

**Project Title**

*Antibiogram of pathogens isolated by SGU Testing Unit in Grenada.*

**Research Goals:** We hypothesize that the monitored coastal waters in Southern Grenada will be of good quality and comply with the water quality standards set by the GDBS as well as the EPA. The isolated indicator organisms will be resistant to one or more antibiotics used in Grenada. The antibiogram of indicators will correlate with antibiogram of pathogens isolated at SGU clinical Unit.

**Aim:**

The aim of this study is to determine the prevalence of indicators and occurrence of antibiotic resistant indicator bacteria (*E. coli* and *E. faecalis*) in the coastal environment of St. George's, Grenada and to compare this range with the GDBS, EPA and WHO recreational water quality standards. I also plan to determine if there is a link between the observed patterns of antibiotic-resistance and the antibiotics that are commonly used in Grenada.

**Rational:** A combination of the long-term observations of the coastal water quality and bacteriological content with the data on antibiotic-resistance of the indicator organisms, will allow these investigators to answer the research question of "How often the recreational waters in Southern Grenada are contaminated with organisms carrying genes for antibiotic resistance?" This research has a number of important implications including public health concerns, the identification of the source of contamination, and the discovery of a potential source of antibiotic-resistance. Can one acquire antibiotic-resistant infection from a marine microorganism? The antibiogram could be later available from the SGU to the Ministry of health of Grenada and to the medical doctors in Grenada and to any SGU professor for teaching in microbiology, clinical skills or pharmacology as an educational material on susceptibility patterns of bacterial pathogens in Grenada.

One of his research objectives is "Compare the resistance pattern obtained for marine indicators *E.coli*, *Klebsiella pneumonia* and *Enterococcus faecalis* collected during the period 2008 and 2010. to resistance pattern obtained for pathogens in Grenada.

**Novelty:** It will be first antibiogram produced in Grenada.