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FAU Harbor Branch Conducts First-Ever Study of *Vibrio* Bacteria in the Indian River Lagoon

Scientists Working to Understand How Freshwater Discharges Affect Pathogens

FORT PIERCE, Fla. (July 24, 2014) – Pathogenic bacteria of the genus *Vibrio* cause an estimated 80,000 illnesses and 100 deaths each year in the United States, and scientists at Florida Atlantic University’s Harbor Branch Oceanographic Institute (HBOI) have documented the presence of these bacteria in the Indian River Lagoon—providing the impetus for a recently-launched study that aims to determine areas of concern and educate the public about potential hazards.

The research is the subject of FAU graduate student Gabby Barbarite’s Ph.D. dissertation and is being conducted under the guidance of research professor Peter McCarthy, Ph.D., of HBOI’s Marine Biomedical and Biotechnology program.

“The Lagoon is not only ecologically important, but it is also a great area for aquatic activities like boating and fishing,” said Barbarite. “This study will help us understand the distribution of these pathogens and the sources that they are associated with, in order to make everyone’s time spent on the water as enjoyable and safe as possible.”

Though these bacteria are natural inhabitants of warm coastal waters, anthropogenic events, like freshwater discharge can alter their distribution and abundance. This study will not only provide new information about their local presence but also establish a monitoring baseline to reference after such events.

The study is screening sediment, oysters and finfish from recreational areas. Preliminary findings confirm that these bacteria are present throughout the Lagoon, and that their abundance differs by location mainly due to water parameters. Sampling will continue throughout the year to determine seasonal fluxes.

“It is likely that these bacteria have always been in the Lagoon system, we’re just the first to specifically look for them,” said Peter McCarthy, Ph.D. “This is a part of a larger study which is looking at the health impacts of bacteria both in terms of how the bacteria impact human health and how we might impact the health of the Lagoon through pollution.”

While it is important for local Lagoon users to be aware of these hazards, experts say it is not a cause for alarm, as severe infections are mostly limited to immune-compromised individuals. Risk of infection can be reduced by properly disinfecting and avoiding exposure of wounds as well as by using caution when handling and consuming seafood.

For more information, contact Carin Smith at 772-242-2230 or carin.smith@fau.edu.

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About Harbor Branch Oceanographic Institute:

Founded in 1971, Harbor Branch Oceanographic Institute at Florida Atlantic University is a research community of marine scientists, engineers, educators and other professionals focused on Ocean Science for a Better World. The institute drives innovation in ocean engineering, at-sea operations, drug discovery and biotechnology from the oceans, coastal ecology and conservation, marine mammal research and conservation, aquaculture, ocean observing systems and marine education. For more information, visit www.fau.edu/hboi.

About Florida Atlantic University:

Florida Atlantic University, established in 1961, officially opened its doors in 1964 as the fifth public university in Florida. Today, the University, with an annual economic impact of \$6.3 billion, serves more than 30,000 undergraduate and graduate students at sites throughout its six-county service region in southeast Florida. FAU's world-class teaching and research faculty serves students through 10 colleges: the Dorothy F. Schmidt College of Arts and Letters, the College of Business, the College for Design and Social Inquiry, the College of Education, the College of Engineering and Computer Science, the Graduate College, the Harriet L. Wilkes Honors College, the Charles E. Schmidt College of Medicine, the Christine E. Lynn College of Nursing and the Charles E. Schmidt College of Science. FAU is ranked as a High Research Activity institution by the Carnegie Foundation for the Advancement of Teaching. The University is placing special focus on the rapid development of three signature themes – marine and coastal issues, biotechnology and contemporary societal challenges – which provide opportunities for faculty and students to build upon FAU's existing strengths in research and scholarship. For more information, visit www.fau.edu.