

NOAA Scientists and Partners on Oceans, Coasts, and Great Lakes Sensors for Human and Marine Animal Health 2010 Projects

Title: A saxiphilin-based assay for PSP toxin detection on field-portable and autonomous, subsurface sensors – research and development phase

Principal and co-Principal Investigators: Gregory J. Doucette¹, Laurie B. Connell², Alison³ Robertson

Institutions: NOAA National Ocean Service Center for Coastal Environmental Health and Biomolecular Research¹, University of Maine², Food and Drug Administration³

Partners: Maine Department of Marine Resources, Washington Department of Health, NOAA Northwest Fisheries Science Center West Coast Center of Excellence for Oceans and Human Health, NOAA Center of Excellence for Oceans and Human Health at the Hollings Marine Laboratory, Cooperative Institute for the North Atlantic Region, NSF/NIEHS Woods Hole Center for Oceans & Human Health

Title: Coordinated Research to Meet the Demands of the Ocean Research Priority Plan (ORPP): Facilitate Implementation of Biological Sensors for Microbial Contaminants

Principal Investigator: Kelly Goodwin, NOAA Atlantic Oceanographic and Meteorological Laboratory/ Southwest Fisheries Science Center

Partners: Monterey Bay Aquarium Research Institute, Northwest Fisheries Science Center West Coast Center of Excellence for Oceans and Human Health, Southern California Coastal Water Research Project, the Stanford Center for Ocean Solutions, University of California San Diego

Title: Direct Detection Method for Domoic Acid, the Cause of Amnesic Shellfish Poisoning

Principal and co-Principal Investigators: Wayne Litaker, Pat Tester

Institutions: NOAA National Ocean Service Center for Coastal Fisheries and Habitat Research

Partners: State of Washington Department of Fish and Wildlife, University of Southern California, California Department of Public Health, University of California Santa Cruz University of Alaska Fairbanks, Quinault Indian Nation

Title: User Implementation of Biological Sensor for Domoic Acid for Health Assessment, Event Response and Rehabilitation of Marine Animals

Principal and co-Principal Investigators: John Ramsdell¹, Hans Kleivdal², Jennifer Fuquay¹, Kathi Lefebvre³, Spencer Fire¹

Institutions: NOAA National Ocean Service Center for Coastal Environmental Health and Biomolecular Research¹, Biosense Laboratories AS (Norway)², NOAA National Marine Fisheries Service Northwest Fisheries Science Center³

Partners: Marine Mammal Center, National Marine Mammal Foundation, Cascadia Research Collective, Washington Department of Fish and Wildlife, Sarasota Dolphin Research Program, Mote Marine Laboratory, University of New England, Maine Department of Marine Resources

Title: Evaluation of Jellyfish as a Biological Sensor for Coastal Marine Pollution and a Bioindicator for the Health of Endangered Pacific Leatherback Sea Turtles

Principal and co-Principal Investigators: Jeffrey Seminoff¹, Heather Harris¹, Scott Benson¹, Gina Ylitalo², Spencer Fire³, Robert Poppenga⁴, Peter Dutton¹, and Christina Fahy⁵

Institutions: NOAA National Marine Fisheries Service Southwest Fisheries Science Center¹, NOAA National Marine Fisheries Service Northwest Fisheries Science Center², NOAA National Ocean Service Center for Coastal Environmental Health and Biomolecular Research³, University of California Davis⁴, NOAA National Marine Fisheries Service Southwest Regional Office⁵

Title: Field Testing and Expansion of Capabilities of the Environmental Sample Processor: Necessary Steps Toward Operational HAB Monitoring and Forecasting in the Gulf of Maine

Principal and co-Principal Investigators: Richard Stumpf¹, Donald M. Anderson², Dennis J. McGillicuddy, Jr.²

Institutions: NOAA National Ocean Service¹, Woods Hole Oceanographic Institution²

Partners: NOAA National Ocean Service Center for Coastal Environmental Health and Biomolecular Research, Monterey Bay Aquarium Research Institute, Maine Department of Marine Resources, Northeast Regional Association of Coastal Ocean Observing Systems

Title: Raman-based Barcoding for the Identification of Toxic Marine Pathogens and Phytoplankton

Principal and co-Principal Investigators: Vera Trainer¹, Mark Strom¹, Mark L. Wells², Qiuming Yu³

Institutions: NOAA Northwest Fisheries Science Center West Coast Center of Excellence for Oceans and Human Health¹, University of Maine², University of Washington³

Partners: University of Maine; University of Washington; Washington Department of Health; Pacific Shellfish Growers Association; Orono Spectral Solutions, Inc.; SoundToxins (includes Tribal partners, Taylor and Coast shellfish, Penn Cove mussels, Port Townsend Marine Science Center, Washington SeaGrant, Pacific Shellfish Institute and others (see www.soundtoxins.org)); Northwest Association of Networked Ocean Observing Systems

Title: Development of Hand-held, Field Deployable Array Biosensors to Distinguish Multiple Species of *Karenia* and *Pseudo-nitzschia*

Principal and co-Principal Investigators: Frances Van Dolah¹, John Paul², R. Bruce Cary³

Institutions: NOAA National Ocean Service Center for Coastal Environmental Health and Biomolecular Research and the Center of Excellence for Oceans and Human Health at the Hollings Marine Laboratory¹, University of South Florida², Mesa Tech International, Inc.³