



UNIVERSITY OF HAWAI'I SYSTEM

TESTIMONY

S.B. 2067 – RELATING TO HIGHER EDUCATION

Testimony Presented Before the
Senate Committee on Education

February 13, 2004

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James R. Gaines
Interim Vice President for Research
University of Hawaii

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Chair Norman Sakamoto and Members of the Committee:

I would like to present testimony in support of this bill. The National Science Foundation (NSF) established the Experimental Program to Stimulate Competitive Research (EPSCoR) in 1979 in response to Congressional concerns about the geographic concentration of federal funding for academic research and development (R&D) in a select group of states and institutions. Today, in response to this congressional concern, six other federal agencies listed below have adopted EPSCoR-like programs, the largest being National Institute of Health's (NIH) Institutional Development Award (IDeA) program.

The EPSCoR and IDeA programs are merit-based programs aimed at enhancing the science and engineering research and technology capabilities of states that have historically received lesser amounts of federal R&D funding. EPSCoR/IDeA aims at achieving this goal by creating a partnership among a state's research institutions, businesses, government organizations, and the federal R&D enterprise.

The program is a statewide collaborative effort involving the entire University of Hawai'i System, including the Community Colleges, and public and private research organizations. It not only provides more opportunity for our Hawai'i

researchers, but also expands the types of research that can be conducted by improving the infrastructure in classrooms and labs throughout our state.

Through EPSCoR/IDeA, Hawai`i and other participating states are building a high quality, university-based research effort that serves as the backbone of their science and technology (S&T) enterprise. With the help of EPSCoR/IDeA, Hawai`i can continue to transform its economy and ensure itself of a strong and stable economic base into the next century.

Hawaii's EPSCoR Funding History

Hawai`i joined EPSCoR/IDeA in 2000. Since joining, they have received grants from the DoD, the DoE, the EPA, the NSF, and the NIH. Institutions throughout the University of Hawai`i System as well as private companies and non-governmental organizations participate in EPSCoR/IDeA. EPSCoR is viewed as a "model" Federal/State/ University partnership that helps researchers and institutions improve their research capacity by helping to make them more competitive in obtaining grants from federal, state and private sector agencies.

Below is a list of the absolute dollars awarded to institutions in Hawai`i as of January 1, 2004. In three years Hawai`i has received almost \$39M in funding from the EPSCoR/IDeA program.

National Science Foundation (FY 01—05): **\$22,897,897**

RII: \$8,995,525

Co-funding: \$13,902,372

National Institute of Health (FY 01—06): **\$15,279,955**

BRIN: \$5,979,955

COBRE: \$9,300,000

Dept of Defense (FY 02): **\$500,000**

CURRENT TOTAL: \$38,677,852

This total reflects only direct EPSCoR-type funding. The collateral benefits of participation in the suite of EPSCoR programs is even more far reaching as the number of grants submitted by faculty at the University continues to increase. Submissions from Community College campuses are increasing and their participation in University-initiated proposals is increasing as well. This level of grant solicitation not only increases the scientific merit of research conducted in Hawai'i but also affects the broader impacts of that research such as job creation, economic diversification and higher quality of life for all of the citizens of Hawai'i.

As part of the University's commitment to capacity building throughout the UH System, the office of the Vice-President for Research at UH provided cost matching dollars in the amount of \$1.5M for the first year of the 3-year RII grant. The funds requested in this bill would be used to provide cost match for the second year of the grant.

It is important to note that a focused effort to facilitate grant writing and submission under UH EPSCoR began in earnest upon the receipt of the \$9.0M Research Infrastructure Improvement (RII) grant in April 2003. Since that time, UH EPSCoR has identified promising faculty at every campus in the UH System and has helped to initiate dozens of new grant proposals to federal agencies on a wide variety of topics including science and math education at the community colleges, research programs at UH Hilo, and high technology workforce training. We expect that the total amount of EPSCoR funding from all agencies will continue to increase as a result of these efforts.

In purely financial terms, the state has received approximately \$12.9M per year as an EPSCoR/IDeA participant. Based on a cost match contribution of \$1.5M, the State of Hawai'i has leveraged its investment very effectively. Increased grant opportunity awareness and development of proposal writing skills across the state will undoubtedly increase the ROI in the years to come.

Thank you for the opportunity to provide testimony on this bill.

Hawaii's EPSCoR Research Infrastructure & Improvement (RII) Grant

- Hawaii selected its scientific theme for its Research Infrastructure Improvement award based on an emerging field of research at the University of Hawaii at Manoa that coincided with one in which there was an existing strength at the University of Hawaii at Hilo: Biocomplexity in an Integrated Island Environment. This is an issue of great social and scientific importance to Hawaii and the nation.
- Hawaii also included the theme of Bioinformatics in order to pursue environmental modeling and studies of emerging evolutionary trends. Hawaii has identified three research thrusts within the overarching theme of Biocomplexity in an Integrated Island Environment: Evolutionary Genetics, Ecosystems Studies, and Information Technology for Environmental Research. Hawaii's highly diverse subtropical environments; endemic, introduced, and invasive species; and coastal zone watersheds provide the natural laboratory in which collaborative research in these thrust areas will be conducted.
- These themes were deliberately selected to allow Hawaii's diverse faculty both at the University and Community College campuses to collaborate and improve capacity across many disciplines.
- The RII award has allowed Hawaii to hire faculty across the University System to support the three thrusts; enhance Ecological and Evolutionary facilities and Environmental Analytical facilities across the System by consolidating them into shared use facilities located at select sites throughout the System; improve field stations in Hawaii as collateral support for ecological research that improves Hawaii's position for inclusion in the National Ecological Observatory Network program under the NSF; increase the number of proposals to NSF overall especially within BIO and EHR; and

establish outreach programs to K-12 schools within Hawai`i to foster inclusion of more under-represented students in the Science, Technology, Engineering and Mathematics disciplines.