



NEWS

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October 5, 2006

Researcher Seeks Cause of Fish Kills in Chesapeake Bay Scientists to Receive \$989,000 Grant to Study Dinoflagellates

Baltimore, MD—The National Science Foundation has agreed to fund \$989,036 for a study of dinoflagellates (pronounced di-no-FLAH-jell-ates). These marine microorganisms are found throughout the world and are responsible for many harmful algal blooms. The dinoflagellate transcriptome (genes expressed) will be sequenced under the grant. Allen R. Place, Ph.D., of the University of Maryland Biotechnology Institute's Center of Marine Biotechnology (UMBI's COMB) is one of the co-principal investigators on the project.

“These organisms can be quite toxic. There is much evidence that dinoflagellates may be responsible for fish kills in the Chesapeake Bay and around the world,” stated UMBI President Jennie Hunter-Cevera. “Once we unlock the secrets of this organism's genes, we will be able to understand what role they play in the environment including carbon cycling, and whether human activity or other factors are leading to fish kills by dinoflagellates.”

“We understand very little about microorganisms in the marine environment,” commented COMB Director Yonathan Zohar, Ph.D. “But the revolution in microbial based biology opens new avenues for our inquiries. We can create many, many copies of the genes of this organism in the laboratory and use sophisticated computers to map the genes in a process called genomics. In addition to genes that help us understand this microorganism's role in the environment, we can learn more about how genes lead to unique proteins and metabolites in this major class of marine organisms.”

“Dinoflagellates are interesting organisms,” commented Dr. Place. “They produce chlorophyll like plants and can use sunlight for photosynthesis, but they can also be predators and hunt, kill, and digest other microorganisms. Their toxins seem to destroy fish gills, but isolating the genes responsible for producing these toxins may help us find new medicines or diagnostics.”

“UMBI works on projects like this collaboratively. Dr. Place is one of the world's leading marine biochemists and brings specific skills and strengths. By working with other leading researchers, we can ensure that every participant is value-added to the process. Cutting edge, world class research takes this level of planning and cooperation, and we are quite proud that the National Science Foundation is making such a major commitment to Dr. Place's lab,” stated President Hunter-Cevera.

Principal Investigator on the grant is Senjie Lin, Ph.D., of the University of Connecticut. In addition to UMBI's Dr. Place, Co-Principal Investigators are Theresa Gaasterland,

Ph.D., of Scripps Institution of Oceanography, Scripps Genome Center, and Yu-Hui Rogers, Ph.D., of The Venter Institute. The grant covers a 30 month period commencing October 1, 2006.

One of five centers forming UMBI and located in Baltimore's Inner Harbor, COMB researchers apply the tools of modern biology and biotechnology to study, protect and enhance marine and estuarine resources.

With research centers in Baltimore, Rockville, and College Park, the University of Maryland Biotechnology Institute is the newest of 13 institutions forming the University System of Maryland. UMBI has 85 ladder-rank faculty and a 2006 budget of \$60 million. Celebrating the institution's 20th year of service to Maryland and the world, UMBI is led by microbiologist and former biotechnology executive Dr. Jennie C. Hunter-Cevera. For more information visit www.umbi.umd.edu.

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