

Neuropsychological Effects of Ciguatera Fish Poisoning

Conducted 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

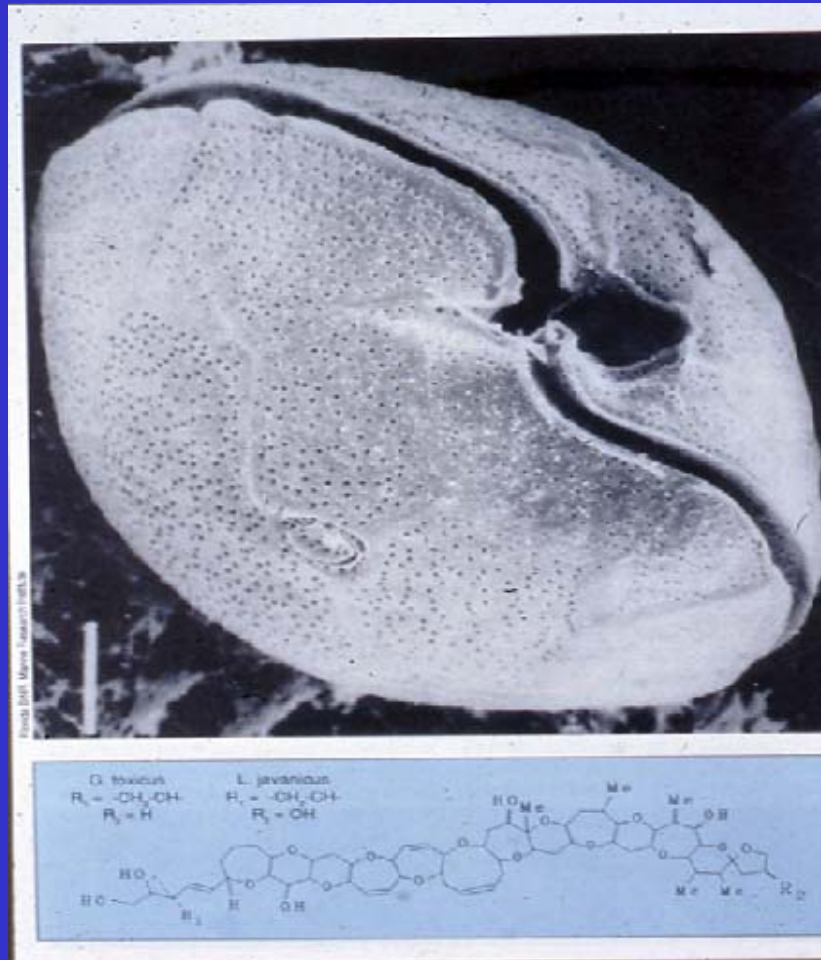
September 2004

Personnel

- **Melissa Friedman PhD, University of Miami School of Medicine and NIEHS Center: PI**
- **Lora Fleming MD PhD, UMSM: Consultant**
- **Bonnie Levin PhD, UMSM: Consultant**
- **Richard Weisman PharmD and Jeffrey Bernstein MD, South Florida Poison Information Center: Collaborators**
- **Donna G Blythe MD, UMSM: Collaborator**
- **Kathleen Schrank, MD, UM School of Medicine, Collaborator**

Objectives

- **Characterize neuropsychological symptoms experienced by ciguatera patients over time, using a battery of neuropsychological instruments**
- **Characterize the relationship of subjective neuropsychological complaints to mood and personality factors**
- **Characterize the effectiveness of acute mannitol treatment in preventing chronic neuropsychological sequelae**



Gambierdiscus toxicus, the microorganism that causes Ciguatera

Past Year Accomplishments

- **Obtained IRB and Human Subjects Approvals**
- **Established collaborative relationships with recruitment sources**
 - **Conducted Outreach and Education with South FL Poison Information Center, local doctors, Emergency Departments**
- **Recruited Subjects & Collected Data (ongoing):**
5 cases, 5 controls (to date)

Challenges

- Geographic location of subjects (Investigators need for travel to subjects to maximize recruitment)
- Slow rate of recruitment

Future Plans

Continue forward with steady progress of Year 01

- Continue recruiting subjects
- Conduct baseline and follow-up neuropsych evaluations
- Maintain Human Subjects standards and respond to IRB issues
- Analyze and interpret the data and disseminate results.



Baracuda -- highly associated with Ciguatera

SYNERGY

- **Ciguatera Neuropsychological Study is being conducted in tandem with the Ciguatera Diagnostic Method Study (CDC: Dr. Lorrie Backer)**
- **Collaboration includes University of Miami School of Medicine, RSMAS, CDC, local physicians, Emergency Department at Jackson Memorial Hospital, and South Florida Poison Information Center**

Benefits for Environmental Public Health

**Ciguatera Neuropsych Study & Diagnostic Method Study
Combined Benefits:**

- **Improved diagnostic ability (with CDC)**
- **Improved understanding of acute and chronic neuropsychological consequences**
- **Improved understanding of the effectiveness of mannitol treatment.**

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by the

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Aquatic Toxins Program
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To report illnesses related to Ciguatera call
your local DOH County Health
Department and the toll free Aquatic
Toxins Hotline at 1.888.232.8635