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UH gets \$19 million for ocean center

The facility will be a collaboration with five institutions for microbial study

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The National Science Foundation has awarded \$19 million for a University of Hawaii-led collaboration that will study the oceans' microscopic organisms and educate future scientists.

The foundation grant funds the Center for Microbial Oceanography: Research and Education, which includes five prominent mainland institutions, for five years with a promise for an equal amount for the following five years.

The center will give scientists a deeper understanding of the ocean and its potential response to global climate changes, university officials said.

"We are on the verge of a revolution in our understanding of the sea around us, especially the role of microbes in global ecosystem processes," said UH-Manoa oceanography professor David Karl, one of the nation's leading microbial biologists.

Karl, principal investigator for the new center, opened it yesterday during a videoconference with mainland colleagues. He also held a "virtual science symposium" to discuss the challenges and goals.

To mark the "historic occasion," Karl draped a traditional maile lei across the table in front of the video screen.



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University of Hawaii oceanography professor Dave Karl, principal investigator for the Center for Microbial Oceanography: Research and Education, stood in his office yesterday.

The choice of UH to lead the microbial center "will be transforming for understanding the planet on which we live," said Brian Taylor, new dean of the UH School of Ocean, Earth Science and Technology.

Karl and his group competed with 164 proposals in 1993 for National Science Foundation funding. The number was pared to 37, then 12 were chosen for site visits.

The UH also has committed \$12 million for the first five years. The Agouron Institute and the Gordon and Betty Moore Foundation are providing additional funding.

Karl received a five-year \$3.85 million grant in 2004 that initiated a marine microbiology program established by the foundation.

The new center is expected to develop new instrumentation and technologies, and educate scientists and engineers, said Nathaniel Pitts, director of the science foundation's Office of Integrative Activities.

"We see unusual opportunities for innovation and research and education, as well as knowledge transfer," he told the videoconference participants.

"Take these 10 years to do things differently. Look for opportunities to make an unusual learning environment for students."

Karl said, "This is about the next generation," adding that students, from preschoolers to post-doctoral researchers, will be involved at every participating institution site.

The center will bring together scientists and engineers who normally work separately in oceanography, microbiology, ecology, computing, genomics, remote sensing and ecosystem modeling, said Matt Kane, who will work with the center as head of the National Science Foundation management team.

"Your center will serve as the vehicle that will move things forward very quickly," he said.

Collaborating are the Massachusetts Institute of Technology, Woods Hole Oceanographic Institution, Oregon State University, the Monterey Bay Aquarium Research Institute and University of California at Santa Cruz.

The UH-Manoa College of Education and state Department of Education are working with the center on programs to help train teachers and develop curricula for undergraduate and secondary-level students. Activities will be designed to attract underrepresented ethnic groups into science, such as native Hawaiians, officials said.

The genomics revolution has changed the way scientists look at the ocean and build models, Karl said. The UH has "a great opportunity to lead in this field," he said. "We need to take advantage of it."

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