukui, Honolulu, Oahu, Hawaii, identified in that certain unrecorded General Lease No. S-3864, more particularly described in Exhibit “A” and delineated on Exhibit “B”, hereof attached and made parts hereof; and

WHEREAS, on August 28, 1978, the State of Hawaii, by its Board of Land and Natural Resources and UH agreed to the withdrawal of a portion of the demised premises totaling 27,070 square feet from General Lease No. S-3864 more particularly described in Exhibit “C” and delineated on Exhibit “D” both of which are attached hereto and made parts hereof, and except as modified by that unrecorded document entitled “Withdrawal from General Lease No. S-3864”, the terms, covenants and conditions set forth in General Lease No. S-3864 continued in full force and effect for the remaining demised premises; and

WHEREAS, pursuant to Act 86, 1990 Session Laws of Hawaii, HCDA became the successor in interest and fee simple owner to the lands underlying General Lease No. S-3864, and

WHEREAS, the fee simple interest to the land underlying General Lease No. S-3864 was conveyed to HCDA from the State of Hawaii by its Board of Land and Natural Resources, by Deed recorded in the Bureau of Conveyances on August 25, 1988 as Document No. 98-125077, subject to General Lease No. S-3864 as an encumbrance; and

WHEREAS, on December 2, 2003, HCDA and UH entered into a Memorandum of Understanding to establish the terms and conditions for the withdrawal of a second portion of land from the demised premises, described as the area formerly occupied by Look Laboratory, the public parking lot used by visitors to the Kakaako Waterfront Park, and the public right away along the shoreline adjacent to the Pacific Biomedical Research Center ("the Withdrawn Area"), more particularly described in Exhibit “E” and delineated on Exhibit “F”; and

2

Second Withdrawal of Land from Gen. Lease No. S-3864
Draft #2 - August 17, 2004
WHEREAS, HCDA and UH agree that General Lease No. S-3864 will remain in full force and effect for the remaining portion of the demised premises occupied by the Pacific Biomedical Research Center and its parking lot ("the Retained Area"), more particularly described in Exhibit "G" and delineated on Exhibit "H"; and

WHEREAS, HCDA has established the Withdrawn Area and the Retained Area by metes and bounds survey and desires to amend General Lease No. S-3864 to document the aforesaid revisions to the demised premises; and

WHEREAS, UH consents and approves to the aforesaid revisions;

NOW THEREFORE, in consideration of the premises, the UH, for itself, its successors and assigns, does hereby surrender and yield as of December 2, 2003, all of its right, title, interest and estate in and to the Withdrawn Area, being a portion of the filled land of Kaakaukukui, situate at Honolulu, Oahu, Hawaii, more particular described in Exhibit "E", and delineated in Exhibit "F", both of which are attached hereto and made parts hereof, containing an area of 197,037 square feet; and

UH does hereby accept the withdrawal of the above-described lands; and

The HCDA and UH agree that except as modified by the aforesaid withdrawal, the terms, covenants and conditions set forth in General Lease No. S-3864 shall continue in full force and effect for the Retained Area, containing an area of 40,337 square feet, together with a non-exclusive access and utility easement (50.00 feet wide) over and across a portion of the Withdrawn Area, said easement more particularly identified on C.S.F. Map 18,094, and subject to Proposed Easement 8, as shown on Exhibit "H", and that nothing herein contained shall serve to release or discharge the UH from the observance and performance of such terms, covenants and conditions.

IN WITNESS WHEREOF, the parties hereto have caused this Second Withdrawal of Land From General Lease No. S-3864 to be executed as of the day and year first above written.
Second Withdrawal of Land from
Gen. Lease No. S-3864
Draft #2 - August 17, 2004
Kewalo Oceanographic Research Center
Kaakaakukui, Honolulu, Oahu, Hawaii
Scale: 1 inch = 100 feet

Exhibit B
LEASE AREAS
PARCEL 1
AS SHOWN ON C.S.F. 22,718
BEING A PORTION OF ROYAL PATENT
4483, LAND COMMISSION AWARD 7712,
APANA 6, PART 1 TO M. KEKUANAOA
(NO V. KAMAMALU)
AT KAUKUKUKUI, HONOLULU, OAHU, HAWAII
DATE: AUGUST 2, 2004

Exhibit F
WITHDRAWN AREA
197,037 SQ. FT.

PROPOSED LOT 1
(C.S.F. 22,718)

PROPOSED LOT 2
(C.S.F. 23,198)

PROPOSED LOT 5
(C.S.F. 12,814)

PROPOSED LOT 6
(C.S.F. 10,022)

PROPOSED LOT 7
(C.S.F. 7,655)

PARCEL 1
(C.S.F. 22,718)

PARCEL 2
(C.S.F. 23,198)

PARCEL 10
(C.S.F. 23,040)

KOKUA STREET EXTENSION

AT KAAKAU KUKUI, HONOLULU, OAHU, HAWAII

DATE: AUGUST 2, 2004

Exhibit H
Dr. Vogel stated their NCI designation was not in jeopardy whether they had this building going on or not, and having the facility would not guarantee accreditation. However, not having the facility would make the competitive renewal process much more difficult and problematic.

Member Liu stated that certain issues had been discussed for several years which needed to be resolved together with the CRCH lease. These issues included the UH Pacific Biosciences Research Center (“PBRC”) site, common area maintenance (“CAM”), and parking. He stated that parking would have to be addressed in order to make Kakaako a vibrant location not only for life sciences, but for the other uses envisioned. He asked why none of the issues were included in the form of the lease agreement submitted by the UH.

Dr. Ostrander stated that it was mostly a matter of urgency to get the lease agreement done. In conversations with Mr. Ching and others, UH had agreed to vacate PBRC and had already advised their faculty that PBRC will be vacated. Their attorneys will work on a separate agreement to handle it. Regarding the issue on parking, UH could not sign off without knowing what the price would be. In the course of negotiations with HCDA, UH reached a compromise and accepted responsibility for at least $20,000 a space. Also, UH would be willing to pick up the CAM fees. The urgency is for UH to have this agreement executed immediately. They are working a business plan that needs to get back to their Board of Regents.

Member Liu noted that, as the UH has agreed to vacate PBRC in 5 years and has agreed on certain parameters to address parking, whether those agreements could be embodied in a side agreement that could be put in place concurrent with the signing of the lease agreement.

Dr. Ostrander stated that he would have to take the side agreement to the Board of Regents for approval and the earliest date would be the September board meeting. Since there are 20-23 years left on the PBRC lease, he was advised he would have to go before the Board and explain why the lease was being vacated. Likewise the board would have to approve the parking agreement if a significant expenditure is committed.

Member Liu asked whether what financial commitment level was within the discretion of the administration.

Dr. Ostrander stated that up to a million dollars was within discretion of the UH administration. He noted that he had directed his attorneys last week that as soon as the lease agreement was completed, they would need to get the parking and PBRC portions of the agreement done.

Member Morioka asked for clarification on what required CRCH to have a signed lease agreement in two weeks.
MINUTES OF A REGULAR MEETING
OF THE MEMBERS OF THE
HAWAII COMMUNITY DEVELOPMENT AUTHORITY,
STATE OF HAWAII

MEETING NO. 332
Wednesday, August 6, 2008

Members Present: Amanda Chang
                 Grady Chun
                 Paul Kimura
                 Jonathan Lai
                 Theodore Liu (9:25 a.m.)
                 Brennon Morioka
                 Dexter Okada
                 Robert Piper
                 Russ Saito

Kalaeloa Members: Stanton Enomoto (9:05 a.m.)
                  Kathy Sokugawa (9:05 a.m.)
                  Evelyn Souza
                  Maeda Timson

Members Absent: C. Scott Bradley
                Linda Chinn
                Joseph Dwight, IV
                Christopher Kobayashi
                Kay Mukaigawa

Others Present: Anthony Ching, Executive Director
                Diane Taira, Deputy Attorney General
                Eugene Won, Deputy Attorney General
                Richard Kuitunen, Asset Manager
                Tesha Malama, Director of Planning and Development for Kalaeloa
                Craig Nakamoto, Director of Communications
                Deepak Neupane, Director of Planning and Development for Kakaako
                Patricia Yoshino, Secretary
                Loretta Ho, Secretary
September 2, 2008

Mr. Anthony Ching
Executive Director
Hawai‘i Community Development Authority
677 Ala Moana Blvd., Suite 1001
Honolulu, HI 96813

Re: Development Lease for Cancer Research Center of Hawai‘i

Dear Mr. Ching:

In connection with the execution by the Hawai‘i Community Development Authority (“HCDA”) and the University of Hawai‘i (the “University”) of a Development Lease for the site on which the University intends to construct new facilities for the Cancer Research Center of Hawai‘i (the “Development Lease”), you have requested, and I am happy to provide, the following summary of our discussions and intentions regarding certain related issues:

1. **District Parking.** The University shall immediately commence good-faith participation with HCDA and other interested parties in a planning process to establish a regional parking solution for the Kaka‘ako Makai Area.

2. **PBRC Site.** The University’s Pacific Biosciences Research Center (“PBRC”) occupies a site in the Kaka‘ako Makai Area (the “Look Lab/PBRC Site”) pursuant to Department of Land and Natural Resources General Lease No. S-3864, dated as of February 10, 1965 (the “Look Lab/PBRC Lease”). The term of the Look Lab/PBRC Lease runs until June 30, 2030. We understand that HCDA has succeeded to lessor’s interest under the Look Lab/PBRC Lease. As we have discussed, the University intends to continue discussions with HCDA, with the goal of entering into one or more definitive agreements containing terms similar to the following:

   (a) The University will vacate the Look Lab/PBRC Site and surrender the Look Lab/PBRC Lease in its entirety within five (5) years following the effective date of the Development Lease;

   (b) The University will deliver the Look Lab/PBRC Site to HCDA in “as-is” condition, and HCDA will be solely responsible for the cost and expense of demolishing and removing all of the improvements located on the Look Lab/PBRC Site;
(c) HCDA will reimburse the University for the reasonable costs of relocating the operations currently housed at the Look Lab/PBRC Site;

(d) HCDA will be solely responsible for any hazardous material remediation of the Look Lab/PBRC Site and for all costs and expenses thereof; and

(e) HCDA will provide the University with such easements or other use rights as may be necessary or appropriate for the University to continue to use certain cables and/or conduits that cross the Look Lab/PBRC Site.

3. **Required Approvals.** It is expressly understood that: (a) the purpose of this letter is to memorialize the University's intent to continue discussion with HCDA in working toward written agreements on a district parking solution and the termination of the Look Lab/PBRC Lease; and (b) any written agreements relating to these matters must be approved by the Hawai'i community Development Authority and by the Board of Regents of the University of Hawai'i. Such final written agreements shall set forth any and all legally enforceable obligations of the parties with respect to the matters set forth therein, and nothing in this letter shall be enforceable against either party until and unless set forth in such final written agreements.

Thank you for your continued cooperation in this matter. We look forward to working with you to ensure the success of the Cancer Research Center of Hawai'i project, the district parking solution, and HCDA's and the University's other undertakings in Kaka'ako Makai.

Sincerely,

Gary K. Ostrander  
Vice Chancellor for Research and Graduate Education
November 25, 2009

Hawaii Community Development Authority Board
677 Ala Moana Boulevard, Suite 1001
Honolulu, Hawaii 96813

Attention: Chairperson C. Scott Bradley
Via Email

Subject: Pacific Basin Research Center Kewalo Marine Laboratory

Aloha Chairperson Bradley and HCDA Board Members:

It has come to the attention of the Kaka‘ako Makai Community Planning Advisory Council (CPAC) that the Authority and/or members of its staff may be considering eminent domain action to evict the PBRC Kewalo Marine Lab from its present location within the next three years. We respectfully request your review of this matter.

The CPAC understands that the Kewalo Marine Lab is a site-dependent research and education facility constructed with federal and state funds, and that its researchers and students rely heavily on the laboratory’s $2 million seawater intake infrastructure for the their globally-valued marine ecosystem and conservation research supported by millions of dollars in federal and state grants. The CPAC also understands that the seawater intake infrastructure serving this facility cannot be relocated away from the offshore reef habitat, or extended much farther inland than the present site without seriously compromising the high quality of seawater upon which the Kewalo Marine Lab’s highly valued marine science research and education program depends.

The CPAC would like to know if such eminent domain action has been contemplated, discussed or committed to by the HCDA. We look forward to receiving your reply on behalf of the HCDA prior to the next monthly CPAC meeting on December 8.

Sincerely,

Ronald Iwami, Acting Chair

Cc: HCDA Executive Director Anthony Ching
Senator Brickwood Galuteria
Senator Carol Fukunaga
Representative Tom Brower
December 4, 2009

Mr. Ronald Iwami  
Acting Chairperson  
Kakaako Makai Community Planning and Advisory Council

SUBJECT: Pacific Basin Research Center Kewalo Marine Laboratory

Dear Chair Iwami:

At its December 2, 2009 meeting, I provided the members of the Hawaii Community Development Authority ("HCDA") with your correspondence (dated November 25, 2009 and received by the HCDA on December 1, 2009) requesting clarification of the HCDA's intention with respect to the Pacific Basin Research Center ("PBRC") Kewalo Marine Laboratory. Specifically, your correspondence indicated that

"It has come to the attention of the Kakaako Makai Community Planning Advisory Council ("CPAC") that the Authority and/or members of its staff may be considering eminent domain action to evict the PBRC Kewalo Marine Lab from its present location with the next three years. We respectfully request your review of this matter."

You subsequently requested in your correspondence that "The CPAC would like to know if such eminent domain action has been contemplated, discussed or committed to by the HCDA." You requested the favor of a reply prior to the next CPAC meeting scheduled for December 8, 2009.

Although I presented your request to the Authority, the timing of your request did not allow the item to be included on the meeting agenda. However, while the Authority was not able to officially receive and act on your request in time for your December 8, 2009 meeting, I have informally made this representation to the Authority and solicited their comments. I will copy the members with this response to your inquiry.

Short Answer. The HCDA and its staff has not and is not considering eminent domain action to evict the PBRC Kewalo Marine Lab from its current location.

Definition of Eminent Domain and Application (or not) to this Situation—Webster’s Dictionary: The right of a government to take or control property for a public use. As the PBRC Kewalo Marine Lab is arguably already a public use, the use of eminent domain or condemnation authority in this use would not seem to apply.
Definition of Lease and Attendant Contract Rights - Webster’s Dictionary: *A contract for the temporary use or occupation of property or premises in exchange for payment of rent.* In this case, the PBRC Kewalo Marine Lab has a *contract* for the occupation of property until the year 2030. While the University of Hawaii (lease holder) may choose to *voluntarily* vacate the property, their right to occupy the property as described in the lease/contract is clear and acknowledged by HCDA staff.

I hope that this response addresses the concerns of the CPAC. Please do not hesitate to contact me should you require further clarification or assistance.

Sincerely,

Anthony J. H.
Executive Director

AJHC:py

c: C. Scott Bradley, Chairperson, HCDA
Members of the Hawaii Community Development Authority
Senator Carol Fukunaga
Senator Brickwood Galuteria
Representative Tom Brower
Hawaii Marine Lab Fights to Stay Afloat

Just a few kilometers down the coast from Waikiki Beach in Hawaii, the death knell is tolling for the University of Hawaii’s (UH’s) Kewalo Marine Laboratory. The university has agreed to give up its lease on the 35-year-old lab 17 years early and plans to move the lab’s faculty to its other marine lab on Coconut Island, or to the main Manoa campus, or even to the Waikiki Aquarium. The state redevelopment agency, which owns the land, plans to tear down the waterfront lab to expand a park and set up a public arts place.

Word of the lab’s demise is spreading through blogs and listservs, setting off protests across the globe. Last week, biologist Paul “PZ” Myers of the University of Minnesota, Morris, called the decision “short-sighted” in his blog, Pharyngula. In a letter to UH officials, Alessandro Minelli of the University of Padua in Italy praised the lab’s evolutionary and developmental research and warned: “Stopping this activity would be a disaster for biology.”

But Gary Ostrander, UH Manoa vice chancellor for research and graduate education, insists that he has no alternatives. “I don’t like the idea of closing a marine lab, but we are a university that’s struggling with budgets, and I have needs that are more pressing right now,” he told Science.

The lab was established in 1972 with a focus on using marine animals and molecular methods to study cell and developmental biology. Given Hawaii’s location and the central role marine resources play in Hawaii’s economy, it would be “tragic” if the lab closes, says its director, Mark Martindale. “We will have the same number of marine labs as Alabama and Ohio.”

The closure will be “really creating a deficit” both for Hawaii and the country, says George Boehlert, director of the Oregon State University Hatfield Marine Science Center in Newport. “You have very limited resources in the United States to do work on coral reefs, so this would be a significant blow to the research capacity of the United States.”

But Ostrander says the lab is falling apart, and for several years the landlord, the Hawaii Community Development Authority, has been pushing to get the land back before the lease is up in 2030. Ostrander says he’s looked into moving the lab a few blocks back from the water but has been unable to raise the $30 million estimated to be needed to rebuild the facility in this new location.

Places like the Kewalo lab “tend to have a fragile existence,” being small and off campus and therefore more vulnerable to being closed down, says James Sanders, president of the National Association of Marine Laboratories and director of the Skidaway Institute of Oceanography in Savannah, Georgia. Indeed, Kewalo has been overshadowed by UH’s other marine lab, the 15-year-old Hawaii Institute of Marine Biology, which also has dorms and conference facilities. But Sanders says that Kewalo is “well-respected” and that he would like to see it protected somehow. “We tend to view marine labs as windows on the ocean,” he says. “I hate to see any of those windows shut.”

Two Strikes and You’re Out, Grant Applicants Learn

Taking some by surprise, the National Institutes of Health (NIH) announced last week that scientists applying for grants will get only one chance to resubmit a rejected proposal. The current policy, which allows two revisions, bogged down the review process and forced investigators to wait in line for funding, NIH says. Giving applicants just one more try should fund the best science sooner.

The change is in response to an advisory panel that identified problems in peer review earlier this year. The panel found that because more researchers are applying for money at a time when NIH’s budget has stopped growing, study sections are shying away from funding applications submitted for the first time. Instead, NIH data show, even investigators with very strong proposals must resubmit at least once. This has increased the workload for reviewers and applicants, and it means that many grantees wait up to 2 years for a decision. The advisory panel had a radical solution: Abolish revised proposals and consider all applications “new.”

Some scientists, including the 80,000-member Federation of American Societies for Experimental Biology (FASEB), argued that was too harsh. In June, NIH officials said they planned to continue to permit more than one revision but would “rebalance” the system to lower the success rates for resubmitted proposals (Science, 13 June, p. 1404).

Over the summer, NIH decided to scrap the rebalancing idea, says Anthony Scarpia, director of NIH’s Center for Scientific Review. “This goes further and achieves the same thing,” he says. Beginning in January, only one amended application will be allowed. If that is rejected, the applicant “should substantially re-design the project,” states an 8 October notice.

“It’s a reasonable compromise,” says Princeton University geneticist David Botstein, a member of the peer-review advisory committee. “It will push study sections in the direction that we want them to go.”

But “there has not been a lot of enthusiasm” among FASEB members, says Howard Garrison, the society’s public-affairs director. He worries that “meritorious projects” will not get funded. But as Garrison notes, there is little point in protesting, as the new policy is final.

--ELIZABETH PENNISI

--JOCELYN KAISER
RESOLUTION ON REQUIRED PROCEDURES FOR REORGANIZATION OF A UNIT

WHEREAS the Administration of the University of Hawai‘i at Mānoa has informed the SEC of its intention to dissolve the Pacific Biosciences Research Center (PBRC), a fully-functional Organized Research Unit;

WHEREAS the Faculty Senate finds it a matter of major concern to close an established Organized Research Unit without a formal and detailed Reorganization Plan as prescribed in Administrative Procedures A3.101, along with adequate time for Senate committees and other concerned constituencies to comment;

WHEREAS the Administration has produced neither the required Reorganization Plan, nor information necessary for the Committee on Administration and Budget and the Committee on Research to assess the proposed reorganization, despite requests to do so;

WHEREAS the Administration has informed the SEC of its intention to place the reorganization before an upcoming Board of Regents meeting;

BE IT RESOLVED that the Faculty Senate of the University of Hawai‘i at Mānoa urges the Board of Regents not to consider the reorganization of PBRC until all proper procedures have been followed and careful consideration has been given to the viewpoints of all concerned parties.

April 15, 2009 – Passed Unanimously
PBRC Addendum - Manoa Faculty Senate Resolutions

Resolution: That the University of Hawaii at Manoa Faculty Senate opposes the plan to close the Kewalo Marine Laboratory and asks that the Vice Chancellor for Research and Graduate Education step down as Interim Director of the Pacific Biosciences Research Center.

Whereas the UHM Chancellor plans to close the Kewalo Marine Laboratory (KML) on the advice of the Vice Chancellor for Research and Graduate Education (VCRGE);

Whereas the Kewalo Marine Laboratory has 20 years remaining on its existing lease, and has been in compliance with all lease conditions and requirements;

Whereas the Kewalo Marine Laboratory faculty were specifically hired to work at this facility with commitments to include associated seawater and laboratory facilities essential to their research that are not available elsewhere or planned to be provided;

Whereas the VCRGE has been serving as the PBRC Interim Director, with direct administrative oversight for the Kewalo Marine Laboratory, for the past 5 years, even though he has several notable conflicts-of-interest and has acted as an antagonist rather than an advocate for the unit;

Whereas during his time as the appointed Interim Director of PBRC, the VCRGE took on additional responsibilities for which he was compensated as the Interim Dean of JABSOM, further limiting any time he could devote to Kewalo Marine Laboratory issues;

Whereas some information presented by the VCRGE/Interim Director of PBRC in support of the closure of the Kewalo Marine Laboratory is factually incorrect, exaggerated or presented in a false light;

Whereas the Kewalo Marine Laboratory is a multimillion dollar facility whose faculty continues to be highly productive in the areas of research, teaching and service despite being prevented from filling vacant positions and who are now required to get clearance from the VCRGE prior to submitting new grant applications to use the KML facility, into which they were hired, past a closing date in 2013 that has not been validated by the University;

Whereas the constraints on KML faculty submitting research grants to use the facility into which they were hired constitutes an unacceptable burden, since as members of an Organized Research Unit, the faculty are required to obtain extramural funding as a key criterion for their evaluations. Furthermore, the stated intent to close the KML is hampering the ability of faculty to recruit the highest quality graduate students and postdoctoral researchers, further compromising the ability of faculty to do the work for which they were hired.

---

1 Hawaii Community Development Association minutes, Aug 6 2008
2 Hawaii Community Development Association minutes, Aug 6 2008 and lease letter
3 Email VCRGE to Kewalo faculty, Feb. 2, 2009
Whereas, the closure of the Kewalo Marine Laboratory demonstrates a lack of fiduciary responsibility on behalf of the University to stakeholders (students, faculty, staff, local and federal governments the Hawaii and Pacific Island communities and taxpayers);

Whereas, the VCRGE had previously been requested by the UHM Faculty Senate Executive Committee to follow a process in pursuing the closure of KML, with which he has not complied;\(^4\)

Whereas, if the Kewalo Marine Laboratory can be represented by an Interim Director with clear conflicts-of-interest and an unwillingness to advocate for the unit, and be eliminated without due process and based on incorrect or inadequate information, other UH Manoa units are likewise at risk;

Therefore:
1. Be it resolved that the UH Manoa Faculty Senate formally opposes the proposed plan to vacate the existing lease for the Kewalo Marine Laboratory.
2. Be it further resolved that the UHM Faculty Senate, on behalf of the PBRC/KML faculty, insists that the VCRGE step down as Interim Director of PBRC, and an appropriate individual acceptable to both the faculty and administration be appointed by the Chancellor to serve in that capacity.

The Faculty Senate also insists that adequate steps be taken to insure no retaliation occurs as a result of this action, including using the present economic challenges as an excuse to terminate KML faculty.

January 20, 2010 – Passed

\(^4\) Memo SEC to VCRGE, Dec. 8, 2009
PBRC Addendum -- PBRC Core Facilities

Research infrastructure: PBRC has developed and maintains four major research core facilities:

- Biological Electron Microscope Facility
- Molecular Biology Core Facility
- Computer Network Support Facility
- Shops: Machine, Carpentry and Electronics

These cores are shared resources developed by PBRC to benefit the biological, biomedical and broader scientific communities at UH Manoa, the flagship research campus. They are in PBRC because it is uniquely positioned as an Organized Research Unit to build needed infrastructure with shared resources. These cores must be competitive for funding and capable of state-of-the-art science, not just for PBRC but for the entire campus. Two of the cores, the Electron Microscope and the Molecular Biology Facilities, operate on a recharge system. The other two are funded by PBRC and/or by federal funds from a Research Centers in Minority Institutions grant to UH Manoa.

Core Users/ Clients: All of these cores are well-used and serve clients throughout the Manoa campus in 8 Colleges, Schools, or Centers in addition to PBRC. Clients from these units represent 33 programs or departments. The table below indicates which units and programs use each of the core facilities. In addition, some of the cores have clients from the community colleges, Federal and State agencies, and private research organizations. The users include faculty researchers, research technicians, postdoctoral fellows, graduate students, and undergraduate students. The annual number of users of these facilities is roughly:

- Biological Electron Microscope Facility -- 100+ clients
- Molecular Biology Core Facility -- 250+ clients
- Computer Network Support Facility -- 250+ clients
- Shops: Machine, Carpentry, and Electronics -- 100+ clients

VCRGE Ostrander's Proposal for the PBRC Core Facilities: Dr. Ostrander's proposal has surprisingly little detail about these major core facilities. In fact, what little mention there is seems to indicate that he knows very little about their operations. The following are the only statements about each of them:

For the Biological Electron Microscope Facility and the Molecular Biology Core Facility, Dr. Ostrander writes:

"The core facilities (Biological Electron Microscopy Facility and the Greenwood Molecular Biology Facility), will remain intact in their current space and report to the Office of the Vice Chancellor for Research and Graduate Education." (Page 8 of PBRC reorganization proposal)

"The Biological Electron Microscopy Facility and the Greenwood Molecular Biology Facility will report to the Office of the Vice Chancellor for Research and Graduate Education." (Page 10 of PBRC reorganization proposal)
For the Computer Network Support Facility

"Administrative staff members, including those who work in the Computer Network Support Facility, will also report to new units depending on the final location of the faculty and researchers." (Page 3 of PBRC reorganization proposal)

"Administrative staff members, including the Computer Network Support Facility (2 individuals) will likewise report to new units. Depending on the final location of the faculty (included with this document are proposed assignments) there may be a reassignment of the work location of some staff members." (Page 8 of PBRC reorganization proposal)

For the Shops

"The management of the Electronics, Machine and Carpentry Shops will be merged with the Chemistry shops on campus as has been previously proposed in the Mānoa Prioritization Process." (Page 8 of PBRC reorganization proposal)

THIS IS NOT A PLAN FOR THE CORE FACILITIES --Why not?

1. There are 10 people employed in these facilities, 7 of whom are not permanent but supported from various accounts in PBRC. The 3 permanent positions are the Director of the Electron Microscope Facility, the Electronics Technician, and the Scientific Instrument Maker in the Carpentry/Machine Shops. All of the staff in the Molecular Facility and all of the staff in the Computer Facility, including both Facility Directors are non-permanent. The VCRGE provides no information about the disposition of the staff.

2. Why would two of the core facilities be placed directly under the VCRGE? The VCRGE is silent on his rationale, and even more important, he is silent on their future.

3. The Computer Facility is composed of 3 staff (not just the 2 individuals that the VCRGE mentions). The Computer Facility was developed and is still partially funded by a National Institutes of Health grant (Research Centers in Minority Institutions - RCMI). The federal funding was awarded in order to build up the computer support of research and researchers in the biosciences at UH Manoa (on top of the basics that are provided by ITS.) Several hundreds of thousands of dollars have been invested in staff, hardware, wiring, video conferencing setups, equipment, storage servers and parallel computing clusters - all heavily used. It makes absolutely no sense to dismantle the Computer Facility.

4. In the Manoa Prioritization Process, the Department of Chemistry stated its intent to CLOSE the Chemistry Shops due to lack of use. PBRC proposed that the Chemistry shop staff join the PBRC shops, because the PBRC shops ARE used. It is utterly bizarre that the VCRGE should now propose that the PBRC Shops and staff move to a unit that was earmarked for disbanding.
## USERS/CLIENTS OF PBRC CORE FACILITIES

<table>
<thead>
<tr>
<th>Users by Program/College/Campus/Other</th>
<th>EM</th>
<th>Molecular</th>
<th>Computer</th>
<th>Shops</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pacific Biosciences Research Center</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bekesy Laboratory of Neurobiology</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Kewalo Marine Laboratory</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Center for Conservation Research &amp; Training</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Molecular Endocrinology Program</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Native Hawaiian Health Research</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biological Electron Microscope Facility</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Molecular Biology Core Facility</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Computer Network Support Facility</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>College of Natural Sciences</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zoology</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Botany</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microbiology</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>College of Engineering</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Electrical</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>College of Tropical Agriculture and Human Resources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant &amp; Environmental Protection Sciences</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Molecular Biosciences &amp; Bioengineering</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Human Nutrition, Food &amp; Animal Sciences</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Tropical Plant &amp; Soil Science</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Resources &amp; Environmental Management</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>School of Ocean Earth Science &amp; Technology</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hawaii Natural Energy Institute</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oceanography</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Hawaii Institute of Marine Biology</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Hawaii Institute of Geophysics &amp; Planetology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center for Marine Microbial Ecology &amp; Diversity</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geology &amp; Geophysics</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Users by Program/College/Campus/Other</td>
<td>EM</td>
<td>Molecular</td>
<td>Computer</td>
<td>Shops</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td>----</td>
<td>-----------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>Water Resources Research Center</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancer Research Center of Hawaii</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College of Social Sciences</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>John A. Burns School of Medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cell &amp; Molecular Biology</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Tropical Medicine, Medical Microbiology &amp; Pharmacology</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Hawaii AIDS Clinical Research Program</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Medicine</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Institute for Biogenesis Research/Anatomy</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Psychiatry</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Anatomy, Biochemistry &amp; Physiology</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Hawaii at Hilo</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leeward Community College</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kapiolani Community College</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Windward Community College</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Oceanic Institute</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Oceanographic &amp; Atmospheric Administration/ National Marine Fisheries Service</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Dept. Ecology &amp; Evolutionary Biology, UCLA</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oeanit, Inc./Hoana Medical</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dennis Kunkel Microscopy, Inc.</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
April 5, 2010

MEMORANDUM

TO: UH Board of Regents

FROM: PBRC Fiscal Staff

SUBJECT: PROPOSED ABOLISHMENT OF PBRC NOT WITHIN UH GUIDELINES

We request that the Board of Regents reject the proposed abolishment of PBRC.

PBRC was created in 1960 by the BOR. For the past 50 years, it has been - and continues to be - a very productive and successful Organized Research Unit (ORU) at UH Manoa.

Our faculty conducts nationally-recognized research and has brought millions of extramural funds annually to the State of Hawaii. PBRC provides a concentrated focus on Biodiversity research with a future in Life Sciences. We have been an incubator for major programs such as the John A Burns School of Medicine (JABSOM) and the Cancer Research Center of Hawaii.

Since 2004, Gary Ostrander has served as both PBRC Interim Director and VCRGE. And for the past several years, he has been trying to abolish the very unit that he is supposed to be leading. PBRC has not had a legitimate leader, supporter, or advocate for the past 6 years.

Abolishment of an ORU at the University is a very serious matter and should not be taken lightly. According to UH Manoa guidelines, the following questions need to be answered before considering reorganization (abolishment):

1. Is the organizational solution (abolishment) really the answer to resolve the problems experienced? Have other alternatives been explored before proposing abolishment, such as changing the work process?

We strongly believe that there are no factual or logical reasons to support the abolishment of PBRC.

PBRC’s grant monies total $5-$6 million annually with an annual operating budget of $3.5 million.

PBRC has always operated in the black.
Abolishment of PBRC would create a great potential loss for current and future grant funding. In these tough economic times, the University’s number one goal should be to avoid such financial losses.

Our facilities, including the Kewalo Marine Lab (KML), are well maintained and fully operational and do not need to be replaced within the next 10-20 years. KML has a seawater system unlike any other. This system allows water to be drawn from the open ocean and circulate through the building, which is vital to our marine research. The VCRGE’s proposal to close KML would entail huge costs to the University in relocating the lab (personnel and equipment), and in creating a new seawater system.

As previously mentioned, since 2004, PBRC has endured Gary Ostrander. As Interim Director, he has been trying to abolish the very unit he is supposed to be leading. Ostrander has also used his position as VCRGE to freeze 6.00 FTE faculty positions at PBRC.

VCRGE Ostrander feels PBRC research lacks focus. PBRC’s focus of research is Biodiversity. Previously, the focus was biomedical but the transfer of large grants to JABSOM provided us the opportunity to focus on Biodiversity. Our Biodiversity research integrates and unites our three largest programs. We are also currently providing a catalyst for new initiatives in the Life Sciences which is the future for NSF funding.

Despite all our obstacles, PBRC continues to thrive. Our future potential collaborations with the Lyon Arboretum and the Waikiki Aquarium are ongoing as well as collaborations with other units such as SOEST, EECB and Zoology.

2. *Is this abolishment consistent with University strategic, program, and financial plan. What is the programmatic impact?*

**No, the abolishment of PBRC goes completely against the UH Manoa Strategic Plan: Defining our Destiny, which has been approved by the BOR.**

PBRC, like the Strategic Plan, is committed to making the UH a more vibrant, engaged and connected place to study, work and interact. Our Center for Conservation Research and Training program specifically addresses issues of excellence in research, community involvement, stream research and sustainability. Our Biodiversity Research provices the impetus for the interactions among various biological disciplines utilizing the mountain to sea concept of the ahupua’a. Our Maunalua Bay project, tree snail projects, and stream
research have direct impact on the Hawaiian and local community. PBRC also has important training programs for 7 undergraduate students, 26 graduate students, and 15 post doctoral students currently working in our research and field labs.

3. **Is the background and rationale for the abolishment explained in sufficient detail to justify the organization changes proposed? Why is the current organization inadequate to address the problems experienced? What are the specific anticipated benefits of abolishment? Specific qualitative and quantitative information should be provided in the proposal.**

No. The ultimate result of the abolishment of PBRC is that the University will potentially lose grant funding and pay a significant amount to relocate faculty. Jobs will also be lost for valuable grant-funded employees, many of whom have been with the unit for over 20 years.

The only reoccurring rationale VCRGE Ostrander states for PBRC’s abolishment is that there is no common focus in research and that faculty should be placed in units of so called “critical mass” to create “new synergies.” PBRC’s common focus is Biodiversity which integrates our major units together. Synergies have existed within PBRC for many years and PBRC has a long history of collaborating with faculty from other units. As the Interim Director of PBRC, Ostrander should be aware of this.

**There are no fiscal or academic benefits to the University in abolishing PBRC**

4. **What is the estimated annual cost of the abolishment and how will these costs be funded? Additional costs may include new positions, position reclassifications, office furniture or other expenses. Or will abolishment result in cost savings or will it be cost neutral? This information should be provided in the proposal.**

**There are no cost savings to the University by abolishing PBRC.** The abolishment of PBRC is not cost neutral as implied in the proposal. The relocation of KML tenured faculty, students and staff totaling 39 individuals will be a significant cost to the University. It is estimated that up to $500,000 will be needed to move the entire lab to another location. There is also a great potential for the loss of current and future funding as well as the costs related to a new sea water system. Estimated cost for a new system: $3 million.

The proposal also moves our Center of Conservation Research and Training (CCRT) program to the Water Resources Research Center where there is no fiscal office or grant support
staff. Without the necessary support staff, CCRT will not be successful in obtaining additional grant monies for the University.

The University should be greatly concerned that the abolishment of PBRC will cost money to relocate existing researchers as well as the loss of millions of dollars in grant funds.

5. Will additional space be required due to the abolishment? Is the required space available?

Yes, additional space will be required.

And No, space is not available.

Although VCRGE Ostrander states there are no plans to move faculty from existing labs he does not clearly address a new location for the KML personnel and most importantly, how they will be able to access fresh seawater which is vital to their success. Briefly mentioned is that KML faculty might move to Hawaii Institute Marine Biology but there is no additional space at Coconut Island to house current KML faculty, post docs, graduate students, visiting researchers and equipment. Another overcrowded location mentioned was the Aquarium which also lacks space. And to reiterate, no other University facility has the seawater system KML requires for their research.

The proposal also moves PBRC administration to the College of Natural Sciences (CNS). It is as yet unclear whether CNS has space for the 5 fiscal/personnel staff and 2 secretaries that will now be reporting under the Dean of Natural Sciences.

No specific plans have been mentioned for two Computer Support personnel and their equipment.

In addition to G funded employees, PBRC has 27 additional employees who are paid on soft money (Faculty and APT). Some of them will need to be relocated and there has been no such discussion as to where they might go.

Keep in mind that Interim Director Ostrander has stated to all employees at PBRC that no positions will be terminated (email to PBRC faculty/staff of August 8, 2008).

The abolishment of PBRC will result in no space saving to the University. VCRGE Ostrander once stated himself that, “Space is as important as cost savings on the Manoa campus” (Industrial Relations Center reorganization, March 3, 2010).
6. *Are the groups affected by the reorganization, e.g., students, identified and the impact of reorganization on these groups explained?*

The 48 students affected by this reorganization are undergraduates, graduate students and post doctoral students who have been trained over the years through a number of research and training grants in PBRC. By moving faculty researchers/mentors to other units, the effectiveness of these same research and training grants would be impacted negatively and these students would very quickly lose support of the nationally recognized research mentors.

7. *Are the supervisor/subordinate reporting relationships properly identified? Are there unnecessary levels of supervision for the work that must be performed? Are the position numbers and position classifications accurate and properly listed in the proposal narrative and organizational charts?*

The proposed organization charts reflect the move of faculty and staff to nine separate units with no clarification of the duties assigned to each position. It is doubtful that the programs to which these programs will be assigned have been notified or consulted.

Furthermore, 13.90 FTE positions are not accounted for from the original PBRC chart regarding new assignments and responsibilities. This renders the proposal incomplete and confusing.

8. *Does the reorganization minimize confusion over authority, roles, and responsibilities? In this regard, are functional responsibilities homogenously grouped under one organization unit or are functions duplicated among or between various organizational segments?*

No consultation was made with the affected units. So no authority, roles and responsibilities have been delineated.

The classification of administrative and research support personnel are not addressed in this proposal. In fact, in the proposal, one position has been entirely removed of supervisory duties of four permanent and two temporary positions without any consultation or reclassification action. In another case, a research support position (marine lab technician) has been assigned to work in the Vice Chancellor for Research and Graduate Education office, a totally illogical assignment.
In summary, the key questions necessary to allow this reorganization are not adequately addressed. And this begs a simple, conclusive question: “Why fix something that is not broken?”

In his proposal to abolish PBRC, the Interim Director/VCRGE has not proven PBRC to be an unsuccessful ORU. No cost analysis has been provided that makes the abolishment feasible. Nothing has been shown that this will save the University money. Our facilities are not “aging.” And they certainly do not need to be replaced. Abolishment will cost the University in relocation expenses, lab renovations, losing excellent researchers, and will lead to missed opportunities for new initiatives in Biodiversity Research.

PBRC has been successful in the past and unbeaten in the present; with great potential to thrive in the future.

PBRC has a fully functional marine research laboratory in urban Honolulu with nationally recognized researchers that bring in large research dollars to the University and State.

PBRC is in full compliance with the goals of the University’s Strategic Plan.

PBRC is stronger together than apart.

In Ostrander’s colorful terms: The key to PBRC’s success has been the strength of having a “critical mass” supported by a dedicated administration that encourages trans-disciplinary “synergies” in the biological fields. In plain English: To break up this right mix of people and programs makes no sense.

If the BOR allows the abolishment of PBRC, you will be hurting both the University and The State of Hawaii at a time when the people and the economy need your guidance most.
Dear Chancellor Hinshaw,

I am writing to urge you to withdraw the proposal to abolish PBRC. Something has gone awry. The process has taken on an adversarial and acrimonious quality that hurts people that make up our institution and thereby hurts the institution itself.

Many of the faculty in PBRC are eminent scientists with world-wide reputations, who serve as leaders in their fields, attract hundreds of thousands, if not millions, of grant dollars, are recognized by their professional societies, serve as editors for the major scientific journals in their fields, and are tapped for leadership roles by the Federal funding agencies. They have put the University of Hawai'i on the map in critical areas of biological science. Not every good scientist, nor even every great scientist, is elected to the National Academy of Sciences, but our PBRC faculty have garnered prestigious awards and recognition for their research productivity and their service to their scientific fields, to UH and to the State of Hawai'i.

The administrative and technical staff of PBRC are amazing individuals who support PBRC's research as though it were the most important mission of the University. These folks bring talent, creativity, and expertise to their work and seem to delight in solving the myriad of technical and administrative hurdles that emerge on a daily basis. The fiscal unit of PBRC is much admired throughout the University and the technical staff members are respected for their professionalism and accomplishments. The researchers are exceedingly grateful that these individuals are in the PBRC ohana -- we really are a team.

Chancellor Hinshaw, I am very concerned about the reorganization process, and not only for PBRC, but for the University of Hawai'i at Manoa. The proposal to abolish PBRC contains no names of the PEOPLE. Those PBRC people in permanent positions (about half) have been reduced to position numbers on a spreadsheet and organizational chart. Those PBRC people not in permanent positions are invisible. They simply don't appear in the documents.

The PEOPLE in PBRC have done nothing wrong. On the contrary, they work for our University and they work very hard. This "process" is hurtful to them. Consultation is the least that they deserve, but imagine if they truly were invited to share in making decisions about their futures, the future of PBRC, and the future of UH Manoa. Please reevaluate the way UH Manoa addresses change.

Sincerely yours,

/s/ Pat Couvillon
Associate Professor
Please see letter of support for PBRC attached.

MEMO

To: Michelle Isa, Chancellor

From: Sheldon Plentovich

Re: Abolishment of PBRC

Aloha,

I just turned in the final draft of my dissertation and will graduate in May. During my 7.5 years at the University of Hawaii, Manoa, I worked closely with the folks at PBRC on multiple occasions. They were instrumental in running various research grants through the University in an efficient and timely manner. Various people within the organization repeatedly went above and beyond the call of duty to, not only, make sure our research grants were in order, but they also carefully watched over my status and grant finances while I was gravely ill and in Seattle for several months. This fiscal/administrative help was unique in my experience at the University and I would hate to see an organization with such caring, efficiency, and professionalism dismantled.

Sincerely,

Sheldon Plentovich

Aloha,
Sheldon

Sheldon Plentovich
Department of Zoology
University of Hawaii at Manoa
2538 McCarthy Mall, Edmondson 152
Honolulu, HI 96822
April 5, 2010

Dr. Virginia Hinshaw, Chancellor
University of Hawai`i at Manoa
Honolulu, HI 96822

Dear Chancellor Hinshaw:

It has come to my attention that the Vice Chancellor for Research and Graduate Education (VCRGE) at the University of Hawai`i at Manoa proposes to abolish the Pacific Biosciences Research Center (PBRC). In my two decades of work with the PBRC faculty and staff, I have had the opportunity and privilege to observe the unique and highly successful operations and administration that have enabled the center to make important research and academic contributions to the University of Hawai`i, the State of Hawai`i, and other parts of the Pacific and international areas. I believe the abolishment of PBRC will be an enormous loss to UH and state, and I urge you to refrain from action on the proposal until there has been adequate consultation with the PBRC faculty and staff and serious consideration of an alternate plan that will enable the center to continue its productivity and contributions as an intact research unit.

One of PBRC’s strengths is the combined talents and abilities of its faculty and staff. I believe the abolishment of PBRC and the unclear proposal for distribution of the affected faculty and staff will seriously and negatively affect the success of its abilities to attract research grants as well as its research capabilities. There appears to have been a lack of adequate consultation with the PBRC faculty and staff on this matter that has extremely important negative implications for UH and the State of Hawai`i. The elimination of any center of world-renown productivity, especially without appropriate consultation, seems to be incongruous to both the policy and spirit of UH and Hawai`i. It is too large and unnecessary a risk of loss of research capabilities that requires further scrutiny.

As a UH alumna, former faculty and emeritus executive who has also participated in various national and international endeavors over a considerable period of time, I am convinced that a notable basic foundation of success at UH is its unique manner of addressing issues and succeeding in work of significance to the state, the Pacific region and the world. PBRC is built on a similar foundation. PBRC, UH-Manoa and the State of Hawai`i deserve the benefit of your personal, serious and urgent attention to this important issue.

Sincerely,

Doris Ching
Emeritus Vice President for Student Affairs, UH System
To: Chancellor Virginia Hinshaw

From: Daniel Hartline, Director  
Békésy Laboratory of Neurobiology

Re: Proposal to Abolish PBRC

I was astonished to read on the one hand the email from you to UH Manoa of April 1 regarding the Administration’s far-reaching Plan for the rejuvenation of UH Manoa while at the same time being acutely aware of its Proposal to destroy PBRC, one of the few units that is already implementing that Plan!

The ORU system of UH is unusual among university systems in this country, which makes the University of Hawaii especially attractive to researchers such as myself and is fundamental to UHM’s stature as a Carnegie 1 Research Institution. This often goes unrecognized by people from outside UH, and they tend to dismiss it because we do not “look the same” as other universities in this respect. The demise of PBRC will force many of its world-class researchers to seek positions elsewhere. Destroying one of UHM’s main ORU’s is a dangerous precedent to set.

I am a tenured Researcher at the Békésy Laboratory of Neurobiology, working in cross-disciplinary research in the area of neurodiversity, in particular examining the evolution of nervous systems in relation to the behavior and ecology of marine invertebrates of Hawaii and elsewhere. This is basic non-medical research that contributes to our understanding of how nervous systems work. I have developed this program with continuous extramural funding since I came to UH 30 years ago, thanks to the special research-friendly environment provided by PBRC. I could not have done it otherwise. Contrary to the assertion in the Proposal, there is NO BETTER UNIT IN WHICH I COULD CONDUCT THIS WORK AS EFFECTIVELY. The Proposal has me transferred to the Zoology Department. While I highly respect the faculty of that department (in fact I serve on its graduate faculty), it is an instructional department with a primary mission of undergraduate and graduate instruction that lacks the degree of research focus that has been necessary for my program. While the Administration’s assignment may be the best placement given dissolution, there is no way that it comes close to the situation that I have in PBRC. THERE WILL BE NO NEW CRITICAL MASS OR SYNERGISMS resulting from this reassignment. Being on the graduate faculty already, I interact with Zoology faculty members, have no barriers to collaboration (which PBRC actively encourages), and am already collaborating with several of them (most recently in an IGERT proposal). This reassignment will give me no additional benefits, nor provide any additional benefits to Zoology (contrary to the VCRGEs assertions) and will in fact decrease my value as a colleague since I will have limited contacts with other PBRCers and PBRC programs that have been valuable resources in my professional capacities. PBRC’s mission in research and research-based training optimally supports my professional contributions. The proposed abolishment will severely JEOPARDIZE MY FUTURE CONTRIBUTIONS TO UHM because it will decrease my chances for securing future extramural funding, deprive me of the facilities I need, deprive me of the dedicated administrative support I need and the interactions with faculty that are most valuable to this future work.
Dissolution will also dissolve PBRC’s developing biodiversity program, to which I (and other members of PBRC) have been able to contribute through inclusion of evolutionary and comparative neurodiversity studies in our repertoire. The program has crystallized a shared interest in how biodiversity impacts and is reflected in the nervous system and behavior. Recent trends at my primary funding agency, NSF, have made it clear that future funding will be targeted toward integrative transdisciplinary research involving broad picture issues, including biodiversity. Dissolution of PBRC will abruptly remove the critical mass in this area that is necessary for me and other PBRCers to compete for this funding.

The Board of Regents long ago created Organized Research Units including PBRC for the important purpose of allowing faculty members to focus in a way that elicits the most productive outcome. In addition, by focusing the energies, facilities and mission of the infrastructure on a research mission, that support becomes much more efficient and effective. The research support of PBRC is legendary across campus. Repeatedly we have faculty from other units come to us for assistance in the reparation, the submission and administration of their grants. The PBRC staff, through its long experience in the area, is especially capable of handing unusual and complex grant situations. Having to put my grants through a less experienced grants management office will adversely impact my ability to get my research done and participate in complex collaborative multi-institutional endeavors as I do now.

The facilities that PBRC provides will NOT be maintained, regardless of what the Proposal would have people believe. Such specialized facilities require the dedication and commitment from the scientists, technical staff and students who are most closely associated with their services, since they are expensive and hard for non-experts to comprehend. The “bottom line” of how costly they are is not the only measure of worth, a fact that is easily lost sight of.

- My research focus in neurobiology REQUIRES: a machine/carpentry shop for construction of special experiment-specific apparatus essential to the research. The times my colleagues and I have had to use other shops have been uniformly unsatisfactory. As one recent example, owing to a cross-departmental collaboration, another shop was engaged to make a piece of apparatus which took them a year and $6,000, and in the end it was flawed in construction. Finally in frustration we had the PBRC build the same apparatus, which they did in 2 weeks for a cost of $200 – it worked and allowed a tight grant deadline to be met. This high-quality service is typical of what supports quality research in PBRC and will disappear when the shop is reassigned.

- Similarly, as an electrophysiologist, I depend on our electronics shop for construction of electronics compatible with electrophysiological and other electronic apparatus (amplifiers, stimulators, high-speed video cameras, integrated computer capabilities) essential for the research. The service is immediately available with minimal delay and the benefit of long experience dealing with the particular type of electronics used in the field.

- Our computer support facilities flexibly and responsively support a database server system I am developing for a large image database. The Facility also supports high through-put computationally intensive modeling and database applications, and provides responsive advising on hardware and software acquisition and training that must be made for specific needs for neuroscientists (as well as for routine computer-intensive day-to-
day operations in a highly computer-dependent field). It is run by a specialist with a PhD in neuroscience, who is thereby particularly competent when it comes to my research needs and those of others at the Békésy Lab. It permits the Facility to contribute to an exceptional degree to developing professional computer-dependent institutional grant proposals that also contribute critically to my research. It is unlikely that under dissolution, any other computer support, now or in the foreseeable future, can provide this level of support.

- Electron microscope facilities – electron microscopy is a key component of my research and one that pushes the limits of even our current excellent facilities. Erosion of this facility, with its knowledge-base of work on the difficult marine material I must deal with would be disastrous for this work.

My research is greatly facilitated by dedicated administrative support that understands the nature of grants administration and proposal preparation and submission for the particular NSF entities that sponsor my work (Oceanography; Integrative Organismal Systems). Their expertise and dedication to getting the job done quickly and efficiently allows me to concentrate on research to a greater extent than is the experience of most of my colleagues in other units.

Because of the wholehearted support I and my research focus receives from PBRC, I am not only able to produce internationally-recognized basic research by myself, my graduate students and my post docs, but:

- I mentor undergraduate students and train them in research techniques owing a) to my proximity to such students and b) PBRC strong support (including funds) for the concept of “training through research.” With erosion of such an environment, my ability to train undergraduates will be threatened.

- I provide neurobiology coursework material, including lectures, handouts, exams and exam grading at undergraduate and graduate levels. These endeavors are not part of my job description, but I provide them because I see a need. With more of my energy spent dealing with the less ideal reorganized situation into which a dissolution of PBRC will thrust me (denials of the Administration to the contrary) my abilities to provide these services will be threatened.

- I support outside visitors to come to Hawaii to collaborate with me and to interact with the other neuroscientists at Békésy. Without the institutional support (including financial) and commitment to the field that comes from PBRC, these programs will be threatened.
Memorandum

To: Virginia Hinshaw  
Chancellor, University of Hawaii at Manoa

From: Kenneth Y. Kaneshiro  
Program Director, Center for Conservation Research & Training (CCRT)

Subject: Response to VCRGE’s Proposal to Reorganize the Pacific Biosciences Research Center (PBRC), University of Hawaii at Manoa

A response to the VCRGE’s Proposal to reorganize the Pacific Biosciences Research Center (PBRC) is being developed by a PBRC Team of faculty and staff in strong opposition to the proposal. However, as Program Director of the Center for Conservation Research & Training (CCRT), a program administered by PBRC, I am submitting an independent response opposing the proposal because of the many misrepresentations and irrational recommendations in the VCRGE’s proposal.

The logic of the VCRGE’s rationale for his proposal is seriously flawed and most of the specifics in the proposal are misrepresentations, without consideration of its broader impact on the university’s academic and research mission. These are being addressed point-by-point in the response being prepared by the PBRC Team. I am presenting an independent elaborated response to address those issues specific to CCRT.

Background

CCRT was first established as the Hawaiian Evolutionary Biology Program (HEBP) in 1985 as a research program within the Pacific Biosciences Research Center. HEBP evolved into what is currently the Center for Conservation Research & Training (CCRT) in 1993 after receiving a grant from the John D. and Catherine T. MacArthur Foundation to establish a program at UHM focused on addressing the extinction crisis faced by the unique plants and animals that evolved in Hawaii and are found nowhere else in the world.

The CCRT is currently staffed by 8 (FTE) State or RTRF funded positions; there are 27.5 (FTE) other faculty, staff, postdocs, and graduate students who are supported by extramural funds. CCRT administers the following Programs:

Hawaiian Drosophila Research Stock Center (HDRSC) which maintains laboratory colonies of Hawaiian Drosophila species, several of which are listed on the Federal Endangered Species list and therefore protected by federal statutes under the Endangered Species Act. The center provides specimens for researchers at UH as well as to other laboratories nationally and internationally. One of the Hawaiian species, Drosophila grimshawi, which has been maintained at the stock center for about 45 years now, is the source of one of only 12 Drosophila species worldwide whose entire genome has been sequenced.

Volcano Rare Plant Propagation Facility (VRPPF), located at the UH Volcano Agricultural Experimental Field Station, has been in existence since 1993 with funding support from the US Fish & Wildlife Service (USFWS) and the State Department of Land & Natural Resources (DLNR) to propagate, maintain and outplant rare and endangered species of plants found on the Big Island. There are approximately 13,000 plants being maintained in four greenhouses comprising 81 threatened and endangered species (all of which are protected by the Endangered Species Act) and 36 other native species. Over the past 5 years,
more than 25,000 individual plants representing many of the threatened and endangered species have been out-planted into the natural habitat with huge success.

**Olinda Rare Plant Propagation Facility (ORPPF)**, located in Olinda, Maui, has been in existence since 2003, with funding from the USFWS and DLNR to propagate, maintain and out-plant rare and endangered species of plants from the Maui Nui Islands. The huge success of the Volcano facility prompted the federal and state agencies to provide funds to CCRT to build a replicate facility on Maui to focus on species from Maui, Molokai and Lanai.

**Land Snail Captive Propagation Facility** in Henke Hall, run by CCRT Assistant Researcher Dr. Brenden Holland, is the only captive breeding facility for endangered Hawaiian tree snails in the world. It currently maintains about 1500 individual snails, representing 15 species, 9 of which are federally listed as endangered.

**Seed Conservation Laboratory**, operated jointly by CCRT and the Lyon Arboretum, is the central facility for seed conservation of native Hawaiian plants for the State. Tens of thousands of seeds of more than 200 species (many of them endangered) are maintained by this laboratory. Many of the species whose seeds are maintained in this laboratory are represented by a single individual left in the wild. The program serves as a genetic safety net for these species.

**Hawaii Biodiversity Mapping Program (HBMP)** maintains the most comprehensive database and distribution records of Hawaii’s rare and endangered species. The entire conservation community in the State, including all government agencies as well as private organizations/industry, depends heavily on the HBMP facility for information on these endangered species.

**Hawaii Stream Research Center (HSRC)** directed by CCRT’s Michael Kido is a program focused on research to understand the health of Hawaii’s stream ecosystems. In 1998, Kido established the Hawaii Stream Bioassessment Protocol, which is used to assess the health of streams in the State. The State Department of Health and the City and Counties within the State have contracted with the HSRC to conduct surveys of each of the major streams within their respective jurisdictions to assess their biotic and abiotic integrity.

**Ecology, Evolution and Conservation Lab**, directed by CCRT researcher Dr. Robert Cowie, conducts research focused on understanding the origins and determinants of Pacific Biodiversity. The four main focus areas are: 1) Biodiversity – understanding the ecological and evolutionary origins of Pacific Island diversity; 2) Invasion Biology – documenting the spread and impacts and understanding the invasion dynamics of alien species; 3) Conservation Ecology – ecology and behavior of native Pacific Island land snails and the species that threaten them; 4) Emerging Disease Ecology – eosinophilic meningoencephalitis (i.e., rat lungworm disease, vectored by snails and slugs, mostly alien) in Hawaii.

**Institute for Integrated Earth Observing Systems (IIEOS)** is a virtual organization within CCRT, which encompasses participants from UH as well as several organizations external to the UH system, to enhance the cyberinfrastructure technologies that CCRT has been developing as part of the EPSCoR program at UH.

**Ecology, Evolution and Conservation Biology Graduate Specialization (EECB)** was established in 1991 as an initiative of HEBP. Three graduate students were admitted in 1991; today, more than 60 students and more than 40 regular faculty from 9 Departments participate in the program.
**NSF GK-12 Program at UH** was first funded in 1999 supporting 9-10 Graduate Fellows from the EECB Program each year to serve as resource mentors to K-12 teachers and students to enhance science education in Hawaii. 35 EECB graduate students have been supported as GK-12 Fellows since the onset of the program at UH; about 120 other EECB graduate students have also been supported with research and travel funds to support their MS or PhD degree requirements, more than 250 K-12 teachers (several of the teachers have won prestigious state and national awards such as the Presidential Award for Excellence in Math and Science Teaching due to the experience gained from the program) and 6,790 K-12 students have been associated with the GK-12 program.

5th Grade Class at Hokulani Elementary assembling weather station which will transmit environmental and climatic data wirelessly to a computer in their classroom. The students will be able to monitor patterns of change over time.

**NSF IGERT (Integrative Graduate Education, Research & Training Program** in Ecology, Conservation and Pathogen Biology currently supports 15 Graduate Fellows and 20 Associate Fellows in a transdisciplinary approach to understanding the ecology of emerging infectious diseases across species including humans. The program has received high recognition from NSF.

Avoiding the tropical heat, Hawaii IGERT students sort collected mosquito samples late at night near Khao Yai Nat’l Park in Thailand (NSF Press release).

**Hawaii Conservation Alliance (HCA)** is a partnership of 17 government, education and non-profit organizations. Its mission is to promote effective, long-term management of Hawaii’s native ecosystems through collaborative research, training and outreach among land managers, scientists, educators and the general public. The HCA sponsors the annual Hawaii Conservation Conference, which drew more than 800 participants in each of the past 3 years (more than 1,100 during the 2009 Conference).

**Experimental Program to Stimulate Competitive Research (EPSCoR)** is an NSF funded program whose mission is “to strengthen research and education throughout the United States and to avoid undue concentration of such research and education.” Hawaii qualified as an EPSCoR state in 2000 and received its first 3-year funding ($9 Million) in 2003. We received a second 3-year grant ($9 Million) in 2006. CCRT Director Kaneshiro served as co-PI of both grants. A third grant, $20 Million over 5 years, has been awarded in September 2009. An additional 3-year EPSCoR grant (Track 2) for $3 Million has also been awarded with Kaneshiro serving as Project Director.

**PBRC Grants Management and Administration**
None of CCRT’s programs/projects listed above would have been possible if not for the administrative capacity provided under PBRC. I have been at UHM for 45+ years with my salary mostly supported by extramural funds for more than 25 years first in JABSOM, then in CNS and CTAHR and finally in PBRC.
Without doubt, the grants management capacity of PBRC’s administrative unit is by far the best among the four units that I have had experience working with over these four and a half decades as a researcher at UHM. PBRC as the premier grants management unit at UHM is well known and there have been numerous investigators who have sought PBRC’s assistance in preparing proposals and administering grant awards. Even Vice President for Research Jim Gaines has requested PBRC’s assistance in administering the EPSCoR awards, beginning with the 2006 renewal of $9M (after the first award of $9M had some issues while being administered by another unit), and now with the current $20M (Track 1, 5-year grant) and the $3M (Track 2, 3-year grant). The $3M IGERT training grant from NSF is also being administered by PBRC even though the PI is a JABSOM faculty member.

CCRT Mission and UHM Strategic Plan
The mission of CCRT is to establish a center of excellence in the fields of evolutionary and conservation biology by taking advantage of the unique natural resources available in the Hawaiian Islands that will strengthen UHM’s capability to educate and train professionals who can participate effectively in addressing global environmental problems. CCRT is a multi-faceted, transdisciplinary program encompassing more than a dozen programs/facilities. These programs range from research on dozens of plant, snail and insect species listed on the Federal Endangered Species List, work on genetics and evolutionary ecology of invasive species, development of education programs that involve graduate students as well as K-12 teachers and students, coordination among all of the conservation organizations in the state, maintaining the most comprehensive database (including GIS maps of the distributional range) of Hawaii’s rare and endangered species, etc. Each of these programs, while independent in achieving their separate goals and objectives, collaborate in achieving the greater mission in Conserving, Preserving and Restoring (CPR) the rare and endangered ecosystems of our islands.

UHM’s Strategic Plan 2002-2010 states, “Hawaii is singularly unique in its location...having the most rare plant and animal species in the world...”. While the Lyon Arboretum’s micropropagation laboratory is involved in propagating some of Hawaii’s rare and endangered plant species, PBRC is the only other unit at UHM which is addressing Hawaii’s extinction crisis and is propagating, managing, and raising species that are listed on the Federal Endangered Species list, not only plants but also the extremely threatened snail and insect species as well. Our facilities play a key role in serving as a genetic safety net for these critically endangered species that are important components of our native ecosystems.

CCRT and Workforce Development
As a result of our research in environmental monitoring in the EPSCoR project, CCRT, in partnership with engineers at Stanford University, has spun off a new company, Intelesense Technologies Inc., which has
been incorporated in the State of Hawaii. The products of this company have already been deployed at the global scale (Vietnam, Thailand, Ethiopia, Iraq, Haiti) with future potential for workforce development in our state and enabling our program to achieve our mission of participating effectively in the global commons. The US Department of Defense has contracted with Intelese to deploy air quality sensors in the combat zones in Iraq and most recently the US State Department and Homeland Security has contracted with Intelese to develop an

**Proposed Re-location of CCRT Personnel to WRRC is Irrational**

The VCRGE’s proposal to transfer PBRC faculty to units with a ‘critical mass of complementary researchers’ and ‘a similar research mission’ has not been well-thought out, especially when in proposing that most of CCRT’s faculty and staff be moved to the Water Resources Research Center (WRRC). Most of CCRT’s activities are focused in the terrestrial ecosystem and while there is some overlap in the respective missions of CCRT and WRRC, it is clear that CCRT’s mission is much broader and encompasses the narrower mission of WRRC. In fact, the merging of WRRC into the broader vision of PBRC and CCRT would be the more sensible and effective plan for the reorganization of PBRC. Two senior WRRC faculty, one of whom is the current Director, have retired and it might be more appropriate at this time to consider merging WRRC into PBRC rather than dispersing one of the stronger programs in PBRC into a unit that is not at all complementary and would only diminish the ability of CCRT to accomplish all of its goals and objectives.

**Proposal to Reorganize/Abolish PBRC Should be Rejected**

Clearly, PBRC’s administrative capacity has played a huge role in the development of the tremendous success of all of CCRT’s programs. It will be extremely difficult to sustain the level of grantsmanship and scholarship and the significant growth of CCRT if the program is relocated to another unit at UHM. The breadth of CCRT’s research and training programs/projects extends way beyond that of any existing academic department or research unit (such as WRRC) and the VCRGE’s proposal to abolish PBRC as a unit should be rejected not just for the sake of CCRT but all the other programs currently administered by PBRC (Kewalo Marine Laboratory, Bekesy Laboratory of Neurosciences, etc.).
MEMORANDUM

To: Chancellor Virginia Hinshaw  
CC: Marilyn Dunlap, David Ross  
FROM: Brad Jones  
SUBJECT: PBRC Abolishment and the Computer Network Support Facility

Introduction
This memorandum is in response to Vice Chancellor Ostrander’s Proposal to Abolish the Pacific Biosciences Research Center (PBRC), University of Hawai‘i at Manoa, specifically as it relates to the Computer Network Support Facility (CNSF) in PBRC. On page 8 of Dr. Ostrander’s proposal it is stated, “Administrative staff members, including the Computer Network Support Facility (2 individuals) will likewise report to new units.” Other than that, there is little mention of the Facility.

The purposes of this document are: 1) to describe the CNSF and show that it is a thriving, effective and flexible tool in support of biomedical and biosciences research at the University of Hawai‘i at Manoa; 2) to argue that PBRC has a history of establishing and supporting core facilities that serve a broad community of researchers outside of PBRC and that PBRC is still the best administrative home for such facilities; and 3) to conclude that Dr. Ostrander’s proposal, as it relates to the CNSF, is inadequate and that such a reorganization will be detrimental to the Facility’s ability to provide services to its client researchers, students and staff.

Background
The Computer Network Support Facility (CNSF) was established by the Pacific Biomedical Research Center (PBRC) in 1992 using federal grant money from the Research Centers in Minority Institutions (RCMI) Program. The RCMI Program is an initiative of the National Center for Research Resources (NCRR) at the National Institutes for Health (NIH). Funding for the CNSF during its eighteen years of existence has come primarily from the RCMI Program. In partnership with the federal support, PBRC contributes an administrative home, fiscal office support, space and partial salary for the Facility director (currently 75%).

As with other core facilities in PBRC, the purpose of establishing the CNSF was to provide services and infrastructure that would promote biomedical and biosciences research at the University of Hawai‘i at Manoa. CNSF services have always been designed to supplement and extend services available from the University’s Information Technology Services (UH ITS) as well as services provided by school or departmental computer support operations such as Office of Information Technology at the John A. Burns School of Medicine (JABSOM IT). When delivering services in support of research, the CNSF operates in the context of the excellent network and computer support infrastructure provided by the University.
The CNSF often acts as a liaison between researchers and UH ITS or JABSOM IT and we are proud of the cooperative relationships we’ve built with the staff members of these operations over the years.

Originally the CNSF provided local support within the PBRC building for researchers in the Bekesy Laboratory of Neurobiology and the PBRC administration and fiscal staff. The mandate of RCMI funding was that the director and only staff member, Dr. Brad Jones, would extend services to other PBRC and RCMI staff and researchers in several additional on-campus buildings and at remote locations such as Leahi Hospital, Queen’s Medical Center and Kewalo Marine Laboratory.

Over the years, the service area of the CNSF has grown to include all researchers and staff affiliated with the current and former RCMI grants, other NIH center grants such as SNRP and COBRE and many other non-PBRC researchers. Additional RCMI funding has enabled the staff to be gradually expanded over the years with the addition of a desktop computer support specialist in 2002 and two half-time support positions in 2008.

**Staff**

The CNSF was established by the current director Brad Jones (Associate Specialist, Position Number 86166T). Dr. Jones is a native of Montana who earned both B.S. (with Honors, 1978) and Ph.D. (Neuroscience, 1986) degrees from Stanford University. His computer experience began in the late 1970s with course work at Stanford and practical experience designing data acquisition software for some of the earliest laboratory computers. He came to Hawai‘i as a Postdoctoral Fellow at the Bekesy Laboratory of Neurobiology in 1988. His background in biosciences research and computer applications related to research has been essential in ensuring that the services offered by the CNSF are relevant to the clients served.

Stanford Togashi (IT Specialist, Band B, Position Number 77148T) has been with the CNSF since 2002. Mr. Togashi was born and raised in Hilo. He earned a BBA in Management Information Systems from the University of Hawai‘i at Manoa in 2000 and served as the ASUH President (1998-1999). Before joining the CNSF he worked at Shriner’s Hospital. Stanford was originally hired as desktop computer support specialist but his duties and skills have grown over the years and he now supervises two half-time positions for desktop support and scientific presentation services.

Scott Niimoto (IT Specialist, Band A, Position Number 78455T) joined the CNSF as a half-time employee in 2008 to assist primarily with desktop and laptop support. Scott is a Honolulu native who attended Punahou School. He earned a BA in Sociology from the University of Hawai‘i at Manoa in 2005. Before joining the CNSF staff, Scott worked for the Star Office at UH Manoa. Scott was moved to a full-time position in February 2010 and he now handles both desktop support and scientific presentation services.

**Services**

CNSF services are specialized to support biosciences research and to supplement or extend services available through existing support structures such as UH ITS and JABSOM IT. Major service areas include:

- **Desktop and laptop support:** We provide ongoing desktop or laptop computer support for approximately 300 people, primarily in PBRC and JABSOM. Support includes assistance with selection and purchasing, installation of operating systems and software applications, configuration, problem resolution and user training.
• **Scientific poster printing and lamination:** We printed approximately 200 scientific posters between March 2009 and March 2010. Of these, approximately 70% were for undergraduate or graduate student research trainees. Poster printing costs are derived from our RCMI supply budget so there is no charge to researchers for poster services. The current market rate for commercial poster printing is over $100/poster, so we saved researchers more than $20,000 in poster printing charges in the past year. We also provide poster-sized lamination for moisture resistance or long-term display.

• **Presentation support:** We provide complete technical and audio/visual services for seminars, meetings, conferences and public outreach events. We have provided support for numerous scientific events, including large international conferences, at on-campus locations, JABSOM, the East-West Center and hotels on Maui and in Waikiki. We have supported numerous grant agency site visits and external advisory committee meetings for NIH center grants. This year we provided full audio/visual support for two public outreach events at the Waikiki Aquarium.

• **Videoconferencing:** We have been committed to providing tools for enhanced communication and collaboration among researchers. We have already established, and provide ongoing support for, four videoconference facilities (two at UH Manoa, one at Leahi Hospital and one in the research laboratory building at JABSOM). This year we are installing four more such rooms (two new rooms at JABSOM, one at Queen’s Medical Center and one at Kewalo Marine Laboratory). In addition, we provide hosting and support for desktop conferencing using Adobe Acrobat Connect and a toll-free teleconferencing service.

• **Web Sites:** We provide servers and support for hosting web sites. We also provide web site design and maintenance. Specialized services include conference registration, presentation upload sites for meetings, database support, and customized web-based forms for data input.

• **Parallel processing:** We provide a parallel computer cluster for high-speed computations. We provide software installation and configuration and end-user training for researchers wishing to use this powerful tool for bioinformatics, biostatistics and modeling.

• **Data Storage, Archiving and Backup:** The CNSF provides support for both local storage servers in remote locations and centralized storage servers. All data storage is based on redundant RAID technology and is backed up nightly to provide a high degree of disaster immunity.

• **Network Management:** In cooperation with the network staff at UH ITS, we provide complete network support for the UH researchers at Leahi Hospital and for Kewalo Marine laboratory. In both of these locations we designed the building network and installed hardware purchased with RCMI funds. We also support specialized LAN configurations in several on-campus buildings.

### Equipment
The CNSF manages an extensive array of equipment and spare parts. This state-of-the-art equipment represents several hundred thousand of dollars of federal investment in UH research infrastructure that is jeopardized by the proposed abolishment plan. This is a selected list of the items managed by the CNSF:

• **Poster Printers:** Two Hewlett-Packard ink-jet color poster printers capable of printing posters up to 42 inches wide.

• **Poster Laminator:** Large format laminator capable of handling material up to 42 inches wide.

• **Presentation:** Two PC and two Apple laptops, video switches, four LCD projectors, indoor projection screens, large outdoor projection screen and associated cables and connectors.

• **Audio:** Free-standing podium, commercial-quality wired and wireless microphones, audio mixers, audio power amplifiers and public-address speakers. Our PA system is capable of providing sound amplification for an event of up to 500 people, either indoors or outdoors.
• **Videoconferencing:** One Polycom standard definition conference room, three Tandberg standard definition conference rooms and four Tandberg high definition conference rooms. The rooms are located in the Biomedical Sciences Building, Leahi Hospital, JABSOM, Queen’s Medical Center and Kewalo Marine Laboratory. Each room is equipped with projection capability via a plasma television and conferencing via an LCD television.

• **Parallel processing cluster:** A high-speed 16 computer (88 processing unit) parallel cluster for bioinformatics, biostatics and modeling.

• **Data Storage:** Centralized storage servers with a usable capacity of 13.6 Terabytes. The servers are located in the PBRC and Biomedical Sciences Buildings.

• **Network:** All the hardware associated with the fiber optic network serving researchers within Leahi Hospital was installed and is currently maintained by the CNSF. Similarly, we installed and maintained the Ethernet network of the Kewalo Marine Laboratory network. Additionally, we support numerous Ethernet switches and firewalls installed in various on-campus locations.

**Clients**

This selected list of research groups to which we have provided services over the past year:

• **PBRC** (all administrators, researchers, students and staff)

• **PBRC Core Facilities** (Biological Electron Microscope Facility, Greenwood Molecular Biology Facility, Electronics Shop, Carpentry and Machine Shop)

• **PBRC Research Training Programs** (MBRS, MARC, PRIDE, URM, NSF-ATE)

• **Department of Cell and Molecular Biology** (JABSOM)

• **Department of Tropical Medicine, Medical Microbiology and Pharmacology** (JABSOM)

• **Specialized Neuroscience Program** (JABSOM)

• **Cardiovascular Research Center** (JABSOM)

• **Neuroscience and Magnetic Resonance Research Program** (Queen’s Medical Center)

• **Hawai’i Center for AIDS** (Leahi Hospital)

• **Laboratory Animal Services** (videoconference support)

• **Department of Psychology**

**PBRC Administration, Fiscal and Core Facilities**

The heritage and institutional philosophy of PBRC promotes strong working relationships among core facilities. In addition, the core facilities receive outstanding support from the PBRC administration and fiscal office. We all share the philosophy of our late Director, Frederick C. Greenwood, who held that PBRC will “support research by any means short of a prison sentence”. This *esprit de corps* must not be ignored when considering the abolishment of PBRC.

The CNSF employs the services of the Electronics Shop technician, Hinano Akaka, on a daily basis. We rely on Hinano to repair power supplies, computers, battery backup units, laser printers and variety of other equipment. His skills have saved researchers many thousands of dollars over the years. Similarly we rely on Ted Murphy in the Machine and Carpentry Shops for renovation and modification of offices, computer rooms and conference rooms. Ted also fabricates specialized furniture and devices when items are either not commercially available or are prohibitively expensive.

Conversely, the Biological Electron Microscope Facility (BEMF) and Greenwood Molecular Biology Facility (GMBF) are both heavily dependent on computers for their daily operations and rely on the CNSF to install and maintain these computers.
The proposed abolishment plan would dissolve PBRC administration and fiscal, move the Electronics and Machine and Carpentry Shops to the Department of Chemistry, the BEMF and GMBF to the Office of the Vice Chancellor for Research and Graduate Education and two of the CNSF staff members to unnamed departments. From the point of view of the CNSF it is difficult to understand how this reorganization will improve the ability of any of these core facilities to serve researchers and students.

**Conclusion**

Despite the fact that the CNSF was designated to be maintained “as-is” in the Manoa Prioritization Process, the proposal to abolish PBRC jeopardizes the future of the Facility.

The CNSF is comprised of more than two staff members so a plan for the future of the Facility should involve more than transferring position numbers to new units. Rather, the Facility is an integrated unit that manages an array of expensive hardware, occupies space in two on-campus buildings and is directed by a non-tenured faculty member whose fate is not specified in Dr. Ostrander’s proposal. Even moving the entire Facility into another department does not guarantee that the same types of services will be available to the broad range of clients currently served, unless that department shares PBRC’s commitment to providing research infrastructure for bioscience research. Further, the CNSF has close ties with the other PBRC core facilities and with the PBRC fiscal and administrative staff that facilitate our ability to provide services.

It is likely that the proposed abolishment of PBRC will result in the abolishment of the CNSF or at least severely degrade the operations of the Facility.

PBRC has not had a permanent director for the past 10 years. The size of the faculty has decreased during this time as retiring, departing or deceased researchers have not been replaced. For the past several years considerable energy has been expended just fighting for PBRC’s survival. Nevertheless, despite obstacles that would have devastated a weaker institution, PBRC has continued to exhibit strong and effective research, training and core support activities.

The staff of the CNSF looks forward to the day when this reorganization has been stopped and everyone at PBRC can again devote their full energies to excellence in biosciences research and training.
Dear Dr. Hinshaw

I am an Emeritus Researcher (Professor) from PBRC. I retired in December 2000. At the time of my retirement I was an active researcher as well as a Director of the Biotechnology Program. This university-wide new program was jointly initiated in 1986 by PBRC and HITAHR, and I served as its Director from its inception until I retired; first serving as Director of the Joint Program (1986-95) and subsequently continuing in that role for PBRC alone from 1995-2000.

I am writing to you today in connection with a proposal by VC Ostrander to abolish PBRC.

Let me begin by stating that I strongly support maintaining the integrity of PBRC as an independent unit at UH. I find that the reasons for abolishing PBRC given in the VC’s Proposal are not well substantiated and the plan to reorganize it is vague. It seems that the main arguments in favor of abolition of PBRC are that it lacks research focus, it has too many disparate research areas, several key faculty members are approaching retirement, its infrastructure is deteriorating and the administration does not have the resources to maintain the facilities or to support the faculty. I think that PBRC’s diversity is, in fact, a strength, not a weakness. This diversity has allowed PBRC to monitor new developments in several key emerging areas of biological research and take a leading role at UH to obtain outside financial resources and address the opportunities in developing these areas. This was possible because of PBRC’s culture and its strong history of flexibility in addressing these opportunities. I believe that this is a strong point in favor of PBRC.

Dispersing the PBRC faculty which is cohesive and has an identity as a respected research unit is not justifiable based on the arguments offered or comparative data presented in the abolition plan. In my view, it would be a mistake to abolish an institution as productive as PBRC. The PBRC faculty have generated their own competitive grant support and depended less on the State’s resources as compared to many other units and departments at UH. If the numbers of current faculty are below the “critical mass” the remedy would be to fill the vacant positions in PBRC and even award new positions to strengthen certain areas at PBRC not covered by other units involved in biological research. One last point about this: the proposal says that current PBRC faculty will not be relocated from the space they currently occupy. This will not result in new synergies expected from the dispersal, as physical proximity is essential for effective interactions among faculty.

My first assignment as a Director was to build a state-of-the-art molecular biology instrumentation and training facility for the UH biology community and the State. Neither PBRC nor HITAHR had the financial resources to build such a facility. We (in collaboration with the office of Dr. Ghali) secured extra mural funding from the U.S. Department of Education to start with and set up the Facility in a short time. Subsequently I hired Dr. Neil Reimer, a biochemist as a first Manager of the lab. Dr. Reimer, and subsequently Dr. Gabor
Mocz, acquired major competitive grants and developed expertise in the analysis and interpretation of data. This facility has emerged as the only comprehensive molecular instrumentation facility in the state of Hawaii (see attachment.)

The vice chancellor’s would dissolve the Core Facility and merge it with other units. This would be a major step backward because this facility makes possible the widespread use of diverse tools involved in molecular biology research. No other laboratory can take its place.

I urge the administration to not only maintain the molecular biology facility but to enhance its capabilities by financially supporting it on a permanent basis.

Aloha,

Suresh S. Patil

Researcher Emeritus
April 4, 2010

Chancellor Virginia Hinshaw
University of Hawaii – Manoa
Honolulu, HI  96822

Dear Chancellor Hinshaw:

We write this letter in support of two entities at the University of Hawaii – Pacific Biomedical Research Center (PBRC) and one of its research units Kewalo Marine Laboratory (KML) – the future of which are currently under consideration. From 1996 through 2004, we held positions at KML as members of the PBRC faculty. It should said here that, while we left KML in 2004 to take university professorships and the leadership of the Symbiosis Research Cluster at the University of Wisconsin-Madison, our KML research efforts prospered through the opportunities afforded to us as members of PBRC; we had everything we needed to accomplish the goals that we had while in Hawaii. Our positions at KML were embedded in an ongoing, 22-year relationship with UH that began in 1988. We have worked, and continue to work, with both KML and another marine facility at UH, Hawaii Institute of Marine Biology (HIMB), where we currently hold affiliate faculty positions, so we are well-positioned to understand the separate and highly complementing niche KML fills.

Pacific Biomedical Research Center
As members of PBRC, we considered ourselves faculty of an organized research unit, or ORU. Universities have ORUs in order to respond quickly to changes in national and international priorities in science, offering a flexibility that is impossible to achieve within the traditional structure of an academic department. ORUs are particularly invaluable in biology now, as it is the most quickly developing of scientific fields. PBRC has two principal focuses – biomedical science and environmental science. As such, it is perfectly positioned to contribute to the goals of two new federally-mandated initiatives: 1) those outlined by the National Research Council arm of the National Academy of Science: “The New Biology of the 21st Century” (website); and, 2) those developed by the American Medical Association and environmental biologists: “The One-Health Initiative” (website). Each of these initiatives focuses on the critical link between human health and the environment, the very heart of PBRC’s historical strengths. Thus, PBRC has not only the mission, but also the inherent flexibility, to respond and contribute to these research opportunities.

In addition to being a UH unit that is well positioned for current national trends, PBRC has been highly active in fostering research training of local minorities. NIH grants that supported such efforts not only offered many of these individuals their first opportunities to participate in research, it also offered the faculty the chance to recruit and interact with first-rate students. On a personal note, several times while at KML, we each had students who were supported by these grants. For example, one masters student who trained with us recently
received his MD at UC Davis. In addition, we were fortunate enough to sponsor and mentor several truly exceptional students from Kamehameha High School.

In summary, PBRC is fortunate to be a research unit that has a natural ability to couple the two most powerful frontiers of 21st-century biology: biomedicine and environmental biology. Although other research groups at other universities (e.g., at UC San Diego and Stanford) are being created to bring together these disciplines, few (if any) have the advantage of already claiming the strong record of PBRC. We think that UH, through PBRC, is well situated to make great contributions in this area.

Kewalo Marine Laboratory
KML as a unit of PBRC offers one of the critical components to an understanding the link between human and environmental health. KML is a cell and developmental biology laboratory that characterizes the basic biology of how marine animals function, and how they respond to perturbations unique to an urban environment. Because Hawaii is an ocean state, and functions as a kind of ‘canary’ from a conservation standpoint, KML plays a special role. We cannot think of another national laboratory that fills the niche of KML. Located in the center of Honolulu, KML is directly positioned to study an impacted watershed in a major urban area. In addition to the bench science of the researchers at KML, because the laboratory is located so near to the high schools of Honolulu, it provides an opportunity for the city’s students to easily access training in the cellular and molecular biology and biochemistry that underlies environmental health. As mentioned above, several Kamehameha students became valued members of our own laboratories, bringing with them their particular concern for the Islands’ health and well being. It would be exciting to see UH embrace and expand on these opportunities, taking advantage of the unique physical location of KML to integrate UH more fully into the community of Honolulu.

It is our understanding that UH is considering closing KML. We have heard that some think that the biologists at KML could work in other units at UH. Having run our research programs eight years at KML we know that faculty there could not possibly study urban impact as they do by moving either to Manoa or to HIMB. It should be stated that KML is a marine laboratory, not a marine station like HIMB. In our minds, as individuals who have associated with both entities, KML and HIMB offer very different, complementary (not overlapping) venues for work. KML researchers study cell and developmental biology in a city landscape and urban harbor; HIMB researchers study the ecology and evolutionary biology at one of the country’s only pristine coral-reef sites. Thus, when our students and postdocs come to Hawaii to ask question in the area of cell and developmental biology, they work at KML, while to investigate ecological and evolutionary questions, they work at HIMB. UH has recruited into these units absolutely top-rate faculty, who are lead by two highly respected, world-class directors. In the minds of the international community of biologists, KML and HIMB are not competing units at UH, but rather two independent and vibrant marine sites with different missions. Two seems a bare minimum for our nation’s only island state.

In summary, we are hopeful that UH will consider the fates of PBRC and KML carefully, knowing that while their stature has been thoughtfully nurtured for 30 years, these academic resources
can be irreversibly lost in a day. We sincerely hope that, for the sake of UH, the researchers at PBRC and KML, and the international community of biologists, the University Hawaii will decide not to dismantle these highly productive research entities, but rather expand upon them to take advantage of their unique characteristics. In this way, UH will emerge from these uncertain times by building on its strength, and supporting research that only it can do.

We deeply value our relationship with the University of Hawaii and our colleagues there, and hope that these remarks will be taken in the sincere and heartfelt respect with which they were intended.

With regards and much aloha,

Edward G. Ruby
Professor and Vice Chair

Margaret McFall-Ngai
Professor
Dr. Virginia S. Hinshaw  
Chancellor, University of Hawai‘i at Mānoa  
Honolulu, HI 96822

April 2, 2010

Dear Dr. Hinshaw:

I am writing to you to express my deep disappointment that the Vice Chancellor of the University of Hawai‘i at Mānoa has proposed the reorganization (abolishment) of the Pacific Biosciences Research Center (PBRC).

I am a former graduate student of the University of Hawai‘i at Mānoa, a former tenured faculty member of the Department of Zoology, and a former member of the Bekesy Laboratory of Neurobiology of PBRC. In 1988 I was recruited from UHM to the University of Virginia, where I have remained, and am currently an active biomedical research investigator and tenured Professor of Neuroscience at the University of Virginia, School of Medicine, where I oversee an internationally recognized and competitive research laboratory. I also teach in both the School of Medicine and both graduate and undergraduate programs of the College of Arts and Sciences.

I am gravely concerned that such a proposal would have had the opportunity to advance through the various administrative levels at UHM to the point of imminent consideration by the Board of Regents, because I view it as ill conceived. I believe that PBRC is the home to a collection of some of the University of Hawai‘i at Mānoa’s most prominent, productive, and internationally respected biomedical and bioscience researchers. For those researchers PBRC and its dedicated and knowledgeable research administrators and support personal make it possible to compete effectively for federal and private research funds and produce research results that are worthy of publication in highly regarded peer-reviewed journals. As it was when I was a both a member of the faculty of the Department of Zoology and a member of the Bekesy Laboratory from 1981-88, PBRC provides a special and unique home for many, outstandingly talented and productive biological and biomedical research scientists who bring to UHM their capacity to compete at the cutting edge of modern biological discovery and succeed in winning a share of the scarce research funds and resources.

I predict that if the proposed abolishment of PBRC is enacted UHM will not be able to retain some of its most successful and prominent biological scientists. PBRC provides those scientists with the capacity to produce important scientific discoveries and with the opportunity to work together with other research laboratory heads and members of their laboratory who share collective interests in the areas of scientific focus of the individual components of PBRC.
PBRC is certainly not the only organizational unit within UHM that is diverse in scope or functioning as a specialized center for research that extends into broad and diverse subject areas, which all fall under a rather far-reaching but nationally known and recognized administrative title. HIG and HIMB come to mind as similarly diverse collections of researchers and quite diverse research programs that have formed as amalgamations which allow some of UHM’s most successful researchers to conduct their scientific investigations with the support of dedicated and knowledgeable grant administrators and small but appropriately tailored shared research facilities and support staffs for electronics and machine shops, computer and information technology services, and specialized research animal care and maintenance facilities such as exist in PBRC.

I respect and admire my former colleagues in the Department of Zoology of the UHM and I fully support and respect the instructional mission of such academic departments, but it appears somewhat naïve for the memorandum that outlines the proposed abolishment to suggest that many of the scientists who have been able to build and maintain nationally competitive research programs with the support of PBRC will be able to continue to maintain successful programs at UHM if the professional biomedical and biological grant administrative staff members and the research support facilities that have been available to them by virtue of the existence of PBRC are abolished. If PBRC were to be abolished and those researchers were relocated into academic departments there would not be saving for the University, instead there would be a considerable cost in terms of reputation as well as financial cost, in terms of lost federal research funding. If forced to relocate from PBRC it is likely that many of the programs of bioscience research that are now successful would founder under the need to devote time and resources to the development of departmental administrative support for accomplishing the specialized grant administration and accounting that is currently provided by the knowledgeable and professional research support staff that is at the heart of PBRC.

It is my hope that this letter and others that you will no doubt receive will convince you and the Board of Regents to reconsider the proposal to abolish PBRC, and that the University of Hawai‘i at Mānoa will reject this proposal and instead decide on a wiser course of action that will lead to increased strength and continuing advances in scientific research and understanding. Bioscience research is in many ways more important today than ever before and I believe that continuing and hopefully improved support for PBRC will, in fact, contribute to improved standing of the University as a research organization, improved and continuing success in the capacity for UHM scientists to compete for federal research dollars and international recognition while making strong and important contributions that will provide benefits to the State of Hawai‘i through contributions to the economic health, education, and well being of its citizens.

Sincerely yours,

Jeffrey T. Corwin, Ph.D.
Professor of Neuroscience
April 2, 2010

Dr. Virginia Hinshaw
Chancellor, University of Hawaii at Mānoa

Dear Chancellor Hinshaw:

As a former Visiting Research Professor at the University of Hawaii at Mānoa, I was delighted to see your email entitled “Future Campus Directions” (sent April 1, 2010), where you outline your thoughts for how the University of Hawaii at Mānoa and its community can invest to insure that both the institution and its faculty, staff and students excel in the future and continue to provide for the people and lands of the State of Hawaii. Your plan was elegantly constructed and wise in its vision. This said, I am dumbfounded by your administration’s plan to dissolve the Pacific Biosciences Research Center, an organized research unit whose very essence is what you are proposing to build on the Mānoa Campus. It seems to me that rather than disbanding the PBRC, you should be holding it up as an example for how the University should strive to function as a whole in the future.

In your email you list several criteria for investment, which I have shortened here in the interest of space: 1) ensuring student success, 2) building academic excellence, including increasing faculty who are Native Hawaiian or of other underrepresented minorities, 3) advancing knowledge by maintaining areas of unique strength and excellence (ocean sciences and health and well-being specifically mentioned) and 4) sharing our scholarship with the broader community through increased civic engagement. Each and every one of these points is well taken and no one will dispute their importance for the future of UH Mānoa. Each and every one of these points is also a strength of the PBRC. For example, I have had the pleasure of meeting many undergraduate and graduate students at the PBRC. The scientific mentoring that these students receive is world class and only afforded by faculty who have the time to teach through demonstration – a unique feature of an ORU where the sole focus of the faculty is research and training. Likewise, the demographics of the faculty of the PBRC is diverse, collegial and very approachable to both UH students and the public. While visiting the Békésy Laboratory, I personally had the opportunity to work/interact with Latina, Filipina, African American and Native Hawaiian faculty, all PBRC members. Being an underrepresented minority myself, I have never felt as welcomed and comfortable with any group of colleagues. Moreover, I have never been in a department with this level of diversity – and I doubt that there are many on the UH Mānoa campus that are more diverse. With respect to advancing knowledge through areas of unique strength, the work of the research teams at the PBRC seem to receive national and international press daily, e.g., Mark Martindale’s studies on evolution and development (for which he recently received the Alexander Kowalevsky Medal for Comparative Embryology), Bob Richmand’s research directed at coral reef conservation, Mike Hadfield’s work geared...
toward the preservation of endangered Hawaiian molluses, and Angel Yanagihara’s studies on the venoms used by box jellyfish (which even my 8 year-old niece in Maine talks about having seen snippets of it on the National Geographic Channel!). Finally, the outreach that the PBRC does - for example, engaging the community in local environmental conservation - underscores how this ORU is critically involve civically. For these and a host of other reasons for which there is simply not space to write, I see the PBRC as one of the flagships of UH Mānoa, a model to emulate, certainly not one to destroy.

In closing, I laud you for striving to improve the University of Hawaii at Mānoa and to insure that it continues to provide educational access and excellence to its students, generate research advances that benefit us both locally and globally, and contribute significantly to the community. As your email outlines, there are criteria that will help guide these goals. I hope that you will reread your email and honestly assess the strengths and weakness of the PBRC. If you do, I am sure that you will see that its pros far outweigh any cons, and that it is serving as an existing model for your wise plan for UH Mānoa’s future.

Sincerely yours,

Andrew Christie, Ph.D.
Investigator/Director, Imaging Core
Program in Neuroscience
John W. and Jean C. Boylan Center for Cellular and Molecular Physiology
April 2, 2010

Dear Chancellor Hinshaw:

I am writing in response to the proposed dissolution of the Pacific Biosciences Research Center. The proposal put forth will disband the unit into different parts of the University, thus destroying a unit that has excelled at working synergistically to provide research and training opportunities for the entire university community.

I feel privileged to be associated with PBRC. My own experience here has been amazing – the support staff and the collegial environment have allowed me to compete for extramural funding and thus maintain a productive research career. As a soft money faculty, my funding has been cyclical, and I have greatly benefited from the flexibility in our unit, which has provided bridging funds between grant periods. In addition, PBRC has had a long history of supporting female and minority faculty. At the Békésy Lab alone, I am one of three minority faculty members. We have all been involved in mentoring students and have been role models to students from under-represented groups.

Our infrastructure has allowed me to depend on our core facilities to construct custom equipment, train students in electron microscopy and molecular biology, and build a research program that spans many areas of expertise. I have also established collaborations with faculty from other units (SOEST, CTAHR). Every single one of my collaborators has benefited from the infrastructure at PBRC, providing them access to core facilities that were not available to them in their units. The loss of PBRC means that these opportunities will be lost not only to us in the unit but also to other faculty at UHM.

As a PBRC member, I have contributed to the educational mission of the UH. Every year, I have mentored 2 to 4 students and provided them with hands-on research experience. In addition, I have participated in the Honors program, teaching students research methods, and guiding them through the difficult process of writing a research proposal. Again, I was able to depend on PBRC infrastructure to assist these students. My involvement in educating undergraduate and graduate students is not unique within PBRC, as a matter of fact many of my colleagues have spearheaded special programs and obtained extramural funding to provide research experiences for undergraduate and graduate students, high school students and teachers.

The proposed plan does not include any provisions for soft money faculty like myself. My future is thus uncertain – however, what is certain is that the loss of faculty like myself means fewer extramural funds for UHM, fewer students trained in research, fewer minority students mentored by minority faculty, and fewer grant applications for major instrumentation. Dissolving PBRC would not a zero-sum game – it would be major a loss to the community. It is my sincere hope that PBRC can be retained as an intact unit.

Respectfully,

Petra Lenz, Ph.D.
Associate Researcher
To Whom It May Concern:

As a Neuroscience PhD candidate at the University of California Los Angeles (UCLA), I do not presume to understand the current fiscal situation of the University of Hawaii. However, as a student who has benefited from and continues to reap the rewards of training at the Pacific Biosciences Research Center (PBRC), I can attest that PBRC is an excellent institution composed of a richly diverse and interconnected team of researchers that generates meaningful publications and trains thoughtful students. The dismantling of such an institution would be a great loss not only to the University, but to the state of Hawaii. As such, I implore you to look at the larger picture, to not only assess the costs, but to also acknowledge the research and students PBRC has produced. Instead of tearing apart this great institution, please work towards strengthening what is already there. Please support PBRC.

An introduction to the PBRC I know

PBRC is an example of interdisciplinary research at its best.

I spent 1.5 years in the Hartline/Lenz Laboratory: 6 months as a visiting undergraduate student seeking experience at a large research active university and one year as a laboratory technician. During my time at the University of Hawaii, I benefited most from the rich diversity of the researchers present in the laboratory. The Hartline/Lenz Lab is composed of three PIs: Dr. Dan Hartline, a classic neurophysiologist; Dr. Petra Lenz, a plankton behavioral ecologist; and Dr. Ann Castelfranco, a mathematical modeler. At first glance, this appears to be a strange combination of talents. However, it is an ideal union in the field of neuroethology, the study of the relationships between the nervous system structures and the behavior and resulting ecology of the organism. Each PI brought a unique perspective to the table, and ultimately this allowed for a more complete look at the research.

In addition to the diversity within the lab, I also benefited greatly from the diversity present within the larger institution that is PBRC. During the 1.5 year period I worked in PBRC, I concurrently learned about the ecology of Kaneohe Bay from Dr. Lenz, learned how to set up plankton cultures from tows in Kaneohe Bay, and how to prepare the cultured specimens for electron microscopy with the help of Tina Carvalho at the Biological Electron Microscopy Facility (BEMF). In addition, I also learned about the phylogeny of invertebrate myelin by working with Dr. Jeff Drazen, Dr. Kenneth Kaneshiro, and Dr. Elaine Seaver to collect and look for myelin in various crustaceans, caterpillars, and marine worms.

Within PBRC I was immersed in a research-rich environment, constantly surrounded by people passionate about their projects. Through brief lunch hour run-ins, I learned about the plight of the honeybees from Dr. Patricia Couvillon and about the venom delivery system of the Hawaiian box jellyfish from Dr. Angel Yanagihara. These interactions generated a ideal learning environment and comfortable research setting.

Despite the condition of the buildings, PBRC has excellent facilities that provide students with the technical skills needed to succeed in graduate school

Through the assistance of collaborators, such as Tina Carvalho in the Biological Electron Microscopy Facility (BEMF), I became a very capable, competent microscopist. As a technician at the University of Hawaii, I became proficient in transmission electron microscopy (TEM), scanning electron microscopy (SEM), and laser scanning confocal microscopy. These skills set me apart from my peers and helped me get into great graduate programs, such as the
Neuroscience Interdepartmental PhD program at UCLA.

Since coming to UCLA, I have come to better appreciate the electron microscopes and the services provided by the BEMF at the University of Hawaii. Tina Carvalho, an expert at what she does, is an invaluable component of the BEMF. The new scanning electron microscope (SEM) purchased by the BEMF is phenomenal and far superior to anything I have access to at UCLA and USC. In my experience the BEMF is the premier facility in and around the Pacific Basin, which includes the West Coast.

In the Proposal to Abolish PBRC an emphasis is placed on the reorganization having “no anticipated impacts to students...” (p.3, 7). I respectfully, and strongly, disagree with this statement. Without my experience at PBRC, I would not be here now, a Neuroscience PhD candidate at UCLA. I initially came to the University of Hawaii seeking research experience, because I was interested in Biology, but was unable to see any future in it other than being a medical doctor. PBRC opened my world to research. Through the diversity of the institution, PBRC showed me that there are many interesting questions out there not only waiting to be solved, but needing to be asked. PBRC is the reason I am in science. For all the future good it can do, for all the future researchers it can train and inspire, please support PBRC.

Thank you, Jennifer.
Dear Dr. Virginia Hinshaw,

My name is Monica Orcine and I am an undergraduate majoring in Biology. I am currently working as a lab assistant at the Pacific Biosciences Research Center and I am very heart-broken to hear that this facility was going to be shut down. I am writing in support of PBRC and I strongly object to the destruction of this wonderful research facility which greatly represents the University of Hawaii and Pacific research region.

As a UH undergraduate, I am very proud and fortunate to do research in a very friendly and interactive research community. Although I am employed as a lab assistant, I am involved in many projects with many researchers and have gained so much research experience. I can remember a year ago when I first started that I did not have any experience or research foundation. I simply just started fresh. I definitely would like to thank Drs. Daniel Hartline and Petra Lenz for opening the door during my job interview. PBRC is my foundation and stepping stone. The opportunity of doing research at PBRC has expanded my horizons by exposing me to not only research opportunities in Hawaii, but also at a national and international level when I participated in my first REU fellowship at Mount Desert Island Biological Laboratory Island, Maine. This experience has boosted my confidence to share my research with professors and present at symposia. In fact, I will not only represent PBRC at this yearâ€™s Biomedical Symposium, but as well at my second MDIBL REU fellowship. I would not have been granted these opportunities if I had not worked at PBRC. Thanks to PBRC which enabled me to travel and share my research, my life has changed, and I now want to focus my career on international medicine. Because of my great experience at PBRC, I want future undergraduates and graduates to have these opportunities as well. In fact, two of PBRC faculty members, Drs. Petra Lenz and Pat Couvillon are working on a MARC grant for underrepresented undergraduate minorities. I know that PBRC faculty members are always opening research experiences for undergraduates. There are many programs that PBRC offers for undergraduates such as URM, MARC, and PRIDE.

There are so many ways that PBRC has branched out and has contributed to making University of Hawaii a better research institution. Most importantly, my learning experience from working at PBRC has taught me the importance of biomedicine, evolution, ecology, and invertebrate research. For example, the invertebrates are simpler organisms because of their basal position in the phylogenetic tree. As we better understand the evolutionary changes from primitive species to highly derived ones, we can better understand the complexity of the vertebrate nervous system. Studying evolutionary history is important in order to for us to understand ourselves. Similarly, just as scientists use the phylogenetic tree to exemplify the history of life, the study of ancestral organisms should not be ignored!
I see PBRC as a unique research community that better serves in sharing and providing better research. Even though there are many types of research projects, researchers at PBRC manage to work together, making this facility an interactive research community. Not only are the faculties important, but also the staff who contribute to better research. Ms. Lynn Hata, who is the secretary, helps the researchers a lot on ordering supplies and processing paperwork. She helps me with placing orders with the appropriate grants, and not to mention, my paychecks.

The computer technicians have been a great help for the directed research that I did last semester using Photoshop and with other computer help. The microscopists, Mrs. Tina Carvalho and Ms. Marilynn Aihara have been a great help on confocal microscopy, which is a major part of my directed research on copepod neuroanatomy. I can sincerely say on behalf of PBRC, that without them, the research process would have been severely slow. They are major PBRC resources.

Overall, I know that research is part of my life after being introduced to PBRC. I feel that if you take away PBRC, you are definitely taking away my UH pride. In fact, my research at PBRC constitutes the most significant part of my UH college experience. Because of the wonderful research and resources provided by PBRC, this is one of the major reasons why I stayed back in Hawaii. Research facilities like PBRC give local students an incentive to stay in Hawaii and to make use of the resources and opportunities provided by UH to expand beyond, especially in the research field. I am speaking on behalf of the future local Hawaii students, undergraduates and graduates, and UH faculties to give them the ability to have resources and research facilities like PBRC. Once this PBRC is lost, I do not know how this facility can be reconstructed.

I ask you again for UH and its principle on great research to please not shut down and break apart this wonderful research facility.

Mahalo.

Sincerely,
Monica Orcine
Dear Chancellor Hinshaw,

I am writing to you regarding the proposal to abolish the Pacific Biosciences Research Center (PBRC). I am a graduate student in the Zoology department, and a member of the Ecology, Evolution, and Conservation Biology (EECB) program. I strongly suggest that you keep the Pacific Biosciences Research Center (PBRC) intact.

The PBRC and the EECB program facilitated by this unit are among the few scientific programs that foster interdisciplinary interaction at the University of Hawai‘i. Given your time at the University of California, Davis, I assume you can appreciate the value of a multidisciplinary approach to science. Most of the top scientific research universities in this country (Davis included) have departments that are organized around broad themes and contain faculty from highly divergent areas of expertise, much like the PBRC. Given this fact, I find it puzzling that Dr. Ostrander considers the diversity of the PBRC faculty a weakness in his proposal to abolish this unit. My own graduate education has benefited immensely from the diverse expertise of the PBRC faculty and the interdisciplinary collaboration fostered by both the PBRC faculty and students, and the EECB program.

My experience, and undoubtedly, that of most of my EECB student colleagues, contradicts another point in Dr. Ostrander’s proposal: the lack of any “anticipated impacts on students as there are no degrees or certificate programs in PBRC.” In fact, the EECB program and degree designation for graduate students was originally developed within the PBRC, and has been administered through this unit since its inception in the early 1990s. Two prominent NSF-sponsored programs, the GK-12 program to integrate science research with teaching, and the Integrative Graduate Education and Research Traineeship (IGERT), have been administered through PBRC and EECB, and have provided valuable training for a large number of MS and PhD students at the University of Hawai‘i. While I have not been funded through either of these programs, I can say with confidence that most of the top graduate students in the Zoology department during my short tenure here have been trained through one of these two programs.
Personally, I have benefited from one research grant, as well as two travel grants administered through PBRC. Without the research funding, I could not have conducted my PhD dissertation fieldwork. The travel grants enabled me to disseminate my research to two different, diverse scientific audiences outside of Hawai‘i. It is difficult to overstate the importance of these opportunities to my development as a professional scientist, given the insular nature of conducting research here. I am sure the same is true for many of my fellow graduate students who have been assisted with funding through the PBRC.

The PBRC has and will continue to have an immensely positive impact on graduate student education at the University of Hawai‘i. It is one of the few programs at UH fostering interdisciplinary education in the sciences, which is crucial to the future success of researchers in any field. Please support its continued existence.

Thank you for your time and consideration.

Sincerely,

Matthew Iacchei
TO: Chairperson, Board of Regents  
University of Hawaii

VIA: M. R. C. Greenwood  
President

VIA: Virginia S. Hinshaw  
Chancellor, University of Hawaii at Manoa

VIA: Gary K. Ostrander  
Vice Chancellor for Research and Graduate Education (VCRGE)

FROM: Ian M. Cooke  
Professor of Zoology/Research Professor  
Department of Zoology/Békésy Laboratory of Neurobiology  
Pacific Biosciences Research Center (PBRC)

SUBJECT: Reject the proposal to abolish the Pacific Biosciences Research Center

Reference is made to the document and attachments published on-line by the Office of the VCRGE.

The action recommended by this proposal will destroy one of the University’s internationally most widely respected and productive research units without rational justification or any clear advantage to the University or State. The proposal should be rejected forthwith.

The stated purpose is “to abolish PBRC and to place faculty in units where a critical mass of complementary researchers are working”. Since the proposal contains no mention of physically moving faculty (with the exception of those at the Kewalo Marine Laboratory) it has no effect in promoting “critical mass”; there currently exists no impediment to the working interchange involved in “critical mass”.

The criticism that “there has been no common academic/research theme uniting the PBRC faculty” seems to me to speak rather to a strength of this research unit. Historically, PBRC has promoted and fostered pioneering research in biological sciences as available according to the talents of UH faculty. It thus finds itself well-positioned to exploit granting agencies’ current promotion of interdisciplinary research. The availability of full- or part-time research positions has led to PBRC’s distinguished history as an initiator and incubator of innovative programs. These have included the Cancer Center, Center for Tropical Medicine, at least two programs for recruitment of minority students to research careers, and provided JABSOM with immediate research credibility to avert a threatened loss of accreditation by transfer in 2003-4, of PBRC researchers holding NIH grants and their labs to the medical school.
It is difficult to overemphasize the difference in research productivity possible in a dedicated research unit relative to an academic department. Teaching deserves and demands a great deal of time and attention. Research, particularly in biological sciences, demands long stretches of uninterrupted time and effort. It has been my great good fortune to be associated with PBRC as a member of the Békésy Laboratory of Neurobiology on a split appointment, with tenure in the Department of Zoology. During my 37 years I have come to appreciate the significant advantage for research productivity provided by a dedicated research organization. The ability to devote undivided attention and time to research for a portion of each academic year made the difference in achieving sufficient progress on proposed projects to obtain steady extramural funding from both NIH and NSF. The research activity in turn provided the possibility of research experiences for one or more undergraduates at all times, for training of Zoology graduate students, and for the enrichment of the research environment by postdoctoral students and visiting international senior investigators.

What might not be obvious is the unusually supportive research environment that characterizes PBRC. From my training and sabbatical leaves, I am able to compare PBRC with the Harvard Biology Department and five European research institutions. None of these offered support facilities comparable to those available to the biological sciences community here at UH established, organized and administered by PBRC. Among those my research program particularly exploited are the construction of custom mechanical and electronic equipment, fluorescence and electron microscopy facilities, and computer networking. The PBRC staff has been remarkable for facilitation of paper work such as ordering research equipment and supplies and handling of personnel matters. The proposed abolition of PBRC and reassignments threatens these facilities and their continued availability to the biological sciences community.

For a research university located in the center of the Pacific Ocean to close down a uniquely productive marine laboratory, accessible without special transport and centrally located in the city, seems truly counterproductive. There exist funding sources for the refurbishment and maintenance of such facilities (e.g. the National Science Foundation). The Coconut Island facilities of the Hawaii Institute of Marine Biology are not equivalent to those of the Kewalo Laboratory: they are not readily accessible, nor is there access to clean, open-ocean water. Changes in the lease arrangements between the State and the University for the Kewalo site have not been documented publically, to my knowledge. It is my understanding that the lease will continue for 20 years. Closing of this laboratory will almost certainly result in the departure from the University of the researchers working there because their research infrastructure requirements cannot be met. This group has recently received international acclaim with the award to Dr. Martindale of the Alexander Kowalevsky Medal for Comparative Embryology for his contributions to the field of evolutionary developmental biology.

There are many unaddressed problems associated with the proposal to administratively transfer faculty to academic units. A few of these include: renegotiation of hire contracts; departmental relations with respect to teaching by F-faculty vs. R-faculty; voting on personnel committees; voting on decisions about new hires (or distress at losing the ability to do so because of the additions); as well as many further disruptions to the governance and operation of the receiving departments. At least with respect to Zoology, the transfers have not been discussed with the Chair or faculty.
The background provided in the proposal document is misleading and incomplete. Contrary to the assertions made, PBRC has remained highly productive as evidenced by research publications in prestigious journals and success in obtaining extramural funding at a ratio of approximately 3:1 extramural funds to state funds. This continued success has been achieved in spite of impediments imposed by the VCRGE since his assumption of his position in 2004 (see further below).

Since the death of the PBRC director, F. C. Greenwood in August, 2000, PBRC has been without an independent director. “Faculty hiring has not kept pace with retirements and other faculty departures” is included in the rationale for abolition, but fails to acknowledge that PBRC has not been permitted to recruit or hire since 2000 by the administration. “There has not been stable long-term leadership” is noted without also stating that while two searches for a new Director were conducted, in 2003 and 2007, negotiations by the VCRGE with recruits selected by the faculty were unsuccessful. Appointment of a Director from within the existing faculty of PBRC was rejected.

A resolution adopted by the Faculty Senate at its meeting on January 20, 2010, details some of the abuses attributable to the obvious conflict of interest involved in the VCRGE acting as the Director of PBRC since January 2005, while working for its abolition.

PBRC, as the major organized research unit for the biological sciences in the State, provides a focused research environment, as well as facilities, that cannot be duplicated or provided by the academic departments. As a Carnegie Research 1 university, the biological sciences need and deserve the continuation of PBRC. PBRC must not be abolished.
March 31, 2010  
Gary Ostrander  
Vice Chancellor for Research & Graduate Education  
Hawai‘i Hall 211  
2500 Campus Road  
Honolulu, HI 96822

Dear Vice-Chancellor Ostrander,

As a graduate student in the zoology department here at the University of Hawai‘i at Manoa I am very concerned with the proposed abolition of the Pacific Biosciences Research Center. I am currently employed as a graduate research assistant working in the laboratory of Dr. Petra Lenz and Dr. Dan Hartline on a project in collaboration with Dr. Clyde Tamaru. This collaborative effort would not be possible without the presence of the PBRC research facility and its constituent faculty and infrastructure in its current form. The value of a unified group of researchers located on the UH Manoa campus cannot be overstated. The daily guidance and mentoring provided by Dr. Lenz and Dr. Hartline has been unmatched in my academic career.

My thesis research project is focused on understanding the life cycle of the Hawaiian pink snapper (Opakapaka) in an effort to achieve a sustainable bottom fishery in Hawai‘i. This research has required much research infrastructure from space for cultures to a sophisticated 3D filming apparatus. I could not do my research without the extensive help, advice and training from our shop and computer support staff. All of these facilities have been available to me in the Bekesy building. I feel fortunate to be working in PBRC. I have also noticed that many of my fellow graduate students in Zoology depend on PBRC facilities for their research, facilities that are not available within the department. Much of the best research, education and mentoring currently underway at PBRC would not be possible without the current technical support and infrastructure – there is a synergy here that I have not experienced previously.

I am also concerned as to how the abolition of PBRC plays into the “future campus direction” described by Chancellor Virginia Hinshaw in her April 1st campus-wide announcement. As a member of the PBRC research group, I feel that many of the “criteria for investment” are met by PBRC. As a graduate student working daily under the roof of the Bekesy building, I can especially speak to the many ways in which PBRC satisfies the first criterion listed: “Ensuring student success, from increasing financial aid to strengthening academic support services to providing courses required for timely graduation.” As mentioned above, without the existence of PBRC in its current unified state, the project in which I am involved and which supports my Research Assistantship position would not be possible. Dan Hartline gives much of his time to teaching an excellent graduate level course, of which I am a benefiting student, in addition to his undergraduate course responsibilities. There is a great wealth of knowledge, research productivity and mentoring capacity that will be lost or greatly diminished in the dissolution of the Pacific Biosciences Research Center.

Most Sincerely,

James Jackson  
Graduate Student, Department of Zoology
31 March 2010

Dr. Virginia Hinshaw, Chancellor
University of Hawaii at Manoa
Hawaii Hall 202
Honolulu, HI 96822

Dear Chancellor Hinshaw:

I respectfully write to convey my deep dismay at learning of the recent proposal to reorganize the Pacific Biosciences Research Center (PBRC) at the University of Hawaii. By way of background, the Silversword Foundation has maintained a longstanding working relationship with key elements of the PBRC, specifically the Center for Conservation Research and Training (CCRT) and its Volcano Rare Plant Facility. In addition, the Silversword Foundation has provided more than $1,100,000 in grant support to the University of Hawaii for conservation work during the past seven years, and fully expects to provide more funding in future years. Though the latter funding has been provided to the Pacific Cooperative Studies Unit, it supports work that entails the key collaboration of the Volcano Rare Plant Facility.

I certainly do not wish to interfere in the internal deliberations of the University, but simply highlight that the proposed reorganization risks serious harm to the dynamic nature of the PBRC, including to the CCRT and its component programs. Given that the CCRT has played such an enormously important role in conservation research, training, and management in Hawaii, including through its pivotal role in the establishment of the Hawaii Conservation Alliance, and given that the Volcano Rare Plant Facility has achieved national and international distinction for its efforts to rescue Hawaii’s most critically imperiled plants from extinction, I reiterate my deep dismay at the prospect that these programs will suffer under the proposed reorganization.

Sincerely,

Robert H. Robichaux
President, Board of Trustees
Dear Chancellor Hinshaw,

The Hawai'i Conservation Alliance is deeply concerned about the proposal to abolish the Pacific Biosciences Research Center (PBRC) – we believe that this action will have a strong negative impact on biodiversity research and conservation efforts in Hawai'i. Over many fruitful years, PBRC programs and resulting research have broadened our understanding of biological diversity and its conservation across the Hawaiian Islands and the Pacific region. Nationally, University research programs are shifting to the cross-disciplinary organizational structure currently achieved by the PBRC because this structure facilitates the collaborative and synergistic activities required to take on the most pressing environmental challenges of our day – climate change, invasive species, and non-sustainable development to name a few. The collective research capacity of the PBRC programs in developmental biology, molecular and evolutionary biology, ecology, and conservation biology of marine and terrestrial systems has greatly benefited from this cross-disciplinary approach, but just when other Universities are moving to cross-disciplinary models, the proposed reorganization to a less integrated structure can only hinder Hawaii’s collective research capacity to address mounting environmental threats.

The PBRC has played a critical leadership role in the larger conservation research and management community through its support of the Hawai'i Conservation Alliance (HCA). In 1993 Fred Greenwood, former director of PBRC, took the lead in administering the then Secretariat for Conservation Biology, which evolved into the current HCA. By supporting the HCA over the years, the University has enjoyed an unparalleled opportunity to interface with the agencies and landowners responsible for managing Hawai'i’s lands and seas, and also to foster the professional growth of new generations of conservation researchers, managers, and educators. In fact, with the University’s support the HCA’s annual Hawai'i Conservation Conference has helped it to grow into the largest professional gathering of its kind in the state, drawing 75 participants in the first year (1988) and more than 1,100 in 2009. This collaborative effort is truly one of the nation’s conservation success stories. On behalf of the HCA membership, I urge you to withdraw the proposed abolishment of the PBRC, and continue supporting effective biodiversity and conservation research.

Sincerely,

Christian Giardina
2010 Chair

Kelley Sage
2010 Acting Vice Chair

Gregory Koob
2009 Past Chair
Dear Chancellor Hinshaw,

I am writing to you regarding the proposal to abolish the Pacific Biosciences Research Center (PBRC). This is my first year as a graduate student member of the Ecology, Evolution and Conservation Biology (EECB) program, and I have benefited greatly from PBRC and strongly urge you not to abolish it.

Even as an undergraduate, I was employed by a grant obtained by a PBRC faculty member. I was also able to attend the weekly seminars given by students, faculty, and other visiting scientists. The weekly seminars also allow students to share their research and receive valuable feedback from fellow colleagues.

The PBRC faculty has obtained many grants which help the University and has also invested time in helping students excel in research and learning. Several PBRC faculty members, including Robert Cowie, Brenden Holland, Ken Kaneshiro, and Durrell Kapan are part of the EECB program, which was originally developed by PBRC. These faculty members have been vital to the continued success of EECB as a place where people from various departments are able to come together to exchange ideas.

Many EECB students have also benefited from National Science Foundation grants and other scholarships administered by PBRC. Through EECB I was recently granted funding from one of these sources, and it will contribute greatly to my graduate research.

PBRC is an indispensable part of the University. Its funding and its faculty have influenced and enriched my college experience, as well as those of many other students. Please support its continued existence.

Sincerely,

Jaynee R. Kim
Dear Chancellor Hinshaw,

I am writing to you regarding the proposal to abolish the Pacific Biosciences Research Center (PBRC) which I strongly oppose. I am a postdoctoral scholar whose research has benefited directly from Durrell Kapan and Ken Kaneshiro. With their support, I have been able to establish an ancient DNA facility at UH Manoa and have been successful getting a grant to do ancient DNA research in Hawaii. I have also worked with other PBRC faculty members including Brenden Holland and Rob Cowie to apply for grants to expand the use of the ancient DNA facility. The support of these faculty and my interactions with them have been a valuable part of my postdoctoral education.

PBRC is a valuable part of the University’s educational and research capacity. The resources and synergy it provides are important to my success as a post-doctoral scholar. Please support its continued existence.

Sincerely,
Yvonne Chan, PhD

Yvonne Chan, Ph.D.
NOAA Post Doctoral Researcher
University of Hawaii - Manoa
ylhchan@hawaii.edu
(808) 349-1810

*****************************************************************************
Dear Chancellor Hinshaw,

I am writing to you regarding the proposal to abolish the Pacific Biosciences Research Center (PBRC). I am a life long resident of Hawaii, and currently a graduate student of the Ecology, Evolution and Conservation Biology (EECB) program, previous fellow of the highly successful NSF GK-12 program, and a graduate research assistant in PBRC/CCRT. Even before my time at UH, as a student at McKinley High School, I benefited immensely from the research and outreach provided by PBRC through the various activities that faculty and staff have been involved with over the years (i.e. Hawaii State Science Fair, guest lectures, and mentoring). I have continued to benefit immeasurably from my interactions with researchers and staff in PBRC since becoming a student at UH. I have received invaluable support from PBRC staff, faculty and the programs administered by the department in the form of monetary, academic/professional mentoring and logistical support for my research both as a graduate student and a research assistant.

The EECB program offers travel and research grants and scholarships for graduate students in various departments such as Zoology, Botany, Geography, Oceanography, Plant & Environmental Protection Sciences, and Natural Resources & Environmental Management. Additionally, this interdisciplinary program provides the opportunity for academic interactions with successful and outstanding faculty members and other students. These interactions provided me opportunities to improve my research and communication skills, and scientific expertise across fields of research. This program is one of the outstanding attributes of attending graduate school at UH, and without the PBRC staff and administration it would not be as successful as it has been.

I was also NSF GK-12 Fellow, August 2006 – July 2008. The GK-12 program provided graduate students the opportunity to partner with Hawaii’s science teachers and public outreach educators in mentoring students. These fellows assisted in developing and teaching standards-based biology by using their research to emphasize perspectives of evolutionary and conservation biology and incorporating innovative hands-on research experience into school curricula. This PBRC-administered program allowed me to share my research on seabird ecology, evolution, and conservation with a range of school children and educators, and to incorporate a multitude of subjects such as math, botany, avian biology, geology, and history in teaching standards-based biology to the community. Furthermore, it provided an opportunity to help further scientific outreach to the public, allowing UH to give back to the community in which it resides. Like many of the GK-12 alumni, after graduation, I will continue to teach science-based inquiry to the community through guest teaching in public classrooms, workshops, guest lecturers, and other outreach forums. Such services are invaluable and cannot be measured with mere accounting statistics.

PBRC has been extremely important for my academic development, scientific research and professional future. My case is not unique, rather it exemplifies the experience of most current and future graduate students that have had the opportunity to interact and work with the extremely competent and hard working professionals in PBRC. The resources and superb research activities, public services and outreach provided by PBRC are irreplaceable, and a true value to the future of the University of Hawaii.
Without the support of these programs and opportunities administered by PBRC, it would have been much more difficult, if not impossible, to complete my dissertation research, and I surely would not have developed into the well rounded, critically thinking, outreach minded professional that I feel I have become through my experience at UH. I strongly urge you to not abolish PBRC or accept the currently proposed reorganization plan. As a life long resident of Hawaii, a UH graduate student, and someone deeply concerned with the quality of life in our islands I feel that the abolishment of PBRC or acceptance of the current reorganization plan will be a great loss to the academic and education community in Hawaii, and will be detrimental to the future of research that benefits us all.

Sincerely,

Norine Yeung  
PhD Candidate  
University of Hawaii  
Zoology (Ecology, Evolution, and Conservation Biology)
Dear Chancellor Hinshaw,

I am an Associate Professor in Plant and Environmental Protection Sciences and have had the good fortune to have some high profile papers in internationally recognized journals (like Science and PNAS). I have also been fortunate enough to have brought in a few million dollars in research funds during my 8 years at UH Manoa. I mention these things to emphasize that I am very involved in research, and have been fairly successful at it. My success is in no small part due to the resources available to my lab. For this reason, I am writing in strong support of Dr. Gabor Mocz and the PBRC Greenwood Molecular Biology Facility. There are two very important reasons this core facility should be preserved. For one, it has been a crucial part of my ongoing research over the past 8 years. I can’t honestly tell you how many sequences my graduate and undergraduate students and postdocs have had processed by the Greenwood Molecular Biology Facility but it has been in the thousands by now, I am sure. Having the Core facility centered on campus has been crucial to troubleshooting and our ability to generate novel data quickly. If this facility is closed, we will lose a very valuable resource, and our efficiency will suffer tremendously.

This brings me to another very important point. Many will say that we could send our sequences off campus or overseas for processing, but the vital consultation services that Dr. Mocz and the core facility provide is absolutely essential. Having an expert in modern and cutting edge molecular techniques in residence is a phenomenal advantage over labs which must literally grope their way towards solutions to sequencing problems. Dr. Mocz is extremely generous with his time and his expertise is unmatched. Whenever we have a problem with any stage of our DNA sequencing work, we know he is available and able to advise us. This is a major advantage to having a core facility -- Dr. Mocz and the Greenwood Molecular Biology Facility simply cannot be replaced. To let the Greenwood Molecular Biology Facility disappear would truly be ‘penny wise and pound foolish’ since there might be some savings in the short term, but the long term costs in the extra time that I, and my whole lab will spend troubleshooting and retrying experiments that could have easily been successful in the Greenwood Molecular Biology Facility will be extremely expensive. Throughout this letter I have spoken from the perspective of my own lab, but I know there are many other PI’s who feel the same way. The Greenwood Molecular Biology Facility is a resource we can’t afford to lose, it will very quickly end up costing the University more than we can save in the short term. Having a shared resource like the Greenwood Molecular Biology Facility increases everyone’s success and competitiveness, and this facility has been a vital part of the research environment for the past 23 years.

Thank you for considering my comments,

Daniel Rubinoff
Dear Chancellor Hinshaw,

I am writing to you regarding the proposal to abolish ("reorganize") the Pacific Biosciences Research Center (PBRC). As a former graduate student in Zoology, member of the Ecology, Evolution and Conservation Biology (EECB) program and a graduate research assistant in the Center for Conservation Research and Training (CCRT) I have experienced firsthand the numerous benefits of such an immensely well organized and diverse group of researchers and staff that make up PBRC.

As a graduate student at UH pursuing my PhD in Zoology with specialization in Ecology, Evolution and Conservation Biology (2003-2008) I personally received a great deal of financial, logistical and mentoring support from both the PBRC staff and researchers, and through the various funding programs (NSF GK-12, IGERT) that are administered through PBRC and that support EECB. As a research assistant working in CCRT I was also the beneficiary of the efficient and incredibly knowledgeable support staff that allowed me to carry out my research, and provided expert logistical and administrative support. Additionally, the diversity in expertise of researchers within PBRC also greatly improved my graduate education and development as young scientist. Much of this interaction and the ease with which I was able to carry out my research would not have been possible, or accomplished as efficiently, with a support staff focused primarily on undergraduate education (i.e. Zoology, Biology). This is not the case because these departments (Zoology, Biology, etc) are inefficient or staffed with poorly qualified individuals, quite the contrary, but it is simply because they are not exclusively focused on research, instead have to deal primarily with the intricacies of undergraduate education and associated issues.

In addition to my experience as a graduate student, I was able to witness the benefits of having a department like PBRC at a university while I was carrying out my postdoctoral research at the Smithsonian Institution. During the summer of 2009 I was preparing an NSF proposal along with Dr. Robert H. Cowie and two other collaborators, one in Brazil and one at the Smithsonian. Dr. Cowie was away in Paris during the preparation and submission of this proposal, which required extensive coordination between the Smithsonian support staff and those within PBRC. Without the knowledge, experience and expertise of the staff in PBRC it would not have been possible to coordinate the submission of this proposal and we would not have been awarded $500,000 by NSF to do this research. Such examples are not unique, but rather indicative of the value PBRC provides to the university educational and research community as a whole.

Having a department like PBRC at the University of Hawaii benefits graduate education, researchers, citizens of Hawaii, and the state itself by providing invaluable educational opportunities, diverse research programs and activities, public outreach through programs like GK-12, and through facilitation of successful grant awards from agencies like Environmental Protection Agency, National Science Foundation, the United States Department of Agriculture and many more. With such a valuable organization firmly rooted in the past success of the University of Hawaii and so important to it's future excellence, I strongly urge you to reject any recommendations to abolish PBRC, particularly the current reorganization plan.

Sincerely,

Kenneth A. Hayes, Ph.D.
From: Ann N A. Sakuma
Sent: Thursday, April 08, 2010 2:51 PM
To: Ann N A. Sakuma
Subject: FW: [Fwd: Letter Regarding The Proposed Abolishment of PBRC]

------- Original Message -------
Subject: Letter Regarding The Proposed Abolishment of PBRC
Date: Wed, 31 Mar 2010 10:47:18 -1000
From: David Sischo <sischo@hawaii.edu>
To: vhinshaw@hawaii.edu

Dear Chancellor Hinshaw,

This letter is in regards to the proposed abolishment of the Pacific Biosciences Research Center (PBRC). As a graduate student in the University of Hawai‘i’s Zoology Department, and a member of the Ecology, Evolution, and Conservation Biology (EECB) program. I can testify to the necessity of this institution and associated faculty. I strongly oppose this abolishment and urge you to consider your decision carefully.

PBRC has been instrumental in the progress of my own degree program, and many of my fellow graduate students programs. Many PBRC faculty members contribute to the existence of the EECB program, which provides community outreach, funding for graduate students, and a forum for the exchange of ideas and peer review of research.

Although I am not directly supported by PBRC funds, I am an active member of the EECB program, I conduct my research at the Kewalo Marine Laboratory, and use the guidance and expertise of the PBRC faculty on a regular basis.

Abolishment of PBRC has far reaching consequences for science programs and research at the University of Hawai‘i. PBRC’s faculty, facilities, grants, and student support are intricately involved in many programs, such as EECB, and many science departments at UH. Abolishment of PBRC will severely affect the quality of graduate research at the University of Hawai‘i.

In this day and age when anthropogenic pressures on Hawai‘i’s ecosystems are only growing, and the need for sound conservation management and sustainable agriculture are ever increasing. Closing productive educational institutions in the sciences, such as PBRC, is completely irrational. As a member of the academic community and a concerned citizen of the State of Hawaii, I urge you to support the continued existence of PBRC.

Sincerely,

David Sischo

Graduate Research Assistant
Zoology Department
Kewalo Marine Laboratory
41 Ahui Street
Honolulu, HI 96813
Dear Chancellor Hinshaw,

I am writing to you regarding the proposal to abolish the Pacific Biosciences Research Center (PBRC). As a PhD student member of the Ecology, Evolution and Conservation Biology (EECB) program, I have benefited immensely from PBRC and strongly urge you not to abolish it.

The expertise of PBRC faculty has been particularly valuable to my graduate education. Several PBRC faculty members, including Brenden Holland, Durrell Kapan, Rob Cowie and Ken Kaneshiro, are part of the EECB program, which was originally developed by PBRC. These faculty members have been crucial to the continued success of EECB as a place for interdisciplinary exchange of ideas among students and faculty across many departments. The EECB program has been essential in my PhD training at UH and I believe its success is very much related to the existence and contribution of PBRC.

I also benefited directly from scholarships administered by PBRC. Funding from this source has been critical to my PhD research since I am performing numerous field expeditions in a foreign country. The success of my project depends on grants that are efficiently administrated and friendly to graduate students to manage and report results.

PBRC is a valuable part of the University's educational and research capacity. The resources it provides are important to my success as a PhD student, and to the many other EECB students who have benefited from its funding and its faculty. Please support its continued existence.

Sincerely,
Isabel Belloni Schmidt
PhD candidate
Botany Department/ Ecology, Evolution and Conservation Biology Program (EECB)
University of Hawai‘i at Mānoa
3190 Maile Way, #101
ischmidt@hawaii.edu
Dear Chancellor Henshaw,

I am writing concerning the proposal to abolish the Pacific Biosciences Research Center (PBRC). I believe that ending PBRC would have a very negative impact on life sciences at the University of Hawaii. As a graduate student in Zoology and a member of the Ecology, Evolution and Conservation Biology (EECB) program I and many other students have benefited from PBRC. Faculty members of EECB and PBRC, such as Robert Cowie, Brendan Holland, Ken Kaneshiro, and Durrell Kapan, have made EECB a tremendous success. The EECB program has provided me and many of my graduate student colleagues with funding for my dissertation research as well as a forum to exchange information with colleagues from other life science departments on campus. In addition, the EECB program has made me and many other students aware of the importance of being involved with K-12 science education in the community and continues to provide opportunities for graduate students to be involved with K-12 education in Hawaii.

PBRC is really important for life science research and education at the University of Hawaii and without PBRC the EECB program would not be a success.

Sincerely,

Kelly S. Boyle
Dear Chancellor Hinshaw,

I am writing to voice my support for the continued existence of the Pacific Biosciences Research Center (PBRC). I strongly disagree with the proposal to dissolve the PBRC. As a former NSF GK-12 Fellow and current Ecology, Evolution, and Conservation Biology (EECB) student, I have benefited greatly from the activities of PBRC.

The GK-12 fellowship has been the most effective and meaningful aspect of my graduate school career. I was in the last GK-12 cohort (2007-2009), and can only assume that the efficiency by which the GK-12 program was administered was learned through careful testing and monitoring, which was enabled by PBRC’s specific research focus. I believe that the success of the GK-12 program was also linked to the PBRC mission: it encouraged collaborations across disciplines. This was evident in the GK-12 program, which by necessity (to meet the needs of graduate students, the NSF, UH Manoa, and the constituent public) was multidisciplinary. I worked with biological, educational, and sociological specialists during my fellowship, and my academic and professional careers are stronger for it. Additionally, the funding support provided by PBRC was vital.

I am currently conducting my dissertation research in my field site of Palau. At the same time I hold a high level position at the Palau Conservation Society, Palau’s premier environmental organization. I am unique in the organization in being able to bring a solid scientific perspective to applied conservation work. My ability to balance scientific research and applied science was developed, in part, to my participation in the EECB program. EECB offers a unique environment to discuss research proposals and student-generated findings in a cross-disciplinary setting. PBRC administers EECB. PBRC also supports research and exchanges across the Pacific, and I hope to gain more financial support from PBRC in the future.

PBRC offers something unique: support for cross-disciplinary research. No single department in the University can offer this, and this is why the continued existence of PBRC is vital.

Sincerely,

Anuradha Gupta

PhD Candidate
Geography Department
University of Hawaii at Manoa
Honolulu, HI

Director, Conservation and Protected Areas Program
Palau Conservation Society
Koror, Palau
March 30, 2010

Dr. Virginia Hinshaw
Chancellor
University of Hawaii at Manoa
2500 Campus Road, Hawaii Hall 202
Honolulu, Hawaii 96822

Dear Dr. Hinshaw,

The Natural Resources Conservation Service would like to express our support for keeping the Pacific Biosciences Research Center (PBRC) as an Organized Research Unit of the University of Hawai‘i at Mānoa and not integrate its various programs into other existing academic units. We believe that the PBRC has a history of being one of the most successful units in the biological sciences at the University. Disbanding it could be detrimental to the support that PBRC has provided to the administration and operations of the Hawaii Conservation Alliance (HCA) for the past 17 years. Keeping it as an Organized Research Unit would also retain the ability of PBRC to have the flexibility and resources to support high priority, state-wide initiatives such as the HCA.

The PBRC has a long history with the HCA. Under the former director, Fred Greenwood, PBRC offered to administer the Secretariat for Conservation Biology (the precursor to the HCA) for the first 5 years (the agreement was that the management of Secretariat operations would rotate among each partner organization every 5 years – PBRC and UH has been doing it for 15 years with Ken Kaneshiro as the Executive Director).

The PBRC has played a significant role in a number of other conservation initiatives such as the operation and maintenance of the Rare Plant Propagation Facilities at Volcano and Olinda; the establishment of a new graduate program in Ecology, Evolution and Conservation Biology (EECB) in 1991; the establishment of the Center for Conservation Research & Training in 1993; and most recently, the establishment of the Institute for Integrated Earth Observing Systems in 2006.

The Volcano Rare Plant Propagation Facility has propagated several thousands of seedlings of the Mauna Kea and Mauna Loa silverswords and successfully outplanted about 25,000 individual plants back into their natural habitat.
The EECB program admitted its first three graduate students in 1991; today, it boasts more than 120 students. Several graduates from the EECB are employed by various partner organizations of HCA.

PBRC organized and coordinated the Hawaii Conservation Conference for the first 12 years. The number of participants grew from 75 to more than 600. The conference now attracts more than 900 participants. Natural Resources Conservation Service, as a member agency of the HCA, benefits greatly from the coordination of efforts made possible through the alliance. Having the PBRC as a member organization is an important link to the University of Hawai'i at Mānoa and I would like to see that relationship continue.

Sincerely,

[Signature]

LAWRENCE T. YAMAMOTO
Director
Pacific Islands Area

cc: Deanna Spooner, Executive Director, Hawaii Conservation Alliance
Dear Chancellor Hinshaw,

I am writing to you regarding the proposal to abolish the Pacific Biosciences Research Center (PBRC). As an international graduate student at UH Manoa and someone who has visited Kewalo Marine lab and seen the work they do I strongly urge you to prevent this wasteful dissolution. A strong part of the attraction of UH Manoa for both domestic and international students is its strength in Marine and Ocean Sciences, with the PBRC and Kewalo Marine Lab I fear a significant proportion of that credibility would be lost.

Several PBRC faculty members, including Brenden Holland, Durrell Kapan, Rob Cowie and Ken Kaneshiro, are part of the EECB program, which was originally developed by PBRC. These faculty members have been crucial to the continued success of EECB as a place for interdisciplinary exchange of ideas among students and faculty across many departments.
EECB students have also benefited from a number of National Science Foundation grants and other scholarships administered by PBRC. Funding from these sources has been critical to many graduate students research.

PBRC is a valuable part of the University's educational and research capacity. The resources it provides are important to the success of numerous graduate students who have benefited from its funding and its faculty. Please support its continued existence.

Sincerely,

Philip Davy

Philip Davy
Graduate Assistant
Molecular Biosciences and Bioengineering
University of Hawaii
Tel: +1-808-692-1749
Fax: +1-808-692-1962
Ann N A. Sakuma

From: Ann N A. Sakuma
Sent: Friday, April 09, 2010 3:23 PM
To: Ann N A. Sakuma
Subject: FW: PBRC comments from Anna Cooke

Original Message

Subject: Vice Chancellor
From: "Anna Cooke" <ac283@yahoo.com>
Date: Tue, March 30, 2010 04:25
To: pat@pbrc.hawaii.edu

Dear Pat,

My Dad wrote to me saying that the Vice Chancellor is proposing that PBRC be abolished.

I think that the Vice Chancellor's position is a short sighted and ill-advised course of action. In my line of work, lack of transparency behind a person's position is always suspect. If the University administration is too apathetic to oppose the Vice Chancellor, I think it a poor indication of the state of the education system and a massive disservice to students who are slated to become future researchers. Just because a practical function for PBRC cannot be found today does not mean that something worthwhile will not result at a later point in time. In the meantime, PBRC's programs train students to think logically, critically and analytically. I think anyone would agree that these traits are ones that need to be fostered at every opportunity, and Universities are in an unparalleled position to do so.

Anyone can learn the theory behind research in textbooks. However, the opportunity to actually put that theory into practice isn't one that is always easy to come by. Textbooks rarely spend time discussing why certain experiments failed. This is very different to my actual experiences in running experiments, particularly as sloppy work or failure to pay attention to detail would result in a failed experiment. These sorts of lessons are ones that can, in my opinion, only be learned in a laboratory setting.

Abolishing PBRC and all of the mechanisms in place to develop future researchers will make it that much harder for people who do want to be exposed to, and trained in, excellent technique and practice. It will mean that there may be not enough spots for the best and the brightest. It is already difficult to get into research programs - I am not sure why the Vice Chancellor would want to make it harder and it apperas that he has not been forthcoming with his agenda.

Not only did my ten summers (and the occasional vacation after that) at the Bee Lab train me to be extremely picky about my own procedures, it made me extremely aware of the importance of communicating clearly, and documenting absolutely everything so that future Bee Lab students could replicate various experiments. The same insistence on exact procedure which resulted in statistically meaningful work now assists me at work in a law firm today. Incoherent or inconsistent policies have been the subject of my suggestions (and in many cases, authorization to standardize various procedures in order for my firm at large, to operate better). The theoretical bases behind the research may no longer be at my fingertips, but the good habits I learned in the Lab have followed me to law school and to work. I find that I still use positive conditioning to achieve the desired results in many situations, and it gets better results from all parties with whom I deal.
People still ask me about my psychology background. They are fascinated by the bees and goldfish experiments, and the procedures and theories behind them. I was actually explaining the pilot program with the goldfish, lights and timing less than a week ago to a corporate lawyer, who found the goldfish much more exciting than his high powered job in Hong Kong. Further, it may seem odd, but my very first law firm job was a result of the principal of the firm reading about my research on my CV. He stopped reading my CV once he reached the research portion in the CV, and called me in for an interview because I had an interesting resume.

The point is this: one of the main purposes of PBRC is to turn out well-trained researchers. A side benefit of that training is that the people who are trained at PBRC and branch out into other fields are still able to use that training, whether it be another field altogether, working with a government department to save the bees from the mite problem, giving them a springboard to join a national research organization, or gaining excellent observational skills and putting them to use in a way which I haven't thought of yet. The previous concrete examples belong to colleagues with whom I have worked, and you are probably in a better position than I am to tell the Vice Chancellor what PBRC alumni have been doing since we left our respective programs.

I hope that this note has been of assistance and I really hope that the University administrators will realize that their first duty should be to the students and tomorrow's researchers.

Please contact me if I can be of any further assistance.

Aloha,
Anna Cooke
Hi Pat,

PBRC has always been a part of my life as I had the advantage of my father, Ian Cooke, as a faculty member there. Later, in my undergraduate studies, I had the privilege of working at the lab with Pat Couvillion as my mentor. The skills and knowledge I gained during my year of directed research not only encouraged me to apply to the University of Hawaii Honors program, but it still serves me now in my fourth year as a doctoral student in psychology at Argosy University.

Having the experience of conducting and presenting my research from PBRC in the undergraduate symposium gave me the confidence in my abilities as a researcher and paved the way for my future studies in psychology. I was so fortunate to have had such wonderful research experience and guidance from everyone who is part of the PBRC faculty.

Please feel free to share this with anyone who might be interested in hearing about how valuable the PBRC experience is to UH students.
University of Hawaii at Manoa
Pacific Biosciences Research Center
Békésy Laboratory of Neurobiology
1993 East-West Road - Honolulu, Hawaii 96822-2359
Tel: 808 956-8067 - Fax: 808 956-9612
Email: blanchar@hawaii.edu

March 30, 2010

Dr. Virginia Hinshaw, Chancellor
University of Hawaii at Manoa

Dear Dr. Hinshaw:

I am writing in opposition to the plan to reorganize (abolish) the Pacific Biosciences Research Center (PBRC). Although I am a full-time member of the Department of Psychology, I have an active research program that has been funded for many years by NIH, NSF, and other external sources and administered through PBRC. The services provided for my program have included fiscal/grants management support, equipment building and servicing of an array of electronic apparatus items through the carpentry and electronics shops, and, last but by no means least, use of laboratory and office space assigned to PBRC. The collaboration between Psychology and PBRC’s Bekesy Laboratory of Neurobiology for supporting research and training in the behavioral neurosciences has existed for over three decades.

Without these PBRC services and facilities, my research program would simply be impossible. My department, Psychology, has no permanent home due to the imminent collapse of Gartley Hall. While efforts are being made to find office/administrative space for this Department, it has never had adequate facilities for my animal-subject based research and I have had no indication that it plans to include such space in its future plans. In addition, Psychology has no carpentry and electronics shops, and its experience in administering grants is far, far, less than that of the personnel in PBRC.

Currently my program brings in about $335,000 per year (total of about $1.35 million for my current NIH funding), a sum that is not, I think, included in the grants totals for PBRC listed in the reorganization materials, because of my Psychology affiliation. This provides salaries for an average of 2 undergraduates, 3 graduate students and one postdoctoral fellow, contributing substantially to support of students in Psychology. It also provides undergraduates in the Psychology Department with some exposure to laboratory methods and research training in neuroscience. This exposure involves use of my PBRC lab space, as there is not, and has never been, a facility for such animal lab work in the Psychology Department. This exposure, and the research interaction it involves, results in publication authorships for both undergraduate and graduate students, and information for us to use in individualized and informative letters of recommendation for them to further their careers. In consequence, our lab has been
extraordinarily successful in placing students in excellent graduate programs, or in medical school. In short, in addition to research relevant to several important areas of psychopathology (anxiety disorders; autism spectrum disorders), our lab has been instrumental in helping a generation of Hawaii undergraduates and graduate students fulfill their career goals. It also brings in quite a bit of overhead money to the University, from which we directly receive minimal benefit.

We have been told that lab space will continue to be available if PBRC is disbanded, but there are apparently no guarantees as to specifics. Our understanding of the reorganization plan is that the current PBRC support services are not likely to go into the social sciences division, which will leave us—and our lab’s strong needs for specialty-built equipment—without some essential services. This includes administrative support, for which there is simply no equivalent in the Psychology Department to what is currently available in PBRC. Disbanding PBRC will be a disaster for my research program, and for the students it supports and fosters. From a student perspective, it will take away opportunities that have no alternatives, with none planned. I urge that these factors be taken into consideration when a decision is made with regard to the future of PBRC.

Sincerely,

Robert J. Blanchard, Ph.D.
Professor of Psychology and Neuroscience
March 30, 2010

Chancellor Virginia Hinshaw
University of Hawaii at Manoa
Hawaii Hall 202
Honolulu, Hawaii 96822

Dear Chancellor Hinshaw,

I am writing in regard to the proposed closure of the Kewalo Marine Laboratory and its home unit, the Pacific Biosciences Research Center. This is a concern for the many of the graduate students in my department, as it directly affects graduate student research and education at the University of Hawaii. Over 150 graduate students have performed their thesis and dissertation research at this internationally recognized facility, which provides unique opportunities and facilities that draw graduate students from around the world to study evolutionary and developmental biology, marine larval ecology, marine conservation biology, coral reef ecology and a variety of other fields of research that can only be pursued at a marine laboratory with a functioning seawater system. The proposal to close this facility has raised concerns, locally, regionally, nationally and internationally and was the subject of an article in the journal Science.

Marine sciences are an obvious draw for both graduate and undergraduate students for the University of Hawaii. Although my own work is elsewhere, there are approximately 25 graduate and undergraduate students pursuing their research and education at the Kewalo Marine Laboratory who will be affected by the proposed closure. The rationale presented by the Vice Chancellor for Research and Graduate Education does not seem to hold up to scrutiny. The Lab has been very successful in garnering grant support, providing unique research, educational and community services, and is in far better shape than many other UH facilities. The closure of one of the two best equipped marine laboratories in the state of Hawaii seems ill advised. If there is a need to obtain additional space for parking tied to the development of the Cancer Center of Hawaii next to the John A. Burns School of Medicine, there must be more financially and programmatically practical solutions than allowing a facility with a $2 million dollar seawater infrastructure and a replacement value of over $30 million to be destroyed to satisfy the desires of the Hawaii Community Development Authority and the developers who stand to profit.

There are very few opportunities and ideal locations for graduate students to study tropical marine biology. Hawaii is one of two states that have accessible coastal coral reefs and related organisms in the nearshore environment. Closing the Kewalo Marine Laboratory will not only affect students presently engaged in graduate studies at the University of Hawaii, but will reduce enrollment in programs that should be a centerpiece of future research and training efforts here.

I respectfully request that you and your office re-examine the proposed closure, and take all necessary actions to protect the Kewalo Marine Laboratory as a facility of value to the
University, state, region and nation; as well as honoring the 20 years remaining on the present lease at the Kaka’ako makai site. I also humbly recommend that as the economy improves, plans be made for an expanded marine research facility that can better serve our students and ocean state.

In conclusion, while everyone recognizes the present financial problems facing the University of Hawaii, we must also recognize that destroying unique facilities and programs that bring in large research and educational grants that support both graduate and undergraduate students is not a sustainable solution into the future.

With Respect and Aloha,

[Signature]

Lee H. Shannon
Department of Zoology
University of Hawaii at Manoa
2538 McCarthy Mall, Edmondson 152
Honolulu, HI 96822
March 30, 2010

Chancellor Virginia Hinshaw
University of Hawaii at Manoa
Hawaii Hall 202
Honolulu, Hawaii 96822.

Re: Pacific Biosciences Research Center, Center for Conservation, Research and Training and Hawaii Conservation Alliance

Aloha e Chancellor Hinshaw:

The National Park Service (NPS) is grateful for the long-term association with the Center for Conservation, Research and Training (CCRT) through the Pacific Biosciences Research Center (PBRC) at the University of Hawaii at Manoa and the Hawaii Conservation Alliance (HCA). The long-standing partnership between the organizations since 1993 through PBRC and CCRT with the formation of the Secretariat for Conservation Biology, now the HCA, has consistently fostered and contributed significantly to interdisciplinary research and projects supporting roles in understanding the biological diversity of the Hawaiian Islands and the greater Pacific region.

PBRC/CCRT has provided a foundational structure that continues to encourage interaction between agencies and landowners responsible for the management of Hawaii’s lands and seas and challenged new generations of conservation researchers, managers and educators. The annual Hawaii Conservation Conference is a prime example of how PBRC/CCRT and HCA have benefitted the community and more than 1100 people attended the 2009 conference, especially students and emerging professionals. HCA has created many avenues for engaging younger generations in the resources management and conservation professions.

Additionally, the HCA currently provides further opportunities to study and preserve the unique environment and cultures of the Pacific and facilitates the Hawaii Resource Conservation Initiative (HRCI) and the LLC/Pacific Islands Climate Change Consortium (PICCC). These organizations, in concert with the multi-agency mission of HCA, serve to support research, students, and projects that are critical to understanding our resources and the future of the Pacific area and our abilities to face serious issues such as climate change and alien invasive species.

Abolishment of the PBRC/CCRT would impact HCA and in the larger picture, would have major negative consequences on many ongoing projects, programs and capacity; we urge reconsideration of this recommendation by the University of Hawaii.

If you need additional information, please do not hesitate to contact me at (808)541-2693 ext. 723 or by email at Frank.Hays@nps.gov

Sincerely,

Frank Hays
Pacific Area Director

cc: Mr. Ken Kaneshiro, CCRT
    Ms. Deanna Spooner, HCA
March 30, 2010

Dear Chancellor Virginia Hinshaw:

I am deeply disturbed by the proposal to disband PBRC. This is a long-standing institution of synergistic research and valuable service that promotes research capacity amongst a broad user community stretching across the University.

My research has relied heavily on the support of the PBRC Computer Facility under Brad Jones. With their help I set up the COBRE-supported Bioinformatics Facility (RR018727, Yanagihara), focused on phylogenetics, at Leahi Hospital under the Department of Tropical Medicine, Medical Microbiology and Pharmacology. The computer facility and staff, Brad and Stanford, were also critical in the relocation of my facility to Kaka’ako in 2005. They will play a role in computational resources in the next COBRE (Yanagihara), which was scored well in recent reviews, in which I am Bioinformatics co-director. The PBRC Computer Facility continues to maintain my web page and provide technical support on computational issues from databases to Unix scripts and installations. My lab continues to print posters for conferences at the PBRC Computer Facility with the help of Stanford Togashi. This is the only facility I know of on campus that provides this service, so readily and with ease, and saves my grants hundreds of dollars each year.

My research has also relied on the PBRC Molecular Biology Facility under Gabor Mocz. All of my oligonucleotide needs, QA/QC molecular needs, and part of my sequencing needs are critically and in some cases uniquely met by this facility. In addition to the facility services, Dr. Mocz himself collaborates with us in modeling novel proteins from Hantaviruses, work that has resulted in publications and an NIH R01 (Yanagihara).

Furthermore, collaborators in the PBRC have played important roles in our NSF Integrative Graduate Education and Research Training (IGERT) Program in Ecology, Conservation and Pathogen Biology (Wilcox). Dr. Kaneshiro of the PBRC is a co-PI on the grant, and several other faculty have given key lectures in the transdisciplinary core curriculum in Applied Evolutionary Ecology. Critically, the PBRC fiscal/admin office has brought its unique experience in running training grants such as Dr. Kaneshiro’s NSF GK-12 to our aid in handling the IGERT where no other unit was adequate.

The research and training infrastructural support provided by the PBRC has helped in maintaining my successful collaborations with the PSWRCE (Barbour) out of UC Irvine, as well as with numerous grant proposals and published papers. In addition, scientifically PBRC has...
evolved into a diverse and rich institution bonded by multidisciplinary excellence that I, along with IGERT researchers and trainees, find greatly inspiring.

To justify abolishment because there are “no common unifying academic/research themes” is old-fashioned and counters major directions in the NIH and NSF towards transdisciplinarity in research. Diversity is a sought-after strength rather than a weakness. Integration can be obtained with mindful leadership, which is locally and readily available at no extra cost. In today’s research climate of global collaborations made effective by modern technology, it is ridiculous to suggest that “the geographic distribution of faculty and staff to include multiple buildings” on and off campus would be a significant impediment to research synergy.

In fact, there is an eclectic synergy around the researchers of the PBRC that inspires innovation and creativity, from the complex mating dances of the Hawaiian drosophila, to the novel compounds in jellyfish nematocysts; from snail invasions to honey bee behavior to solving the tree of life. It is a dynamic and diverse mix whose potential is unlimited; to underestimate it or attempt to block it is tragic, especially for such little and questionable gain.

Sincerely,

[Signature]

Shannon Bennett, PhD
Assistant Professor
Dear Chancellor Hinshaw,

The Pacific Biosciences Research Center (PBRC) is a valuable part of the University's educational and research capacity. I am convinced that its existence is integral in the solid reputation of the University, and quite important for the EECB students who have benefited from its funding and its faculty. Please support its continued existence.

Sincerely,
Ryan Long
Graduate Student
Tropical Plant and Soil Sciences
CTAHR
rcl@hawaii.edu
Dear Chancellor Hinshaw,

I am writing to you regarding the proposal to abolish the Pacific Biosciences Research Center (PBRC). As a graduate student member of the Ecology, Evolution and Conservation Biology (EECB) program, I have benefited immensely from PBRC through 1) funding for my MA research and 2) funding to attend a scientific conference on the mainland. PBRC provides crucial support for research and professional development for many graduate students at UH and I strongly urge you not to abolish it.

Sincerely,
Lisa Wedding

-------------
Lisa Wedding
Graduate Research Assistant
Hawaii Institute of Marine Biology &
Department of Geography
University of Hawaii at Manoa
2424 Maile Way, Saunders Hall 445
Honolulu, HI 96822
Office: 808-956-3694
Fax: 808-956-3528
Email: wedding@hawaii.edu
Dear Chancellor Hinshaw,

I am writing to you regarding the proposal to abolish the Pacific Biosciences Research Center (PBRC). As a graduate student, though I have not benefited personally from PBRC, I feel the elimination of currently functioning classrooms and research facilities has no place in the current budget reforms or shifts in university infrastructure, and I strongly urge you to take a stand against abolishing these or any other facilities which are fully operational.

The expertise of PBRC faculty has been particularly valuable to UHM science programs and to putting research done at this university on the academic map. Several PBRC faculty members, including Brenden Holland, Durrell Kapan, Rob Cowie and Ken Kaneshiro, are part of the EECB program, which was originally developed by PBRC. These faculty members have been crucial to the continued success of EECB as a place for interdisciplinary exchange of ideas among students and faculty across many departments.

EECB students have also benefited from a number of National Science Foundation grants and other scholarships administered by PBRC. Funding from sources such as these is critical to graduate research.

PBRC is a valuable part of the University's educational and research capacity. The resources it provides are important to my success of some of your top programs, and to the many EECB students who have benefited from its funding and its faculty. Please support its continued existence.

Sincerely,
Gwendolyn Arbaugh
Dance Ethnology
Dear Chancellor Hinshaw,

I am writing to you regarding the proposal to abolish the Pacific Biosciences Research Center (PBRC). I am a PhD candidate in the Department of Geography and a Graduate Fellow in a National Science Fondation (NSF) Integrated Graduate Education, Research and Training (IGERT) program that is administered through PBRC. I strongly urge you not to abolish PBRC because it has directly benefited my graduate career, the faculty involved in the Center provide valuable services to graduate students and research at UH, and PBRC significantly bolsters UH's intellectual atmosphere in a myriad of ways.

The expertise of PBRC faculty has been particularly valuable to my graduate education. Several PBRC faculty members, including Durrell Kapan, Rob Cowie and Ken Kaneshiro are directly involved or affiliated with my NSF IGERT program and have been key mentors. These faculty members have been crucial to the continued success of our IGERT program as a place for transdisciplinary exchange of ideas among students and faculty across many departments and disciplines.

Graduate students supported by our NSF IGERT grant have also benefited from a number of grants and other scholarships administered by PBRC. Funding from these sources has been critical to the graduate research of many students. PBRC is also valuable part of the University's educational and research capacity and contributes significantly to the intellectual climate at UH through research, grants, and organized symposia and lectures. The resources it provides have been important to my success as a graduate student, and to the many other graduate and undergraduate students who have benefited from its funding and its faculty. Please support its continued existence.

Sincerely,

John N. (Jack) Kittinger

--
Jack Kittinger
NSF IGERT: Ecology, Conservation & Pathogen Biology
Department of Geography
University of Hawai‘i at Mānoa
445 Saunders Hall, 2424 Maile Way
Honolulu, HI 96822
jkittinger@gmail.com
http://www2.hawaii.edu/~jkitt/
Dear Chancellor Hinshaw,

I am writing to you regarding the proposal to abolish the Pacific Biosciences Research Center (PBRC). I am a recent graduate of the Zoology and EECB programs, and the support I received from EECB was critical to the completion of my degree. I strongly urge you NOT to abolish PBRC.

Page 3 of the VCRGE's proposal comments that the abolishing of PBRC would have "no anticipated impacts to students." This seems grossly inaccurate to me. Numerous graduate students are employed by PBRC, particularly in the Kewalo Marine Laboratory, and abolishing PBRC would have dire effects on the research and degree progress of these students. In addition, several of the labs employ undergrads, giving them not only a paycheck, but valuable experience in scientific research.

EECB students have also benefited from a number of National Science Foundation grants and other scholarships administered by PBRC. I received several research and travel grants from EECB over the course of my degree, which allowed me to travel to the outer islands for research, and also to present this research at two national meetings, giving me the exposure necessary to advance within the academic community. I believe that my presence and participation in these meetings was the key ingredient in the several post-doc offers that I am now receiving.

PBRC is a valuable part of the University's educational and research capacity. The resources it provides were important to my success as a graduate student, and to the many other EECB students who have benefited from its funding and its faculty. Please support its continued existence.

Sincerely,

Alison Stimpert
Dear Chancellor Hinshaw,

I am writing to you regarding the proposal to abolish the Pacific Biosciences Research Center (PBRC) and Kewalo Marine Laboratory. As a graduate student member of the Ecology, Evolution and Conservation Biology (EECB) program and a former NSF funded GK-12 fellow, I have benefited directly from PBRC and strongly urge you not to abolish it.

Kewalo Marine Laboratory is one of the few marine locations to conduct wet lab research through the University and I urge you not to abolish it.

The expertise of PBRC faculty has been particularly valuable to my graduate education. Several PBRC faculty members, including Brenden Holland, Durrell Kapan, Rob Cowie and Ken Kaneshiro, are part of the EECB program, which was originally developed by PBRC. EECB is a program that allows for interdisciplinary exchange of ideas among students and faculty across many departments. I am a marine ecologist in a botany department and this EECB program is invaluable to me as I can meet and interact with other students with more similar research. These faculty members in PBRC have been crucial to the continued success of EECB and my graduate career.

EECB students have also benefited from a number of National Science Foundation grants and other scholarships administered by PBRC. Funding from these sources has been critical to my graduate research.

I was fortunate enough to be supported by the GK-12 fellowship, managed by Dr. Ken Kaneshiro for two years. Without this program I would not be a graduate student at the University of Hawaii as funding is difficult to secure but, these faculty were able to provide me the financial support. I have grown considerably as a researcher because of this fellowship and their efforts. Currently the research I collected while I was funded by PBRC/EECB are being considered for high impact peer-reviewed journals.

Also, I feel that this program and research conducted at Kewalo Marine Laboratory is the type of research that is needed in Hawaii. Hawaii is a hotspot for studying marine evolution, ecology, and conservation. The researchers at Kewalo, for instance Dr. Hadfield and Dr. Martindale have excellent reputations and publish some of the most exciting robust research at this University. I don't understand why the University would not want to keep this research station and facilitate these programs that are generating success.

PBRC and Kewalo Marine Laboratories are a valuable part of the University's educational and research capacity. The resources the
facility and the PBRC program provide are important to my success as a graduate student, and to the many other EECB students and marine scientists who have benefited from funding, faculty, and the facilities at Kewalo. Please support their continued existence.

Sincerely,

Traci Erin Cox
Dear Chancellor Hinshaw,

I am a PhD student in the Botany Department here at University of Hawaii at Manoa. I am writing to you regarding the proposal to abolish the Pacific Biosciences Research Center (PBRC). As a graduate student member of the Ecology, Evolution and Conservation Biology (EECB) program, I have greatly benefited from PBRC and urge you not to abolish it.

Several PBRC faculty members, including Brenden Holland, Durrell Kapan, Rob Cowie and Ken Kaneshiro, are part of the EECB program, which was originally developed by PBRC. These faculty members have been crucial to the past success of EECB as a place for interdisciplinary exchange of ideas among students and faculty across many departments.

Many EECB students have benefited from the grants and scholarships, including a number of National Science Foundation grants, that have been administered by PBRC. These graduate student funding opportunities have resulted in numerous scholarly publications and research breakthroughs right here in Hawaii. My PhD research has also greatly benefited from these grants, awards, and scholarships.

PBRC, and particularly its current members, are a valuable part of the University's educational and research capacity. The resources it provides are important to my success as a graduate student, and to the many other EECB students. Please support its continued existence.

Sincerely,

Aaron Shiels
PhD Student
Department of Botany
Dear Chancellor Hinshaw,

I am writing to you regarding the proposal to abolish the Pacific Biosciences Research Center (PBRC). As a PhD student in the Botany Department and a member of the Ecology, Evolution and Conservation Biology (EECB) program, I have benefited immensely from PBRC and strongly urge you not to abolish PBRC.

Although I am a student in the Botany Department, several PBRC faculty, especially Dr. Durrell Kapan and Dr. Rob Cowie, have been particularly instrumental in my graduate education. Dr. Kapan has provided statistical expertise that I was not able to obtain from other faculty members. Dr. Cowie's leadership has been crucial to the continued success of the EECB program -- initially created by PBRC -- as a place for interdisciplinary exchange of ideas and research between students and faculty.

As a member of the EECB program, I have also received several thousand dollars in research funding from a National Science Foundation grant to Dr. Kaneshiro and other scholarships administered by PBRC. This funding has been critical to my dissertation research on plant ecology and conservation, and I could not have obtained equivalent funding from the Botany Department alone.

PBRC is a valuable part of the scientific community at UH Manoa. I and many other students in a number of departments benefit from the resources it provides. Please support its continued existence.

Sincerely,

Lisa Mandle
Ph.D. candidate
Botany Department
Dear Chancellor Hinshaw,

I was disheartened to learn of the decision to abolish PBRC and its associated Kewalo Marine Laboratory. I spent six fruitful years at this facility between 1987-1993 before I moved to my current position at the City University of New York. I first came there to work with Ian Gibbons as a postdoctoral fellow and later as a Junior Researcher. Since all my work was done there, I can speak mostly for KML.

The proposed document mentions the diversity of research topics and the lack of coherence and focus as weak points against PBRC. It then goes on and makes a point that KML with its only four faculty members is awarded 50% of the total funding to PBRC and is producing the most significant number of publications. These data, I believe, is due to diversity in research foci among the faculty which generates a very unique research environment where the individual faculty and their lab members, although not actually collaborating, create a synergetic atmosphere that is very conducive to good and productive research. Despite its small size, KML gained over the years a stellar reputation of a molecular biology facility that employs marine model organisms to study central problems in cell and developmental biology. Building such a reputation took many years and much effort. Abolishing it is fast and easy but can be an irreversible mistake in the long run.

I understand the perpetual quest of public (and private) institutions to find ways to be more financially efficient, but abolishing successful institutions is not necessarily the best way to go. I am joining (I'm sure) a big choir of voices that urge you to reconsider this decision and keep PBRC and KML alive for Hawaii and for the entire scientific community.

Sincerely,

Dan Eshel
March 29, 2010

Chancellor Virginia Hinshaw
University of Hawai‘i-Mānoa
Hawai‘i Hall 202
Honolulu, HI 96822

Dear Chancellor Hinshaw,

This letter is in regards to the proposed abolishment of the Pacific Biosciences Research Center at the University of Hawai‘i-Mānoa.

I have been advised that a consequence of the changes, as proposed, would be the elimination of funding for the Hawai‘i Conservation Alliance (HCA).

On a modest budget, the HCA provides critical leverage for Hawai‘i’s major conservation agents. These parties collectively protect millions of acres of the forested watersheds and living reefs that sustain Hawai‘i’s livelihood. Through collaboration that is facilitated by the HCA, federal and State agencies, organizations like The Nature Conservancy, University entities such as the Center for Conservation Research and Training and landowners such as Kamehameha Schools are able to strategically coordinate and amplify their efforts in ways not otherwise possible.

This is a highly cost-effective and impactful program supported in large part by funding from the University of Hawai‘i.

Sincerely,

[Signature]

Ualala Woodside
Regional Director, Natural, Cultural, Community and Land Legacy Resources
Kamehameha Schools – Land Assets Division
March 25, 2010

Chancellor Virginia Hinshaw  
University of Hawaii at Manoa  
Hawaii Hall 202  
Honolulu, Hawaii 96822

vhinshaw@hawaii.edu  
(808) 956-4153 fax

Aloha Chancellor Hinshaw,

I write this letter to express my deepest concern about the proposal to abolish the Pacific Biosciences Research Center (PBRC). Of primary importance to me is the grounding tenants in the proposal that (1) the diversity of the PBRC faculty is a negative aspect of the center with respect to University of Hawaii at Manoa (UHM) and (2) that students at UHM will not be affected by the dissolution of PBRC due to the fact that the center is not a degree granting department.

As a former graduate student and current faculty member of UHM, I recognize that there does exist a need for collaboration and unity across departments, schools and colleges. I argue, however, that it is in fact PBRC that provides much of this needed collaboration. The vision of PBRC to create the Ecology, Evolutionary and Conservation Biology (EECB) program (and associated graduate student specialization), for example, has created an effective interdisciplinary structure on the UHM campus that did not exist prior to PBRC. As a graduate student in the UHM Zoology department, I saw many students, from my department, from Botany and from the School of Ocean and Earth Science and Technology (SOEST) to name a few, who were engaged in very similar types of study. Left alone, these students would have remained isolated in their separate departments, however because of PBRC and EECB these students came together and effectively shared ideas.

Moreover, it has been through PBRC that large, capacity building and system-changing grants have been awarded to UHM. The National Science Foundation (NSF) Graduate Fellows in K-12 Teaching (GK-12) is one such example. NSF awarded PBRC faculty in EECB and the Center for Conservation and Research Training (CCRT) not only two rounds of GK-12 funding but also an accomplishment-based renewal grant – for a project tenure lasting more than a decade. This level of funding in GK-12 programs nationwide is unprecedented, and the UHM EECB Gk-12 project has impacted graduate students who served as GK-12 fellows, graduate students who assisted in the GK-12 project, UHM researchers and instructional faculty as well as, literally, thousands of K-12 students and their teachers. I firmly believe that the success of this project, and others like it, is a direct result of the interdisciplinary nature of PBRC and the visionary thinking of those faculty and researchers who comprise it.

I myself am a product of PBRC and owe my success in large part to the association of the faculty there. I was a member of the EECB program and a graduate of UHM with a PhD in Zoology and a specialization in EECB. I participated in the GK-12 program first as a graduate fellow (2002-2004) and then as program coordinator for the GK-12 project (2008-2009) during my position as an assistant professor in the UHM College of Education’s Curriculum Research & Development Group (CRDG). The opportunity that I was given to learn from so many outstanding mentors in PBRC and to manage the large, interdisciplinary GK-12 grant has certainly benefited my career. In addition to my faculty position at CRDG, I am currently affiliate faculty for Hawaii Sea Grant and director of their Center for Marine Science Education. I was also recently (March 2010) awarded a 1.49 million dollar grant from the U.S. Department of Education.
In the reviewer comments, they stated, “It is heartening to see the Project Director (PD) has a background in hard science, with a Ph.D. in marine biology and a publishing record in the discipline. These accomplishments are in addition to an education background, high school teaching experience, and roots in the community. Such well-rounded individuals are not common… the PD (also) has experience with a large National Science Foundation grant.” Clearly, my ability to combine multiple disciplines into a single focus was a skill that I developed with the aid of PBRC and one that is serving me well.

In conclusion, I greatly appreciate the economic stress that UHM is suffering from and the need to streamline departments and personnel. However, I strongly oppose the dissolution of PBRC as a means to this end. PBRC provides collegiality and collaboration among researchers and students that is unmatched, and perhaps unattainable, in consolidated departments.

Sincerely,

Kanesa Duncan, PhD

University of Hawaii
Curriculum Research & Development Group
1776 University Ave.
Honolulu HI 96822

tel: 808-956-4439
fax: 808-956-9486
email: kanesa@hawaii.edu

UH Sea Grant, SOEST
Center for Marine Science Education
www.uhsgmarinescience.org
25 March 2010

Dr. Virginia Hinshaw
Chancellor
University of Hawai‘i, Manoa

Dear Chancellor Hinshaw,

I am a cell biologist who was on the faculties of Purdue University and Harvey Mudd College; I was department chair at both institutions. Currently, I am Director of Precollege and Undergraduate Science Education at the Howard Hughes Medical Institute. The following comments are mine and are not intended to represent the HHMI.

I recently learned of the proposal before you to close the PBRC and the Kewalo laboratory. With this brief letter, I am joining the many others who ask you to choose to keep these institutions and, indeed, to place a high priority on the University’s continued and increased investment in the PBRC and Kewalo.

My introduction to the Kewalo lab was in the early 1990’s when I spent about two years on leave from Purdue University in order to work with Ian Gibbons and his group. This work resulted in four important publications including the first published sequence of the dynein heavy chain (Gibbons et al., 1991, Nature 352: 640-643) and the discovery of multiple dynein genes (Gibbons et al., 1994, Molecular Biology of the Cell 5: 57-70).

My visit to the Kewalo lab revealed the outstanding quality and depth of the groups and facilities, extending far beyond Ian and his group. The high quality is due to the intersection of several important factors, including: (i) great scientists leading the groups; (ii) a diversity of scientific questions and strategies; (iii) the intimacy of the lab that encourages meaningful interactions; (iv) the facility and the support staff; and (v) the location away from the main campus that allows the people who work at Kewalo to focus on science and education.

I grew up on Maui. My introduction to my eventual career was during the summer before my high school senior year when I had the opportunity to go to Manoa and work in Kerry Yasunobu’s biochemistry laboratory. I owe the UH a lot for that experience. Prior to my stay at Kewalo, my understanding of the University was that it struggles to find quality. My impressions of the University were dramatically changed because of my time at the PBRC/Kewalo. You and the University are to be congratulated for having this internationally recognized jewel; a jewel that is small but one that truly stands out at the University and the state.

I will be pleased to discuss this matter further.

David J. Asai
301-215-8874
asaid@hhmi.org
Dr. Gary Ostrander,
Vice-Chancellor for Research & Graduate Education,
Hawaii Hall Room 211
2500 Campus Road
Honolulu, HI 96822

Dear Dr. Ostrander,

I have been greatly dismayed to hear of the recent plans for the University of Hawaii to close the Kewalo Marine Laboratory and the Pacific Biomedical Research Center in 2013. In my opinion, this would be a grievous error and do enormous harm to the future of biomedical research in Hawaii.

As just one example, during the 30 year period 1967-1997, my own research group used the facilities of the Kewalo Marine Laboratory for my pioneering characterization of the motor protein, dynein that was supported by more than $5,000,000 of funding from the US National Institutes of Health. These studies gained me an international reputation as a leading researcher in cell biology. My work was recognized by various awards, including the E.B. Wilson medal of the American Society for Cell Biology, election into the Fellowship of the Royal Society (London) and the Internatiocnal Prize for Biology (Japan).

My findings have been utilized by many subsequent researchers around the world, who have by now published in excess of 3,700 papers and shown that defects in dynein underlie such human health problems as infertility, lissencephaly (a developmental brain disorder), and amyotrophic lateral sclerosis (Lou Gehrig's disease). This research of mine was wholly dependent upon the uniquely large quantities of dynein present in Hawaiian sea urchins, together with the excellent molecular biological instrumentation of the Kewalo Laboratory. We could never have done the same work at Coconit Island Laboratory, which will serves the purpose for which it was built, but was never designed to provide the protected conditions required for the electronic instrumentation of modern molecular biology.

The State of Hawaii needs to make the most of its unique biological environment in the middle of the Pacific. The Pacific Biomedical Research Center, and especially the Kewalo Marine Laboratory, have played an important role in this process over the past 40 years and they will continue to be needed if Hawaii is to maintain its reputation as a leading biomedical research center in the future. Rather than closing down these facilities, they should be guied to seek an alternative source of funding that will tide them over the present temporary shortage of State funds due to the recent downturn in the economy.

With best wishes,

Ian Gibbons
Researcher
University of California Berkeley
March 23, 2010

Chancellor Virginia Hinshaw
University of Hawai’i at Manoa
Hawaii Hall 202
Honolulu, HI 96822

Dear Chancellor Hinshaw,

I have recently been made aware of a proposal by Vice Chancellor for Research Ostrander to dissolve the Pacific Biosciences Research Center. It seems that Vice Chancellor Ostrander has put forward the argument that, “there are no anticipated impacts to students”. Nothing could be further from the truth. I am a former UH-Manoa student who was significantly impacted by PBRC programs. I earned my doctorate in Zoology from UH-Manoa in 2002. During the last two years of my graduate program I was supported by a National Science Foundation Graduate K-12 Teaching (GK-12) Fellowship. Dr. Kenneth Kaneshiro of the Center for Conservation Research & Training – a unit in PBRC – was the Principle Investigator on that grant. My experience as a GK-12 Fellow was without a doubt the most important influence on my career trajectory. The GK-12 fellowship not only included a unique cost-of-education allowance that provided the research support I needed to complete my dissertation, but it also fostered my continued commitment to science education at both the K-12 and post-secondary level. I was extremely fortunate to secure a tenure-track position (with the Curriculum Research & Development Group in the College of Education at UH-Manoa) immediately upon graduation, an achievement that I attribute in large part to the knowledge and skills I gained through my GK-12 Fellowship. I do not believe that I would have been a competitive candidate for either that or my current position, as Assistant Professor of Biology and Coordinator of the Biology 100-series for nonmajors at Western Oregon University. In fact, I have since discovered that a significant proportion of the GK-12 Fellows who were part of this PBRC-administered grant have attained tenure-track positions; a higher proportion than those students in the same academic departments who were not GK-12 Fellows during the same time period.

After I completed my GK-12 Fellowship, I had the opportunity to participate in the successful effort to renew the grant and became a Co-PI and Project Coordinator of the GK-12 Program at UH-Manoa. I thus had the opportunity to work with many other GK-12 Fellows. I can say with absolute certainty that any of those people would tell you what a significant impact that grant, secured and administered by PBRC, had on their professional lives. In fact, only this past month, I heard from a former GK-12 Fellow who is now completing a National Science Teachers Association Fellowship and directly attributes the GK-12 program with shaping her professional life. I can provide with you the names and...
contact information for at least two-dozen of my colleagues who will tell you similar stories about how their participation in the GK-12 program contributed to their professional development.

In addition to impacting those students who were GK-12 Fellows, the GK-12 grant also provided small research and travel grants for EECB students who then provided service to the program in some way. These grants allowed dozens of students to purchase much needed research supplies, travel to field sites, and attend conferences. This feature of the program was noted by our NSF program officers as one of the unique factors contributing to our success. In fact, time and again, the PBRC program was singled out by NSF as an exemplary GK-12 program. During my time with the program (spanning eight years total) we were asked to present exemplary aspects of our programs at the annual program meeting in Washington, DC on four separate occasions. Our program was also the only GK-12 program to be awarded a rare accomplishment-based renewal by NSF. What a shame it would be if UH-Manoa decided to dismantle the University organization that housed this grant, which has been held up time and again by NSF as exemplary.

It is true that PBRC does not offer a degree program, but that does not mean that PBRC doesn’t have a significant impact on students at UH-Manoa. My experience as a student in the UH Zoology department was excellent (despite the abysmal building conditions), but it was my experience as a GK-12 Fellow that had the greatest bearing on my professional life. I can state unequivocally that PBRC had an enormous impact on me and many of my fellow UH students. I believe that dissolving PBRC would do a disservice to future students who could very well benefit from the opportunities that might not arise if PBRC were no longer a part of UH-Manoa. I urge you to carefully consider the decision to dissolve PBRC, which could only further weaken not only the research capabilities, but also the education and training capabilities of UH-Manoa. I would be more than happy to provide any additional information or detail you would care to have about my experience as a GK-12 Fellow. Please feel free to contact me (baumgare@wou.edu; 503-838-8348).

Sincerely,

Erin Baumgartner, PhD
Assistant Professor of Biology
Western Oregon University
Chancellor Virginia Hinshaw  
University of Hawaii at Manoa  
Hawaii Hall 202  
Honolulu, Hawaii 96822  

Chancellor Hinshaw,  

I am writing to express my disagreement with the assertion that the abolition of PBRC would have “no anticipated impacts to students.”  

I am a PhD candidate in Zoology and am also enrolled in the Ecology, Evolution and Conservation Biology (EECB) specialization. Through EECB, I received one scholarship and one grant that were invaluable in funding my research. The NSF K-12 grants that have been administered through PBRC and EECB have helped countless students further their research goals, attend conferences, and bring their research into classrooms in Hawaii. Additionally, EECB provides access to an interdisciplinary community which broadens and strengthens the education we take from the university.  

I was also supported in my research by a substantial grant from the Hawaii Conservation Alliance. This partnership of government, education and non-profit organizations, which has been very successful at strengthening cooperation among disparate groups and disseminating information on conservation issues in the state, is also administered through PBRC.  

Because of these things, it is hard for me to imagine that abolishing PBRC will have no impact to students. My career at UH has certainly been enriched by PBRC activities.  

Aloha,  

[Signature]  

Laurie Strommer  
Ph.D. Candidate, Department of Zoology  
strommer@hawaii.edu
March 15, 2010
Chancellor Virginia Hinshaw
University of Hawai‘i at Mānoa
Hawai‘i Hall, Room 202
Honolulu, HI 96822

Dear Chancellor Hinshaw,

We have been informed of a proposal to abolish the Pacific Biosciences Research Center (PBRC). In particular, we are concerned that the proposal to split up the Center for Conservation Research and Training (CCRT), a research program within PBRC, will have a widespread negative impact on biodiversity research and conservation efforts in Hawai‘i. The PBRC programs in developmental biology, molecular biology, ecology, and evolutionary and conservation biology of marine and terrestrial systems will suffer if PBRC is reorganized. A long productive history of both PBRC and CCRT elucidating the biological diversity of the Hawaiian Islands and the Pacific would be disrupted.

Furthermore, the larger conservation research and management community benefits greatly from PBRC and CCRT via their support of the Hawai‘i Conservation Alliance (HCA). The Nature Conservancy of Hawai‘i was a founding member of the HCA in the early 1990s, when it was called the Secretariat for Conservation Biology. In 1993 Fred Greenwood, former director of PBRC, took the lead in administering the program, which evolved into the current HCA. The University has enjoyed an unparalleled opportunity to interface with the HCA agencies and landowners jointly responsible for managing Hawai‘i’s lands and seas, and has fostered the professional growth of new generations of conservation researchers, managers, and educators. With UH support, the HCA’s annual Hawai‘i Conservation Conference has grown into the largest professional gathering of its kind in the state. It drew a modest 75 participants in its first year (1988) but has swelled to over 1,100 in 2009.

Through the PBRC/CCRT contacts, the scientists and managers of HCA have worked closely with UH faculty and departments. This network of collaboration is significant, and appreciates the PBRC/CCRT nexus with UH. I advise that you withdraw the proposal to abolish PBRC and CCRT, and maintain this very important link to conservation efforts in Hawai‘i.

Sincerely,

John Henshaw
Director of Conservation
The Nature Conservancy of Hawai‘i

BOARD OF TRUSTEES
Ron Higgins  Peter Ho  Stanley Hong  J. Douglas Ing  Mark L. Johnson  Dr. Kenneth Kameshiro  Bert A. Kobayashi, Jr.
Faye Watanabe Kurren  Duncan MacNaughton  Bill D. Mills  Wayne Minami  Michael T. Pfeffer  H. Monty Richards  Jean E. Rolles
Scott Rolles  James Romig  Eric Yeaman
March 15, 2010

Chancellor Virginia Hinshaw
University of Hawai‘i – Mānoa
Hawai‘i Hall 202
Honolulu, HI 96822

Dear Chancellor Hinshaw,

The National Oceanic and Atmospheric Administration Office of National Marine Sanctuaries (ONMS) is concerned about the proposal to disband the Pacific Biosciences Research Center (PBRC). We are particularly concerned that the proposal to split up the Center for Conservation Research and Training (CCRT), a research program within PBRC, will severely impact biodiversity research and conservation efforts in Hawai‘i. Much of our understanding of the terrestrial biological diversity of the Hawaiian Islands, as well as Polynesia and Micronesia, has come from the key roles PBRC and CCRT have played in supporting vital research projects. The proposed reorganization will threaten the cross-benefits accrued through the collective research capacity of the PBRC programs in developmental biology, molecular biology, ecology, and evolutionary and conservation biology of marine and terrestrial systems.

In addition, PBRC and CCRT play critical leadership roles in the regional conservation research and management community by supporting such local efforts as the Hawai‘i Conservation Alliance (HCA). The ONMS is also a member of the HCA and we value this partnership with HCA as it provides the University of Hawai‘i a unique opportunity to work with federal and state agencies, major landowners, and non-governmental agencies who manage or oversee Hawai‘i’s lands and seas. This partnership and alliance also fosters the professional growth of conservation researchers, managers and educators in Hawai‘i.

One remarkable example is the University’s support of the HCA’s annual Hawai‘i Conservation Conference. This conference has grown to become the largest professional gathering of its kind in the state, last year drawing more than 1,100 participants from around the world. Also last year, the HCA hosted a climate change leadership summit that gathered senior scientists and managers from the Pacific region, all working together to share and develop strategies to cope with the impacts of climate change on our vulnerable lands and species. This year the HCA conference will focus on environmental change and how this directly affects our islands, with a keynote address by Governor Togiola Tulafono of American Samoa.
I hope that you will agree that PBRC and the division of CCRT are valuable partners to Hawai‘i’s conservation community, and please feel free to contact me at 808-879-2818 if you have any questions.

Sincerely,

[Signature]

Allen Tom
Regional Director
Office of the National Marine Sanctuary Program
Pacific Islands Region
March 11, 2010

Dr. Gary K. Ostrander
Vice Chancellor, Research and Graduate Education
University of Hawai'i at Mānoa
Honolulu, HI 96822

Dear Dr. Ostrander,

The proposed reorganization of the Pacific Biosciences Research Center (PBRC) contains many elements that are sensible. Granted, there are those who have concerns about any change in the status quo. However, from the perspective of the Lyon Arboretum and the broader plant conservation efforts in Hawai'i, I am fully supportive of the proposal to transfer a key conservation position to the arboretum.

As you know, the plant germplasm and micropropagation work being conducted at the Arboretum has gained national significance and recognition. The seed bank and seed conservation efforts conducted under the auspices of PBRC are an important adjunct to our micropropagation work. These two programs are separately managed, yet are so complementary that they really should be more closely integrated.

Thus, speaking as a conservation biologist and ecologist, it is my opinion that formally transferring the PBRC seed bank program to the arboretum will position the Lyon Arboretum as the state's foremost plant conservation facility and will permit us to much more effectively solicit support for this integrated program. Having elements of a plant conservation program scattered among various units at the university has, in my opinion, hampered our ability to develop synergies and support.

Sincerely,

Christopher P. Dunn, PhD
Director