



Henry Neal Williams, Ph.D.

Professor and Director of the Environmental Sciences Institute
Florida Agricultural and Mechanical University

phone: 850-599-3550

email: henryneal.williams@famu.edu

COSEE Role:

COSEE Florida Advisory Committee Member

Primary COSEE Affiliation:

Florida

Background with Respect to Ocean Sciences Education:

“My research program is focused on two areas - environmental infection control in dental operatories and the ecology, molecular biology and taxonomy of the unique predatory bacteria of the family Bdellovibrionaceae, which may play a role in bacterial mortality and the control of bacterial populations in the environment. The role of bdellovibrios in nature and the organism's potential use as an agent of biological control has eluded investigators for over 40 years. Decades of studying these bacteria in water samples from rivers, oceans and seas have yielded small numbers of the organisms and limited data. Pioneering studies in our laboratory have revealed the primary habitat for these organisms to be the biofilm on surfaces in the aquatic environment and not the water. Our ultimate goal is to uncover the role of these organisms in nature, specifically the aquatic environment, and in infections.”

“The importance of environmental infection control is apparent when it is considered that this issue has had a greater impact on the practice of dentistry today, generating more publicity and causing more public consternation during the last decade than any other. Recent work in my laboratory in this area has focused on the microbial contamination of the dental water supply (DUWS). Our research team was



the first to demonstrate the nature of biofilm development in dental units and yielded important clues as to the source of microorganisms that become established in devices in dental operatories. Our research efforts have had national impact by providing supporting data and a basis for recommendations by the Centers for Communicable Diseases and the American Dental Association.”

“We also have a strong emphasis on diversity in our laboratory and the development of students traditionally underrepresented in the sciences. This effort has been nationally recognized through several awards including the American Society for Microbiology William A. Hinton Award presented to me in recognition of the training of students including minority individuals. In February, 2004 I was awarded the University of Maryland, Baltimore Martin Luther King, Jr. Award in recognition of my efforts to promote inclusion and diversity in the sciences.”