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The Marine Mammal Center Receives Federal Funding to Study Marine Mammal Health

The Center kicks off its 30th year with a continued emphasis on science and research

(SAUSALITO, Calif. – January 13, 2005) The Marine Mammal Center has received funding from The National Oceanic and Atmospheric Administration (NOAA) to advance the study of infectious diseases and conditions that impact marine mammals, and in turn, can help us better understand human health. This funding comes as a result of NOAA's Oceans and Human Health Initiative established in 2003 that is focused on better understanding the relationship between the health of oceans and the Great Lakes and the health of humans. The Marine Mammal Center was awarded two grants, which total more than \$500 thousand, because of its expertise in marine mammal health and because marine mammals are considered sentinels of the ocean, sharing prey and habitat with humans.

The first grant of \$430 thousand will fund a study on the sub-lethal effects of domoic acid toxicity in sea lions. Approximately 21 percent of sea lion patients at The Center each year are treated for domoic acid toxicity, a poisoning caused by algal blooms that have been increasing in the ocean. Domoic acid toxicity can cause seizures and even death in affected animals. The Center has recently put satellite transmitters on several sea lion patients treated for domoic acid toxicity and released these animals to better understand their survival and to document any long-term effects of the toxicity. This study will focus on those long-term effects, such as damage to the brain, heart or other key organs. Collaborators in this study include the University of California at Santa Cruz and the California Department of Health Services.

"We are honored to be recognized by NOAA for our expertise in marine mammal health issues and to undertake this important work," said Dr. Frances Gulland, Director of Veterinary Science at The Center. "For 30 years, we have been documenting illnesses and conditions harming marine mammals. This funding will help us further our research around these diseases, and better determine how they signal changes in ocean and human health."

The second grant of \$100,000 supports the first year of a collaborative effort with NOAA's West Coast Center for Oceans and Human Health, which is based at the Northwest Fisheries Science Center in Seattle, WA and is one of three centers established as part of NOAA's Oceans and Human Health Initiative. This grant will fund a study using pinnipeds, initially California sea lions, as sentinels of ocean change that may affect human health. Research will focus on two areas – the distribution of zoonotic pathogens (animal diseases that can spread to humans) and the development of antibiotic resistance in these bacteria, and the effects of anthropogenic (human-caused) contaminants and biotoxins on sea lion health. Collaborators in this multi-year study include: the Northwest Fisheries Science Center, the Alaska Fisheries Science Center, and the University of California, Davis.

"Sometimes in order to understand ourselves, we need to look to other organisms. By understanding the impacts of pathogens, marine biotoxins, and toxic chemicals on the health of sentinel species, like California sea lions, we can better understand what is happening or what could happen to humans," said Dr. Usha Varanasi, Science and Research Director for the West Coast Center for Oceans and Human Health. "We are very fortunate to have The Marine Mammal Center as a partner in this collaboration."

Celebrating its 30th year in 2005, The Marine Mammal Center is a non-profit hospital dedicated to the rescue and release of ill and injured marine mammals, and to research about their health and diseases. Volunteers and staff have treated more than 10,000 California sea lions, elephant seals, porpoises, and other marine life. In fact, The Center treats more marine mammals than any other institution of its kind in the world, uniquely combining its rehabilitation program with scientific discovery and education programs to advance the understanding of marine mammal health, ocean health and conservation.

On the Web: www.marinemammalcenter.org