

[Marine Biomedicine and Environmental Sciences \(MBES\)](#) is an academic center of MUSC providing a multidisciplinary program of graduate education and basic research. Its mission is to investigate the reciprocal relationships of organisms and their marine environment using modern molecular, biochemical, and cell biological techniques. Emphasis is placed on aspects of human health and disease. MBES is an active participant in [the Hollings Marine Laboratory \(HML\)](#), which is a \$46 million marine laboratory to support interdisciplinary approaches to investigating the health of the marine environment and its relationship to human health. The laboratory is a 78,000 square foot research facility and the 40 faculty members of the MUSC marine program are experts in ecotoxicology, bio-informatics, proteomics, and genomics. MBES's faculty has studied everything from the renal systems of stingrays to the genes of oysters. Epidemiologists study how ocean-borne diseases are transmitted to humans while biologists monitor "sentinel species" that could indicate pollution. Recently, an investigator studying local shrimp pinpointed a substance that kills cancer cells.

Hollings Marine Laboratory (HML)

The HML approach brings basic, applied, and medical researchers together to work collaboratively on factors that affect the health of coastal waters and humans who live in or visit the coastal zone. Its mission is to provide science and biotechnology applications to sustain, protect, and restore coastal ecosystems, with emphasis on links between environmental condition and the health of marine organisms and humans.

Core facilities at HML

- *Bioassay Facility*
- *Microbiology Core with BSL2+ and BSL3 Laboratories*
- *Tissue Culture Facilities*
- *Environmental Chemistry Core*
- *Structural Chemistry Core (including a Nuclear Magnetic Resonance Facility with 800 MHz and 700 MHz instruments)*
- *Genomics Core (including state-of-the-art robotics for production of microarrays)*

Featured Researchers

[Dr. Eric Lacy](#) is the Director of MBES and a Professor in Cell Biology and Anatomy. Dr. Lacy's research focuses on the role of peritoneal fluid in the acid/base balance and osmoregulation in euryhaline stingrays as well as identifying and characterizing molecules in fluids secreted by accessory reproductive organs.

[Dr. Gregory Warr](#) is a Professor in Biochemistry and Molecular Biology. Dr. Warr's research interests are the molecular basis of immune recognition and ecogenomics and the functional genomic approach to signal transduction and innate immunity in shrimp.

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