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Isolation and structure elucidation of phytochemicals from sponges of Okinawa, Japan

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Investigations of marine secondary metabolites revealed the presence of various poly-acetylenic compounds in marine organisms especially in marine sponges which has been attributed to various biological activities. This is a report of an on-going research into the anticancer properties of phytochemicals from sponges of Okinawa, Japan against HeLa cells which has been identified as the causative pathogen of pelvic cancer. The EtOH crude was partitioned between Et₂O, n-BuOH and H₂O. Component isolation of the Et₂O fraction was achieved using a combination of open column chromatography, flash column chromatography and HPLC while spectra analysis of isolates from the Et₂O fraction using ¹H NMR, ¹³C NMR, COSY, DEPT, HMBC, HSQC, TOCSY, NOESY AND MS revealed Pellynol A which was active against HeLa cells at 1 μ g/ml and other poly-acetylenes.

Biography

Gabriel Adeyemi Francis was awarded the Japanese MEXT scholarship in 2011 to undergo a Ph.D. program at the Natural Product Chemistry Laboratory, Graduate School of Pharmaceutical Science, Kyushu University, Japan, under the supervision of Associate Professor Tomofumi Miyamoto and Assistant Professor Chiaki Tanaka. He obtained M.Sc. degree in Organic Chemistry from the University of Abuja, Nigeria. His current research focus is on isolation and structure elucidation of bioactive marine secondary metabolites as novel analogs in drug discoveries against cancer cell lines.

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