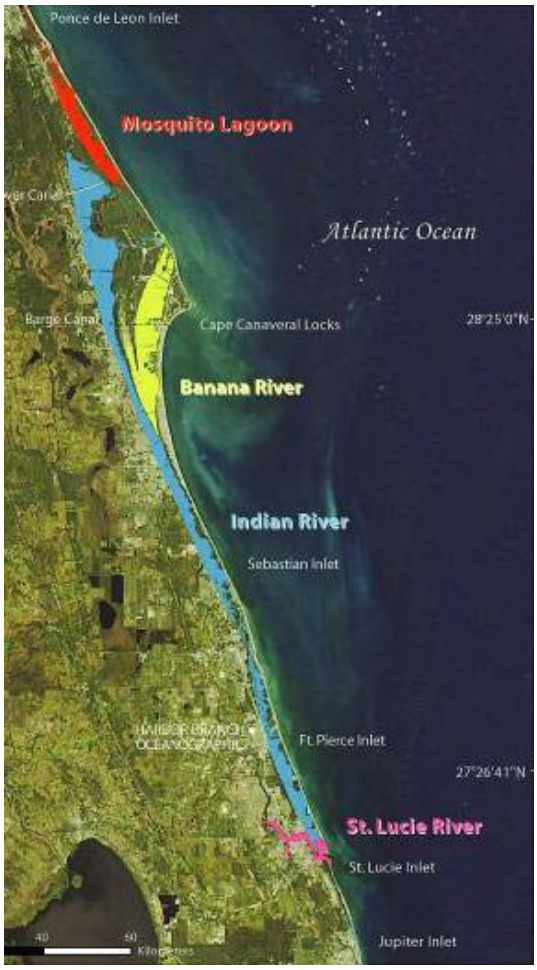
# HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
## FOUNDATION

The Harbor Branch Oceanographic Institute Foundation is pleased to announce
the following grants totaling **$867,526** to FAU Harbor Branch researchers
from funds generated through the sales of two Foundation legislated Florida specialty license plates


***Granted through the***
***Harbor Branch Oceanographic Institute Foundation***

**$431,670**
***Full-Scale Study, 3rd Year***
**The Indian River Lagoon Observatory (IRLO):**
**Ecosystem Function of a Nationally Important Estuary in Transition**
***Principle Investigator: M. Dennis Hanisak, PhD***



The Indian River Lagoon Observatory (IRLO) was launched in FY2012 to investigate ecological relationships in the Indian River Lagoon and how they are impacted by natural and human-induced stressors. Key elements of IRLO are: long-term, ecosystem-based research; a network of advanced observing stations; and collaboration among organizations. Achievements of IRLO include: integrated research focused on the relationships of water quality, macroalgae, and seagrass; development and deployment of IRLO, IRLO's Network of Environmental Sensors consisting of Land/Ocean Biogeochemical Observatory (LOBO) units and weather sensors to provide real-time, high-accuracy, and high-resolution water quality/weather data through a dedicated interactive website; and the annual Indian River Lagoon Symposium a forum for research on the IRL and its management to narrow gaps between research and its application. IRLO has developed and demonstrated HBOI capabilities to conduct sustained long-term time series of environmental and biological data in the IRL, to establish HBOI as a catalyst for IRL research, and to provide unprecedented environmental monitoring capabilities in the IRL.

**$35,000**
**Pilot-Scale Study**
**Florida Deep-water Marine Biodiversity:**
**Digitization of Submersible Videotapes for Research, Education, and Conservation**
**Principle Investigator: John K. Reed, MS**
**Co-Principle Investigators: Shirley A. Pomponi, PhD, Amy E. Wright, PhD, M. Dennis Hanisak, PhD**

**$34,903**
**Pilot-Scale Study**
**Improving monitoring and understanding of phytoplankton and harmful algal blooms in the southern Indian River Lagoon**
**Principle Investigator: James Sullivan, PhD**
**Co-Principle Investigators: M. Dennis Hanisak, PhD & Malcolm McDonald, PhD**

**$35,000**
**Pilot-Scale Study**
**Determining new sediment metrics for seagrass restoration monitoring**
**Principle Investigator: M. Dennis Hanisak, PhD**
**Co-Principle Investigator: Jordan Beckler, PhD**

**$35,000**
**Pilot-Scale Study**
**Water quality and biological responses of Florida Bay to freshwater discharges from Everglades**
**Principle Investigator: Mingsun Jiang, PhD**
**Co-Principle Investigator: Brian Lapointe, PhD**

**$35,000**
**Pilot-Scale Study**
**Characterizing polyaromatic hydrocarbons in the Indian River Lagoon.**
**Principle Investigator: Amy E. Wright, PhD**

**$16,671**
**Pilot-Scale Study**
**Differential Gene and Protein Expression on Triple Negative Breast Cancer Cells Treated with a Marine Natural Compound.**
**Principle Investigator: Esther Guzmán, PhD**

Granted through the
Harbor Branch Oceanographic Institute Foundation

**$230,000**
**Full-Scale Study, 3rd Year**
**Advancement of Land-based Integrated Multitrophic Aquaculture**
**Principle Investigator: Paul S. Wills, PhD**
**Co-Principle Investigators: Anni Dalgleish, PhD; Dennis Hanisak, PhD; Mingshun Jiang, PhD; Susan Laramore, PhD; Peter McCarthy, PhD; Bing Ouyang, PhD; Shirley Pomponi, PhD**

Funding for the 3rd year of a three year project advancing the land-based HBOI-IMTA system by the addition of new species and by using an entirely different analytical approach, stable isotope analysis, for tracking nutrient flow through the system that will allow us to simultaneously model nitrogen and carbon fluxes. This method will give a much clearer indication of nutrient flow and partitioning than the method of waterborne nitrogen analysis used in the prior IMTA initiative. New species will be incorporated into the IMTA system including commercial sponges for fine particulate filtration, a new larger sea urchin, Tripneustes sp. and various macroalgae species. Engineered system components, such as the heat exchanger, developed at the prototype level in the prior IMTA initiative will be designed and evaluated at full-scale. New low cost-sensors for monitoring the system will be evaluated and developed, for refined system management. The models will be further improved with the new data.

**$14,282**
**Pilot-Scale Study**
**Determining the Market and Nutritional Value for Sea Vegetable Aquaculture**
**Principle Investigator: Megan Davis, PhD**
**Co-Principle Investigators: Dennis Hanisak, PhD & Paul Wills, PhD**

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***Full-Scale SLP Studies*** *are designed to achieve a specific research objective, including the thorough testing of hypotheses, and must have adequate design, power, and resolution to lead to publication and external funding.*

***Pilot-Scale SLP Studies*** *are feasibility studies that tests the logistics and scientific potential of a new research idea. Pilot studies are intended to lead to proposals for full-scale SLP projects and/or external proposals in the future. Pilot studies have lower funding needs, are typically 12-months depending upon the project requirements.*

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All HBOIF SLP projects:

- to pertinent Florida legislative language governing the use of SLP funds
- enhance or expand a current FAU Harbor Branch research focus in line with the HBOI 5-year Strategic and Implementation Plans and will have the potential to be leveraged for external funds
- address a challenge facing Florida and yield data that can support development of a resource management and/or policy solution
- leverage SLP funding to obtain funding from other external sources including Federal and State agencies, industry and foundations other than HBOIF.