

**SB 776**

**EDT**



# UNIVERSITY OF HAWAII SYSTEM

## Legislative Testimony

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Written Testimony Presented Before the  
Senate Committee on Economic Development and Technology

and

Senate Committee on Education

February 4, 2011 at 1:15 pm

by

Virginia S. Hinshaw, Chancellor

and

Sylvia Yuen

Interim Dean and Director of the College of Tropical Agriculture and Human Resources,  
University of Hawai'i at Mānoa

Chair Fukunaga, Chair Tokuda, Vice-Chair Wakai, Vice-Chair Kidani, and members of the committees:

SB 776, Relating to Science and Technology, builds on the work of the small business working group and University of Hawai'i President Greenwood's Advisory Council on Hawai'i Innovation and Technology Advancement. It establishes a Biotechnology Task Force to:

- Identify barriers that Hawai'i businesses and university professors face in developing entrepreneurial business models in biotechnology, and
- Recommend specific actions to address these issues.

The representative of the University of Hawai'i College of Tropical Agriculture and Human Resources shall serve as the Chair of the Biotechnology Task Force, and the Task Force shall report its findings and recommendations to the 2012 Hawai'i State Legislature.

The University of Hawai'i supports SB 776.

Thank you for the opportunity to testify on this bill.

January 31, 2011

## Hawaii Branch Officers

*President*

**Vivek R. Nerurkar, Ph.D.**

*President-Elect*

**Moti Chapagain, M.B.B.S., Ph.D.**

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## Mission

The American Society for Microbiology Hawaii Branch (ASM-HI) brings together microbiologists from various island institutions such as universities, hospitals, government agencies, the military and biotechnology companies. Our geographic location provides us with opportunities and challenges unique to our island state that emphasize the importance of a cohesive community of microbiologists.

## Contact Us

ASM-HI Secretariat  
c/o Esther Volper  
651 Ilalo Street, BSB 325  
Honolulu, HI, 96813  
volper@hawaii.edu  
(808) 692-1621  
www.hawaii.edu/asm/  
www.hawaiiasm.blogspot.com/

The Senate  
Twenty-Sixth Legislature, 2011  
State of Hawaii

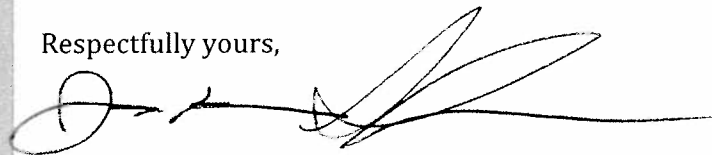
Dear Committee on EDT/EDU,

**Subject: Support for S.B. 776**

As representatives for the Student Chapter of the American Society for Microbiology (SCASM) Hawaii Branch, we are pleased to have the opportunity to support the science and technology related S.B. 776. Apart from the ASM-HI mission stated at the left, the ASM supports the advancement of the microbiological sciences and promotes the application of microbiologically related information for the improvement of human health, economic well being, environmental soundness and national security. Hawaii-based microbiology related activities often utilize specialized supplies that are not readily available in the islands. Many of these supplies require complicated importation permitting processes to ensure the safety and security of the local community and environment. Unfortunately, these processes sometimes take years, delaying the advancement of scientific results. Often, these lengthy processes are unnecessary and have been established as the result of improper communication and lack of shared facts.

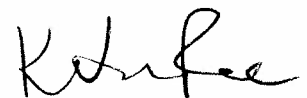
Therefore, we very much support the creation of the proposed task force to identify potential barriers that Hawaii businesses and university leaders face in developing entrepreneurial business models. The task force could objectively assess the facts surrounding safe microbiological tools that may have been misrepresented as a threat to the environment and citizens of our beautiful state. Some facts simply have not have been officially voiced. A comprehensive report may help streamline the permitting process. Most importantly, students attending Hawaii universities and community colleges would not be short-changed, gaining access to the tools necessary to advance their science and technology skills, lay the foundation for professional development and expedite essential Hawaii related microbiological research. Therefore, we enthusiastically support S.B. 776 to create the aforementioned task force.

Respectfully yours,



James Kelley

Nelson Lazaga



Kelsey Roe

# UNIVERSITY OF HAWAI'I AT MĀNOA

John A. Burns School of Medicine  
Department of Tropical Medicine, Medical Microbiology and Pharmacology

January 31, 2011

Senator Carol Fukunaga  
Twenty-Sixth Legislature, 2011  
State of Hawaii

*Subject: Senate Bill No. 776, Relating to Science and Technology*

Dear Senator Fukunaga:

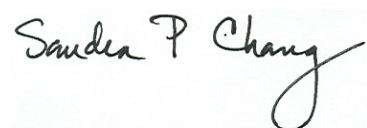
I am writing in support of S.B. No. 776 which seeks to establish a task force to identify barriers and recommend specific actions relating to the biotechnology industry in Hawaii. Specifically I am concerned with the acute need to expedite permit processing for microorganisms for research use at the University of Hawaii.

I have been involved in malaria research for the past 25 years at the John A Burns School of Medicine, University of Hawaii and our laboratory has partnered with several biotechnology companies to develop a human malaria vaccine. This research requires the use of the human malaria parasite, *Plasmodium falciparum*, as well as other rodent *Plasmodium* species in both in vitro (cell culture) and in vivo (animal model) studies. However, our work has been severely impacted by our inability to obtain State of Hawaii permits for the import and use of these microorganisms. We have encountered lengthy delays of up to 8 years in processing of our permits and decision-making by state regulatory agencies. This has impaired our ability to sustain research funding critical for our research progress and has reduced our competitiveness for renewal of research grants and industrial collaborations.

Formation of a special task force to address barriers faced by our laboratory and others in related fields will be an important first step in correcting this problem and fostering a more supportive environment for biotechnology businesses in Hawaii. I strongly recommend support of S.B. No. 776 and subsequent steps that will be needed to deal with this issue.

Thank you for this consideration.

Sincerely,



Sandra P. Chang, PhD  
Professor of Tropical Medicine

651 Ilalo Street, Biosciences Building, Third Floor, Honolulu, Hawai'i 96813  
Telephone: (808) 692-1600, Fax: (808) 692-1979

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# U N I V E R S I T Y O F H A W A I ' I A T M A N O A

John A. Burns School of Medicine

Department of Tropical Medicine, Medical Microbiology and Pharmacology

Committee on Economic Development and Technology  
Twenty-Sixth Legislature, 2011  
State of Hawaii

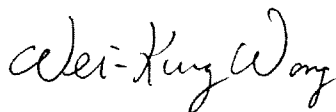
January 31, 2011

Dear Committee on Economic Development and Technology:

I am writing to you to support the Senate Bill No. 776, of which the hearing will be held on Feb. 4, 2011 at 1:15PM. To establish a task force to identify barriers that Hawaii business and university professors face in developing entrepreneurial business models in biotechnology is very important for the development of research and biotechnology in Hawaii.

As an Associate Professor at the Department of Tropical Medicine, Medical Microbiology and Pharmacology, John A. Burns School of Medicine at the University of Hawaii at Manoa, I am currently doing research on dengue virus, a virus which causes increasing and severe epidemics in the Asian-Pacific as well as other tropical regions including Southeast Asia, Central and South America every year. Dengue virus is an emerging pathogen of great public health impact. In 2001, Hawaii had a dengue outbreak after 56 years of silence. Importing different dengue virus strains to study how they cause diseases has been an important part of our research. In the past, we have encountered a lengthy and often delayed process of getting permit from the Hawaii Department of Agriculture to import viruses; such delay greatly affected the progress of scientific discovery and development of new technology. I am glad to know that the Senate Bill No. 776 is being proposed and I strongly support for this bill. Please let me know if you need further information.

Sincerely,



Wei-Kung Wang, M.D., Sc.D.  
Associate Professor

651 Ilalo Street, BSB 325E  
Honolulu, Hawaii 96813  
Telephone: (808) 692-1667 • Facsimile: (808) 692-1984  
E-mail: wangwk@hawaii.edu

University of Hawaii  
John A. Burns School of Medicine  
Biomedical Sciences Building  
651 Ilalo Street, Rm 336-3  
Honolulu, Hawaii 96813  
February 1, 2011

The Senate  
Twenty-sixth legislature, 2011  
State of Hawaii

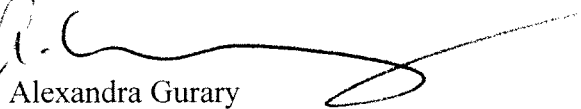
To Committee on EDT/EDU

**Subject: IN SUPPORT of S.B. 776**

I am writing to you in support of S.B. 776. As a PhD student in the Department of Tropical Medicine and Infectious Diseases investigating immune responses to Dengue virus, it is imperative to be able to import certain microorganisms, in order for my research to progress. The delays in processing permit and, sometimes, outright denial to import an imperative component of study used by our research collaborators, has created critical obstacles in my ability to continue with the research project.

I strongly believe that S.B. 776 will help the State of Hawaii, University of Hawaii, and myself to be a more competitive and productive contributor to the future of science research and to new biomedical business ventures in the State of Hawaii.

Sincerely yours,



Alexandra Gurary

## Jody Nakanelua

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Tuesday, February 01, 2011 1:25 PM  
**To:** EDTTestimony  
**Cc:** argon@hawaii.edu  
**Subject:** Testimony for SB776 on 2/4/2011 1:15:00 PM

Testimony for EDT/EDU 2/4/2011 1:15:00 PM SB776

Conference room: 016  
Testifier position: support  
Testifier will be present: No  
Submitted by: Argon Steel  
Organization: Individual  
Address: POB 37536 Honolulu, HI  
Phone: (808) 358-5726  
E-mail: [argon@hawaii.edu](mailto:argon@hawaii.edu)  
Submitted on: 2/1/2011

**Comments:**

I am writing to support legislation which would assemble a Task Force to investigate means of reducing impediments to research at the University of Hawaii. My graduate research on mosquito transmission of the dengue virus is important to public health in Hawaii given our history of recent outbreaks. Yet because of the glacial pace and ambiguity of the current permitting process it appears increasingly likely that I will have to carry out this research either on the Mainland or overseas. Thus I have a personal interest in legislation promoting greater opportunities for innovation in Hawaii. This Act is a good first step and I urge your support.

**From:** [mailinglist@capitol.hawaii.gov](mailto:mailinglist@capitol.hawaii.gov)  
**To:** [EDTTestimony](#)  
**Cc:** [bethann.collier@gmail.com](mailto:bethann.collier@gmail.com)  
**Subject:** Testimony for SB776 on 2/4/2011 1:15:00 PM  
**Date:** Thursday, February 03, 2011 10:59:20 AM

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Testimony for EDT/EDU 2/4/2011 1:15:00 PM SB776

Conference room: 016  
Testifier position: support  
Testifier will be present: No  
Submitted by: Beth-Ann Collier  
Organization: Individual  
Address: 46-287 Auna St Kaneohe, HI  
Phone: 808-236-1468  
E-mail: [bethann.collier@gmail.com](mailto:bethann.collier@gmail.com)  
Submitted on: 2/3/2011

Comments:

As a researcher in the biotechnology field I support the establishment of a Task Force to review and make recommendations to improve the processes for importation of microorganisms into Hawaii. I have been doing research on vaccines to prevent viral diseases (e.g. dengue, West Nile virus, influenza) for more than 2 decades and the existing processes need to be improved in order to better support development of novel vaccines here in Hawaii.



February 1, 2011

The Senate  
Twenty-Sixth Legislature, 2011  
State of Hawaii

**RE: Support of S.B. No. 776**

Dear Committee of EDT/EDU:

My name is Beverly Orillo, a research assistant at the University of Hawaii in the Department of Tropical Medicine, Medical Microbiology, and Pharmacology. I would like to submit my testimony in support of act S.B. No. 776 relating to science and technology.

I am currently assisting many studies on the West Nile virus and Dengue virus. I believe our work here not only benefits the University of Hawaii but also the State of Hawaii. It shows that we are capable in producing quality scientific research and, with an increasing knowledge on the West Nile virus and Dengue virus, it could be used to enhance biotechnology here in Hawaii. But being on an island, many of our supplies or samples for our research must be imported in. The importation of some items requires much documentation and permits. Obtaining permits have been very time consuming and can hinder a study which may carry time restraints. A more stream line process will help enhance research and maybe help push forward Hawaii's science and technology pipeline.

Thank you for your time,

A handwritten signature in black ink, appearing to read 'B. Orillo', written in a cursive style.

Beverly Orillo

Personal Testimony Presented before the  
Economic Development and Technology Committee on SB 776  
February 04, 2011  
1:15 pm  
By  
Ching Yuan Hu, Ph.D.

SB 776

*A Bill for An Act relating to Science and Technology*

Personal Testimony in SUPPORT to the Bill

The Senate Economic Development and Technology Committee  
Senator Carol Fukunaga, Chair  
Senator Glenn Wakai, Vice Chair

Chair Fukunaga, and Vice Chair Wakai, and Members of the Committee:

My name is Ching Yuan Hu and I am the Interim Assistant Vice Chancellor for Research and Graduate Education of the University of Hawaii at Manoa. I am pleased to provide personal testimony **in support** to SB 776. This testimony does not represent the position of the University of Hawaii at Manoa.

In my role as the Interim Assistant Vice Chancellor for Research and Graduate Education, I am responsible for overseeing University of Hawaii's research compliance programs. My office is responsible for assisting our faculty members to obtain microorganism importation permits from the Hawaii Department of Agriculture. Therefore, I have first-hand knowledge of importation permitting process. University of Hawaii received more than \$452 million in extramural grants and award during the fiscal year ending June 30, 2010. The research enterprise generated more than half of that - 1,161 awards worth \$256 million. The research activities conducted by our faculty members not only provide substantial number of jobs to the state now, but also critical for finding solutions to problems facing our society today. Many of our research projects require importations of microorganisms for their research work. Unfortunately, the existing permitting process is so out-of-date, and difficult that we have faculty members who have submitted their application in 2008, and still have not received any response from the Hawaii Department of Agriculture. We have lost substantial amount of grants to our peer institutions because we cannot conduct approved research due to failure to receive required research reagents. This means lost funding, lost job, and most importantly, lost in our competitiveness for the state of Hawaii. We have lost excellent faculty candidates because they were afraid they will not be able to conduct their research because of the delay in importing their research reagents.

We need to fix the problems associated with microorganism importation permitting process as soon as possible. Further delay will only add misery to our faculty members, and prevent faculty of the University of Hawaii bringing in grants and contracts that benefit the people of this great state of Hawaii. Therefore, **I support this bill.** Thank you for the opportunity to testify in support to SB 776.

I firmly support the Act and its proposal to assemble a Task Force to investigate and tackle impediments to innovation and research in the State of Hawaii. As a graduate student at the University of Hawaii at Manoa my research on influenza relies on the importation of study organisms and their use in the laboratory. However, in spite of my efforts at compliance, state regulatory bodies maintain laborious, time consuming and complicated permitting practices that have impeded this research, the research of my colleagues and ultimately innovation and economic stimulus to the state.

Being part of a large extended family deeply rooted in Hawaii, it is my hope to remain in the state to live and work in the future. This vision, however, seems threatened by the lack of opportunity available and I fear limited options may force me to relocate away from my family to the continental United States.

Additionally, I feel the research being performed here in Hawaii is crucially important for the overall health of the state. For example, my research on both seasonal and 2009 pandemic influenza explores the transmission dynamics of flu within Hawaii and examines both importation of infectious disease into and out of the state. This investigation, as well as that of others I work with, demonstrates the potential of research being done in Hawaii, for Hawaii by local people and has the prospect of making invaluable contributions to areas including, economics, tourism and health care, not to mention broader areas of scientific discovery.

This task force is critical to identifying the principal barriers to research regulation and thus to better find solutions. Thank you for your consideration.

Sincerely,

Denise C. Nelson, MS  
1532 Artesian Way, Apt A  
Honolulu, Hawaii 96822

## Jody Nakanelua

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Monday, January 31, 2011 3:50 PM  
**To:** EDTTestimony  
**Cc:** dwtaylor@hawaii.edu  
**Subject:** Testimony for SB776 on 2/4/2011 1:15:00 PM

Testimony for EDT/EDU 2/4/2011 1:15:00 PM SB776

Conference room: 016  
Testifier position: support  
Testifier will be present: No  
Submitted by: Diane Wallace Taylor  
Organization: Individual  
Address: 651 Ilalo Street Honolulu  
Phone: (808) 692-1608  
E-mail: [dwtaylor@hawaii.edu](mailto:dwtaylor@hawaii.edu)  
Submitted on: 1/31/2011

**Comments:**

I am writing in support of the S.B. 776: Relating to Science and Technology.

The proposed Biotechnology Task Force will be a large benefit to the research community in Hawaii. As a biomedical scientist, I realize the importance of moving research results from the laboratory into clinical practice. In the past, I developed "proof of concept" for a diagnostic assay for malaria in my laboratory and then worked with a number of industrial partners to create diagnostic assays that are currently being sold in developing countries world-wide. I hope to make more contributions to improving human health.

But conducting research in Hawaii is not always easy. A major hindrance to my research is the extremely long period of time it takes to get a permit to import microorganisms from the Department of Agriculture. I waited over 9 months to get a permit to use Plasmodium falciparum in my laboratory, even though the laboratory next to mine used the same organism. Once I had the permit, it was good for only one year and I had to re-apply, again resulting in a long wait. Currently, I would like to do experiments using well-characterized strains of P. falciparum from collaborators in Oregon, but the 9+ month wait is too long to wait. The wait, reduces my ability to be competitive. Accordingly, I will either out-source the work to colleagues in Oregon or send my graduate student to Oregon to do the experiments.

Thus, I am enthusiastic about the establishment of a Biotechnology Task Force that will identify and help overcome hurdles so that scientists in Hawaii can remain competitive.

Diane Wallace Taylor  
Professor, JABSOM

## Jody Nakanelua

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Thursday, February 03, 2011 12:08 PM  
**To:** EDTTestimony  
**Cc:** eparks@hibiotech.com  
**Subject:** Testimony for SB776 on 2/4/2011 1:15:00 PM

Testimony for EDT/EDU 2/4/2011 1:15:00 PM SB776

Conference room: 016  
Testifier position: support  
Testifier will be present: No  
Submitted by: Dr. Elliot Parks  
Organization: Hawaii Biotech Inc.  
Address: 99-193 Aiea Heights Drive, #200 Aiea, HI  
Phone: 808-792-1399  
E-mail: [eparks@hibiotech.com](mailto:eparks@hibiotech.com)  
Submitted on: 2/3/2011

**Comments:**

On behalf of Hawaii Biotech Inc, the oldest biotech company in the State, I would like to endorse SB776 and its goals. It is crucial that Hawaii companies remain competitive. For our company this includes, but is not limited to, a strong and mutual relationship with the University of Hawaii.

We fully endorse the purpose of SB776 including (1) identifying barriers that Hawaii businesses and university professors face in developing entrepreneurial business models in biotechnology and (2) recommending specific actions to address these barriers.

Therefore, I hope that you will enact SB776.

Thank you for your attention to these important matters.

Esther Volper  
P.O. Box 240954  
Honolulu, HI 96824

To Whom It May Concern:

January 30, 2011

I am writing in support of S.B. No. 776. I am currently a Ph.D. graduate student at the University of Hawai'i in the Tropical Medicine department. My research project I am completing for my Ph.D. degree depends directly on the importation of viruses as well as diagnostic serum samples. Through collaborations with Duke-NUS in Singapore; the Division of Vector Borne Infectious Disease with the Centers of Disease Control (CDC) in Fort Collins, Colorado; and the CDC in San Juan Puerto Rico, we have developed a new diagnostic test for Dengue Virus detection. The assay will eventually be able to test for a panel of arboviruses including Dengue virus-1, -2, -3, -4, Chikungunya, West Nile Virus, Saint Louis Encephalitis, Yellow Fever Virus and Japanese Encephalitis. However due to the limitations on my ability to import viruses and diagnostic samples I have currently only been able to validate the assay for Dengue virus serotypes 1 through 4 and not the other arboviruses in the panel.

We currently have a patent application pending for the University of Hawai'i that once validated has the potential to generate significant revenue for the University. This assay is not only a valuable asset to the University of Hawai'i, but also to the state, as eventually it would allow patients that return from travel to our state with these arbovirus infections to be diagnosed locally, with a rapid, sensitive, and specific test.

I urge you to allow importation of diagnostic samples in order to directly impact ongoing research here at the University of Hawai'i as well as patient care in the state of Hawai'i in a positive manner. Limiting the importation of these necessary samples directly hampers my research ability and would reflect poorly not only on the University but on the State and result in loss of revenue for the University.

Therefore I strongly support S.B. No. 776.

Sincerely,



Esther M. Volper

1/31/2011

Dear Sir/Madam,

I would like to support SB776. I am a professor with the UH Medical School. In my 24 years as a researcher in this University, I have seen many missed opportunities to do research because of the crippling pace and red tape on the import of microorganisms into the State of Hawaii. In addition, it also has a negative impact on our ability to train students. From personal experience, I had to abandon at least three research projects, and to force my student to change her thesis research because the process of importing a microorganism into my laboratory would take too long. A task force to examine the present problems and provide solutions is long overdue. A more efficient review and approval process for the importation of microorganisms will facilitate research opportunities for UH researchers, allowing them to be more competitive in securing external grant funding. This will translate into more research jobs for Hawaii. Thank you very much for your attention.

Respectfully,

George Hui, Ph.D.



1711 East West Rd., 620  
Honolulu, HI  
96848  
January 31, 2011

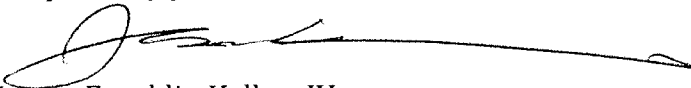
The Senate  
Twenty-sixth Legislature, 2011  
State of Hawaii

Dear Committee on EDT/EDU,

**Subject: Support for S.B. 776**

As a 5<sup>th</sup> year Ph.D. candidate in the Department of Tropical Medicine, Medical Microbiology and Pharmacology at the University of Hawaii's John A. Burns School of Medicine, I am thrilled to have the opportunity to support the science and technology related S.B. 776. Creation of the proposed task force to identify barriers that Hawaii businesses and university professors face in developing entrepreneurial business models would be a tremendous asset for Hawaii's science community. The proposed task force could objectively assess facts that have not yet been officially voiced and possibly provide recommendations in support of expedited permitting of specialized biotechnology supplies. These measures would provide access to the tools needed to advance science and technology and ultimately lay the foundation for business opportunities in Hawaii. Therefore, I wholeheartedly support S.B. 776 to create the aforementioned task force.

Respectfully yours,



James Franklin Kelley, IV

## Jody Nakanelua

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Tuesday, February 01, 2011 11:23 AM  
**To:** EDTTestimony  
**Cc:** kae@hawaii.edu  
**Subject:** Testimony for SB776 on 2/4/2011 1:15:00 PM

Testimony for EDT/EDU 2/4/2011 1:15:00 PM SB776

Conference room: 016  
Testifier position: support  
Testifier will be present: No  
Submitted by: Kae Pusic  
Organization: Individual  
Address:  
Phone:  
E-mail: [kae@hawaii.edu](mailto:kae@hawaii.edu)  
Submitted on: 2/1/2011

Comments:

January 31, 2011

Dear Senator,

I am a Masters candidate in the department of Tropical Medicine, Medical Microbiology, and Pharmacology. I am studying the neuropathogenesis of West Nile virus infection. In doing so I use many reagents that must be obtained from the mainland. It is very important for the integrity and cost of my experiments that these reagents can be obtained in a cost effective and timely manner. As such, I support this bill in order to streamline the process of acquiring the necessary materials for the research that goes on at the universities and industries of Hawaii.

Kelsey Roe

M.S. Candidate

Department of Tropical Medicine, Medical Microbiology, and Pharmacology

John A. Burns School of Medicine

University of Hawaii at Manoa

## Jody Nakanelua

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Wednesday, February 02, 2011 9:58 AM  
**To:** EDTTestimony  
**Cc:** kramer@hawaii.edu  
**Subject:** Testimony for SB776 on 2/4/2011 1:15:00 PM

Testimony for EDT/EDU 2/4/2011 1:15:00 PM SB776

Conference room: 016  
Testifier position: support  
Testifier will be present: No  
Submitted by: Kenton Kramer, PhD  
Organization: Department of Tropical Medicine/JABSOM/UHM  
Address: 651 Ilalo Street Honolulu, HI  
Phone: 692-0934  
E-mail: [kramer@hawaii.edu](mailto:kramer@hawaii.edu)  
Submitted on: 2/2/2011

**Comments:**

Research and teaching of microbiology is an essential component of our responsibility to the State. It is important to train local individuals to deal with medical and agricultural problems due to micro-organisms.

February 1, 2011

Re: Support for SB 776 RELATING TO SCIENCE AND TECHNOLOGY

Dear Senator Tokuda, Senator Fukunaga and Members of the Committee:

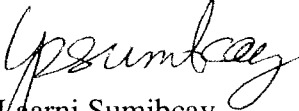
I am writing to testify in strong support of SB 776 which relates to science and technology.

As a research technician for the Department of Tropical Medicine at the John A. Burns School of Medicine since 2006, I have been involved in the study and characterization of different viruses such as JC virus, Hantavirus and West Nile virus. Majority of the materials we need for our work have to be shipped from different sources outside the State. I am fully aware of the regulations implemented with regards to the importation of organisms and other species that may pose risks to the local environment. However, these same regulations create delays and impede the progress of our work.

Hawaii's strategic location makes it a prime area for biotechnology and research in the Asia-Pacific region. In order for us to compete with other world-class research facilities, it is critical that we have access to the resources and supplies in a timely manner. The establishment of a task force that will oversee and facilitate the barriers addressed above will greatly enhance our work productivity and promote the advancement of the biotechnology industry in Hawaii.

I therefore urge the committee to pass SB 776. Thank you for this opportunity to testify.

Sincerely,



Larni Sumibcay

Date: 2/1/11

Dear Sir/Madam,

I am a Graduate student in the Department of Tropical Medicine, Medical Microbiology and Pharmacology at University of Hawaii at Manoa. I am working on the development of rapid and sensitive diagnostic assay for detection of Dengue and West Nile virus infections. The assay has its useful applications to detect Virus infections in early phase, thus preventing the morbidity and mortality that results if these viral infections remain undiagnosed.

For the development of this diagnostic assay, I need to use the West Nile virus and Dengue virus as positive control. It's very difficult to import these viruses and it takes more time due to delays in processing permits by HDoA. Therefore, it takes more time to develop these diagnostic assays. Therefore I fully support this bill.

*MSNamekar*

Madhuri Namekar,  
M.S. Student in the Department of Tropical Medicine, Medical Microbiology &  
Pharmacology  
University of Hawai'i at Mānoa  
John A. Burns School of Medicine  
651 Ilalo Street  
BSB 320H  
Honolulu, HI 96813  
Phone: 808-6921620.

February 2, 2010

Hawaii State Legislature  
2011 Regular Session

**RE: Support of SB776 (Relating to Science and Technology)**

Dear Senators,

As a biological researcher working for the University of Hawaii at Manoa (UHM), I would like to provide testimony in support of SB776. In my work here at UHM (and previously at Hawaii Biotech), it is absolutely essential to our research efforts that the process for importing vital biological research materials be streamlined as much as possible. I have personally witnessed the consequences of delays in this process – loss of critical data, loss of research funding opportunities, and additional strain on the resources of biotech companies already struggling to compete in Hawaii’s challenging business climate.

It is extremely important to the future of our state’s economy that we try to develop innovative businesses in a range of industries, including those in science and technology. The UHM and other institutions within the state are educating our young adults and laying the groundwork for future scientists, researchers, and innovators. However, because of the current business situation, there is a dearth of jobs for researchers, and many of them will end up leaving the state. We not only need to keep this from happening, but we need to develop a robust scientific industry that will diversify and strengthen our economy.

For these reasons, I urge you to pass SB776.

Sincerely,

Maile O’Connell

Moti Chapagain  
60 N. Nimitz Hwy, # Apt 1404  
Honolulu, HI-96817  
Tel: (808) 543-0162

January 31, 2011

The Senate  
Twenty-sixth Legislature, 2011  
State of Hawaii

**Subject: Support for S.B. 776**

Dear Chair:  
Committee on EDT/EDU,

I am an Assistant Researcher at the Dept of Tropical Medicine, Medical Microbiology and Pharmacology, John A. Burns School of Medicine. I fully support the bill (S.B. 766) related to science and technology.

I currently conduct research on human polyomavirus JC (JCV) and West Nile Virus (WNV). JCV causes progressive multifocal leukoencephalopathy (PML) which is a very fatal disease. Many aspects of JCV pathogenesis are unknown. This virus is wide spread and almost 30% of individuals in any population (including individuals living on our islands) excrete this virus in their urine at any time. However, even getting this virus from our vendor in the mainland was a big hassle and took us several months to get this permit which essentially delayed our entire research endeavor. While, I whole heartedly support legitimate concerns of the public and fully agree that we need to address those concerns to protect our islands from invasive or hazardous species, we should have a mechanism to address these issues in a timely manner so that our research endeavors are not affected.

Yours Sincerely,



Moti Chapagain



January 31, 2011

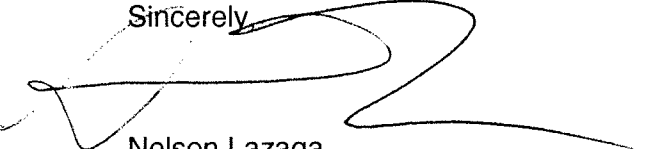
The Senate  
Twenty-Sixth Legislature, 2011  
State of Hawaii

Dear Committee on EDT/EDU,

**Subject: Support for S.B. 776**

As a second year Molecular Biosciences and Bioengineering Master's graduate student, studying JC virus in the Department of Tropical Medicine, Medical Microbiology and Pharmacology, I am in complete support of the science and technology related S.B. 776. Research usually requires specialized supplies that are not readily available here in Hawaii and often need permitting procedures to ensure the safety and security of our community members and unique environment. However, processing of these permits can be lengthy and in research, time is of the essence. As a student of the University of Hawaii at Manoa (UHM), not being able to have the resources available to do research puts us in a position where others might think of us as a lesser university. And I want to believe that student researchers of UHM, like myself, should be proud of their research so that we can stand side by side with researchers from Harvard, Yale, etc. Something as simple as a lack in resources due to mere location should not keep us from being second best. I believe that S.B. 776 will provide our local universities, UHM included, the tools needed to advance in science and technology. Thus, I fully support S.B. 776.

Sincerely,



Nelson Lazaga

41-648A Mekia Street  
Waimanalo, HI 96795

January 31, 2011

The Senate  
Twenty-sixth Legislature, 2011  
State of Hawaii

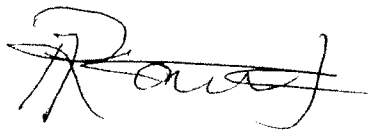
**Subject: Support for S.B. 776**

Dear Committee on EDT/EDU,

As a Junior Researcher in the Department of Tropical Medicine, Medical Microbiology and Pharmacology at the University of Hawaii's John A. Burns School of Medicine, I am excited in having the opportunity to show my full support on the science and technology related bill (S.B.No. 776).

I have been engaging in performing biotechnology research for more than 10 years in an effort to identify alternative applications of biotechnology to very important tropical diseases caused by Dengue virus or West Nile virus. The growth of our research has been slowed by the regulatory approval process in the importation of organisms or other items that typically classified as invasive species or hazardous in some aspect and the associated costs. Therefore, I wholeheartedly support the S.B.No.776 to create task force that will expedite the aforementioned barriers.

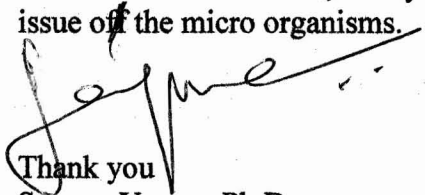
Yours truly,

A handwritten signature in black ink, appearing to read 'Pakieli H Kaufusi', written over a horizontal line.

Pakieli H Kaufusi, MS, PhD

I, Saguna Verma, am working as Assistant Professor in the Department of Tropical Medicine, JABSOM. My work involves working with viruses such as West Nile virus. I study the mechanisms by which the virus enters the brain and causes inflammation. My work has therapeutic potential in the long run. My work depends on various cell lines and virus strains that we need to import from collaborators and companies. Delay in processing import permit by Hawaii Department of Agriculture has great impact on my research. In the past I have not been able to obtain specific virus strain required for my work. Because of this I could not submit my grant proposal to the NIH last year.

Therefore, I fully support the task force that would address the importation issue of the micro organisms.



Thank you  
Saguna Verma, Ph.D  
Assistant Prof.,  
Department of tropical medicine and and medical microbiology,  
Honolulu, Hawaii.

I firmly support the Act and its proposal to assemble a Task Force to investigate and tackle impediments to innovation and research in the State of Hawaii. I have been an Assistant Professor at the University of Hawaii, John A. Burns School of Medicine, since 2004, where I study and teach about how viruses change to generate epidemics and pandemics. One of the primary barriers I face in my research and training is the inability to effectively and in a timely manner obtain permits from HDoA. I have at least 2 funded projects on which progress has been impeded by the laborious and obfuscating practices in the permitting process. Specifically, these projects rely on the importation of microorganisms and their use in laboratory insect models, the permitting of both of which has taken years and is still not complete. These federally funded projects bring in \$125,000 per year to the University in overhead alone (over \$0.5 million over the lives of the grants). Furthermore, these projects support technicians and graduate students, and bring in scientific visitors, and will ultimately produce innovative information from Hawaii. Permitting delays put all the money and economic stimulus raised by these projects at risk of being returned to the agency, because the projects cannot be completed at this time given this current state of affairs. In addition, I have 3 more federal grant applications that are ready for submission this year but similarly depend on the importation of microorganisms and/or their study in insect laboratory models for execution. I am holding up these applications for HDoA permitting. Together these grants would generate \$1,625,000 revenue for the University over the lives of the grant, in addition to creating local jobs.

Sincerely,

Shannon Bennett  
Assistant Professor, John A. Burns School of Medicine,  
University of Hawaii, Manoa  
651 Ilalo Street, BSB 320  
Honolulu, HI 96813

I, Sumeet Saksena, am a Fellow in the Environmental Research program at the East-West Center, Honolulu. My work involves studying the public health impacts of emerging infectious diseases. I study the risks associated with micro-organisms. Environmental samples collected by me are analyzed by my collaborators in their laboratories in Hawaii. Delay in processing import permits by Hawaii Department of Agriculture has an adverse impact on my research.

Therefore, I fully support the task force that would address the importation issue of the micro organisms.

*S Saksena*  
2/2/11

February 3, 2011

Senator Carol Fukunaga  
Twenty-Sixth Legislature, 2011  
State Capitol  
415 South Beretania Street  
State of Hawaii

**RE: Senate bill number S.B. No. 776, February 4, 2011, 1:15 P.M., State Capitol Conference room 016**

Dear Senator Fukunaga:

I enthusiastically support the Senate Bill number 776 to form a task force to identify barriers that Hawaii business and university professors face in developing entrepreneurial business models in biotechnology; and recommend specific actions to address these barriers.

Innovative infectious diseases medical research conducted by the university faculty includes research on AIDS, dengue fever, West Nile virus-associated encephalitis, hantavirus-associated pulmonary syndrome, malaria, acute rheumatic fever and several other viral and bacterial diseases, and orphan diseases such as the Kawasaki Disease, which frequently affects children of Korean and Japanese ancestry.

Tropical infectious diseases are among the most important public-health problems facing most countries in the Asia-Pacific region, being a major cause of morbidity and mortality, as well as crippling economic loss. Moreover, all of the global public-health emergencies in the past 12 years have originated in Asia (i.e., plague in India, 1994; Hong Kong flu, 1997; Nipah virus encephalitis, 1999; SARS, 2003; and avian influenza, 2004-2005). This trend mandates that programs be established to detect and monitor infectious diseases using the most modern laboratory and epidemiologic methodologies, as well as sophisticated information technology systems. The University of Hawai'i at Manoa (UHM), by virtue of its strategic geographic location as the gateway to and from Asia and the Pacific and its strong ties to resource-poor developing countries in the region, is well positioned to serve as the nexus of a vital sentinel network for research on the detection and prevention of tropical infectious diseases emerging in Asia.

Hawaii is not immune to imported tropical infectious diseases. As recent as 2001 Hawaii experienced a outbreak of dengue, which originated in Hana and was later detected on Oahu. These imported cases of dengue in Hawaii were among local residents who visited Tahiti and were infected in Tahiti. Similarly the newly emerged pandemic H1N1 influenza is a classic example of imported infectious diseases in Hawaii.

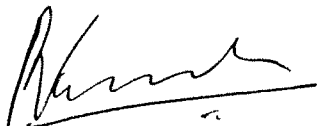
The UHM has state-of-the-art medical research facilities, including high-biocontainment laboratories. For conducting my research activities, I need to import microorganisms

from global community of researchers. The current rules and policies on obtaining permits to import microorganisms in the State of Hawaii are not user friendly and take several years. Due to the chronic lag in permit processing, I am unable to conduct innovative research on infectious diseases such as AIDS, dengue fever and West Nile virus-associated encephalitis. Most importantly, I am unable to comply with the goals stated in my federal grants and I am unable to apply for new federal and national grants to conduct my research activities. Failure to obtain importation permits in a timely manner to conduct our research ultimately affects emergency preparedness in the State of Hawaii and the economy at large.

The multimillion-dollar grants generated by infectious diseases research activities in the State of Hawaii ultimately create jobs for local residents, and the research and teaching associated with these grants empower our young high school students, undergraduates and graduates to think and practice innovation.

Thank you for your support.

Aloha.

A handwritten signature in black ink, appearing to read 'Vivek R. Nerurkar', written over a horizontal line.

Vivek R. Nerurkar, D.M.L.T., M.Sc., Ph.D.

3216 Oahu Avenue  
Honolulu, Hawaii 96822

## Jody Nakanelua

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Wednesday, February 02, 2011 10:01 AM  
**To:** EDTTestimony  
**Cc:** wenyang@hawaii.edu  
**Subject:** Testimony for SB776 on 2/4/2011 1:15:00 PM

Testimony for EDT/EDU 2/4/2011 1:15:00 PM SB776

Conference room: 016  
Testifier position: support  
Testifier will be present: No  
Submitted by: Wen-Yang Tsai  
Organization: Individual  
Address: 651, Ilalo street, #303 Honolulu, HI  
Phone: 808-285-2774  
E-mail: [wenyang@hawaii.edu](mailto:wenyang@hawaii.edu)  
Submitted on: 2/2/2011

Comments: