

Uncovering Hidden Viruses



Mya Breitbart
Associate Professor, College of Marine Science

CURRENT RESEARCH

Identifying the causative agents for diseases in marine animals

New diseases in marine animals are emerging at an increasing rate, yet methodological limitations currently hinder the characterization of viral infections. As global climate change intensifies, we are seeing severe disease outbreaks on an unprecedented scale. Dr. Mya Breitbart is using novel techniques she has designed, along with existing methods, to attack the critical first step of identifying potential pathogens responsible for causing diseases in a number of marine animals such as sea turtles, sea lions, dolphins and starfish. Dr. Breitbart's excellence in research has been recognized by a number of journals and magazines. The scientific community has directly confirmed the quality, impact, and novelty of her research by citing Dr. Breitbart's publications extensively, earning her an H-index of 34, which is an outstanding accomplishment for a researcher of her young age. Maintaining healthy oceans, including a diversity of marine animals, has enormous global implications for the well-being and health of society since human health and the oceans are inextricably linked. Discovering the evolutionary history and ecological niches of several newly discovered viral groups has implications for public health research, medicine, marine science, environmental conservation, veterinary medicine, and agriculture.

Dr. Mya Breitbart, Associate Professor in the College of Marine Science at the University of South Florida is identifying new disease-causing viruses in marine animals by studying chronic infections, investigating the causes of mortality events in captive and wild marine mammals, and rapidly responding to explore potential causes of large scale disease outbreaks. Dr. Breitbart has also pioneered a new...

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AFFILIATION

 University of South Florida

EDUCATION

- Ph.D., in Cell and Molecular Biology, 2006 , University of California, San Diego & San Diego State University
- B.S., in Biology, 2000 , Florida Institute of Technology

AWARDS

- Florida Trend Magazine's "All Stars", 2014
- USF Outstanding Faculty Award, 2014
- Popular Science's "Brilliant Ten", 2013
- National Academy of Sciences Kavli Frontiers Fellow, 2009-2010
- USF Outstanding Research Achievement Award, 2007

RESEARCH AREAS

Environment, Ecology, Oceanic, Agriculture

FUNDING REQUEST

Your donations will support graduate students who respond to disease outbreaks and frantic calls from aquarium vets. Discovery of potential pathogens is a critical step in disease management, yet difficult to fund since it's very reactionary and often not hypothesis-driven. Fieldwork to find and collect samples is crucial. Funds will cover lab costs, supplies, and next-generation sequencing, to enable virus identification and follow-up studies to determine the relation of viral candidates to outbreaks.