

## Microorganisms and Biofilms

### LS.1.P026

#### **Quantification of Indigenous Bacterial Phylogenetic and Functional Groups at Terrebonne Bay along the coastline of the Gulf of Mexico using combinations of Fluorescence *in situ* Hybridization and Epifluorescence Microcopy.**

O. Olapade<sup>1</sup>

<sup>1</sup>Albion College, Biology, Albion, United States

oolapade@albion.edu

Keywords: Fluorescence *in situ* hybridization, epifluorescence microscopy, pollution, coastal marine

The detection and quantification of bacterial phylogenetic and functional groups at the site of the Deepwater Horizon oil spill in Terrebonne Bay along the Gulf of Mexico {GOM} were carried out using combinations of nucleic acid staining, and fluorescence *in situ* hybridization {FISH} and epifluorescence microcopy approaches. Overall, simultaneous analyses of both planktonic and benthic bacterial communities at the bay along GOM by FISH revealed the numerical dominance of members of the type I methanotrophic bacteria (MB) over the type II populations. The study clearly reflects the change in the bacterial community structure and composition in response to the tragic methane and crude oil discharges from the Deepwater Horizon rig along the Gulf of Mexico.