

# **Technical Consultation for Activities related to Surveillance, Research, Outreach and Education on Marine and Freshwater Toxins and their Association with Human Illness**

for the

Aquatic Toxins Program  
Division of Environmental Health  
Florida Department of Health

under

US Centers for Disease Control and Prevention  
Grant #U50-CCU423360-01

by

NIEHS Marine & Freshwater Biomedical Sciences Center  
University of Miami

September 2004

# Personnel

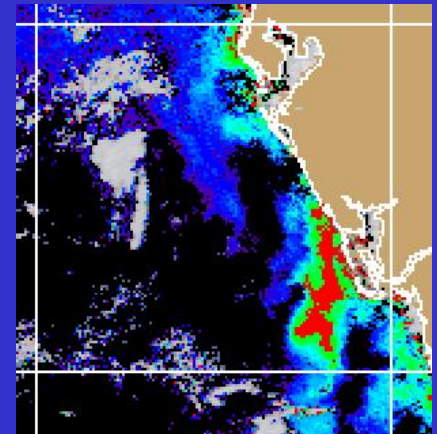
- Lora E Fleming, MD PhD: Principal Investigator
- Wendy Stephan, MPH: Health Educator



# Objectives

Assist Florida Department of Health with marine & freshwater toxin human diseases & exposures:

- Surveillance, research, outreach & education
- Development of targeted educational materials:
  - **Ciguatera Fish Poisoning Poster & Brochure**
    - Targeted at Fishers, MDs, Public Health, General Public



# Objectives

**Assist Florida Department of Health, Centers for Disease Control and Prevention (CDC), Harmful Algal Bloom (HAB) Investigators including Mote Marine Laboratory with:**

- **Multimedia HAB presentation development**
- **Red Tide Emergency Room Study**
- **Red Tide 10 day Follow Up Study**
- **Red Tide Toxins Inland Transport Study**
- **Ciguatera Neuropsychological Study**
- **CDC Ciguatera Study**
- **CDC Mote Cyanobacteria Study**

# Past Year Accomplishments


- **Accomplishments:**
  - Ciguatera Fish Poisoning poster & brochure
    - Reviewed by HAB Experts
  - Assisted in Mote studies & other HAB activities
  - National HAB Plan participation, other presentations
- **Public Health Significance**
  - Future distribution of materials to fishers, etc
  - New HAB human health data
- **Challenges**
  - HABs are environmental phenomena which are difficult to study

# Natural Forces and Exposures




# Past Year Accomplishments: Ciguatera Fish Poisoning Poster and Brochure


*A hidden danger lurks among the reefs.*  
**Beware of Ciguatera**  
(pronounced sig-uwa ebrae)

 Tiny algae can produce toxins that concentrate in the organs and flesh of large carnivorous reef fish (such as barracuda, hogfish, red snapper and groupers). Ciguatera fish doesn't look or taste bad.


**Symptoms of Ciguatera** appear within 6-24 hours, and include vomiting, diarrhea, abdominal pain and cramping, as well as unusual sensations (such as itching skin, aching teeth and painful urination). The classic symptom of Ciguatera is the sensation that cold things feel hot to the touch. For some people, these symptoms come and go for months or even years, and can be triggered by eating seafood, caffeine or alcohol.



**Reduce your risk** of getting Ciguatera by eating only small reef fish and by avoiding species most likely to carry Ciguatera. Ask local fishermen or bait shops about which reefs or fish to avoid.



**Ciguatera can be treated** with a drug called Mambicol if diagnosed within 72 hours. Report your symptoms and that you ate reef fish to your doctor or local emergency room. Call the toll free Aquatic Toxins Hotline at (888) 232-8635 to get treatment advice.



This poster was produced by the Florida Department of Health with assistance from the Fish and Wildlife Research Institute of the Florida Fish and Wildlife Conservation Commission. For more information about how to safely enjoy Florida fish, visit [www.nrmms.miami.edu/groups/whr](http://www.nrmms.miami.edu/groups/whr), or [www.floridamarine.org](http://www.floridamarine.org) or call (727) 896-6026.

# Future Direction

- **Education & Outreach**
  - **Materials: Pufferfish & Saxitoxins**
  - **HAB Taskforce, HAB Conference**
- **Surveillance**
- **Assist Mote & Other HAB Investigators**
  - **10 day follow up Study, Emergency Room Study, Inland Transport Study**
  - **Ciguatera Neuropsych**
  - **Other Research**



# Synergism & Collaborations

- **Production of Education & Outreach Materials**
- **Support in HAB surveillance**
- **Support ongoing HAB Epidemiologic Research**
- **Liaison with HAB Research Community**



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To report illnesses related to Aquatic  
Toxins call the toll free Hotline at  
1.888.232.8635