

UH News

University of Hawaii uses IBM Technology to Study New Bacterium Species and Ancient Protein

Research could lead to improved, longer lasting drugs and commercial enzymes

University of Hawaii

Contact: [Kate Wester](#), (808) 956-9095
 Director, Public Relations & Special Events
[Kristen Cabral](#), (808) 956-5039
 Public Information Officer

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HONOLULU - The University of Hawai'i's Maui High Performance Computing Center (MHPCC) today announced it has been awarded advanced computing technology from IBM to help enable research that could lead to improved, longer-lasting drugs and new treatments for diseases.

"The knowledge and expertise of our researchers and the resources of IBM make this partnership and the potential contributions to life sciences research limitless," said UH President Evan S. Dobbelle.

MHPCC has received a powerful high-performance computing system through IBM's Shared University Research (SUR) award program. UH scientists will use the IBM eServer p690 system to conduct genetic research on a rare bacterium, recently isolated from waters of the Lo'ihi submarine volcano, where temperatures range from 100 to 110 degrees Fahrenheit.

In addition, UH will use the system for research on the ancient globin protein, which has evolved over the past 3.5 billion years to withstand extreme fluctuations in temperatures, oxygen levels, pressure and other atmospheric changes. Through computerized modeling and analyses of these rare microorganisms and proteins, UH researchers hope to discover genetic patterns that hold the key to important new therapeutics and diagnostics and tremendous leaps in biotechnology.

IBM and UH researchers will also collaborate on projects of mutual interest. These projects may include research into the Hawaiian Archipelago, which is home to thousands of plant and animal species, including many novel microorganisms.

"The University of Hawai'i is becoming a leading institution for genomic research," said Ajay Royyuru, manager of IBM Research's Computational Biology Center. "IBM has been the university's technology partner for more than 10 years. We hope that this SUR award and our expanded collaboration will open doors to new scientific discovery and enable both organizations to draw on complementary strengths, including IBM's extensive research expertise in computational biology and high-performance computing, to advance life sciences research."

IBM's Shared University Research (SUR) program awards computing equipment (servers, storage systems, personal computing products, etc.) to colleges, universities and institutions of higher education around the world to facilitate research projects in areas of mutual interest, including: Life Sciences, Grid Computing, Autonomic Computing and Deep Computing. The SUR awards also support the advancement of university projects by connecting top researchers in academia with IBM Research personnel, along with representatives from product development and solution provider communities. IBM awards approximately 50 SUR awards per year worldwide.



President Evan Dobbelle; Cathy Kelihoomalu, IBM Hawaii Territory Manager; Tom Haine, IBM Worldwide Life Sciences General Manager; Chancellor Peter Englert; and Eugene Bal, Exec. Director, Maui High Performance Computing Center, at a College Hill reception.

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