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An investigation of compounds and their bioactivities from Jamaican *Gracilaria mammillaris, Clavelina picta* and *Plexaurella nutans*

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The Jamaican marine environment is home to many diverse organisms that produce various interesting classes of compounds with bioactivities such as anti-cancer and antimicrobial properties. Colon and prostate cancers are two of the leading causes of cancer related deaths in the world and in recent times there has also been an increase in the presence of antibiotic resistant microbes. This research focuses on the characterization of compounds from specimens of the red algae *Gracilaria mammillaris*, the purple ascidian *Clavelina picta* and the itching gorgonian *Plexaurella nutans*. These organisms were collected from different sites within the Ramsar vicinity of Port Royal, Jamaica and their compounds isolated by means of repeated silica column chromatography, solvent-solvent extraction and size exclusion chromatography using Sephadex® LH-20. This led to the isolation of compounds with steroidal, lipid, sesquiterpene and quinolizidine frameworks. Bioactivities of compounds were evaluated against colon and prostate cancer cell lines and microorganisms with a hope that these compounds may be of economic benefit in the agriculture and pharmaceutical industry.

Biography

Doleasha Davis is currently pursuing her PhD in Marine Natural Products Chemistry under the supervision of Winklet Gallimore at the University of the West Indies, Jamaica. She also completed her Bachelor's Degree in Food and General Chemistry from the same university, where she was the recipient of various awards for outstanding performances in both food and Organic Chemistry and was a Member of the Dean's Honour List.

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