

Anticancer compounds isolated from Arctic Marine organisms

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The significance of natural products in drug discovery, particularly for anticancer therapeutics, is unparalleled. Nearly half of the currently available anticancer drugs are derived from natural sources. The marine environment comprises the majority of the global biodiversity. As the marine environment and its organisms have become more accessible over the last decades, it is expected that the ocean will be the next great source of novel chemistry. Our research group, Marbio, UiT explore Arctic and sub-Arctic marine organisms, searching for compounds with activities against cancer, bacteria and diabetes as well as compounds with immunomodulatory and antioxidative effects. We are screening a unique collection of cold-water invertebrates and marine microorganisms, and we have identified several novel bioactive molecules. Through the screening and chemical investigation of extracts from the Arctic marine hydrozoan *Thuiaria breifussi*, our efforts led to the isolation of breifussin A - H. Notably, breifussin C and D displayed selective inhibition of the survival of various cancer cell lines. These findings underscore the potential of Arctic marine biodiversity to yield novel chemistry.