Session 6: Chemotherapy and Discovery of Chemotherapeutic Agents: Research on Natural Products

Marine Compounds as Sources of Chemotherapeutics

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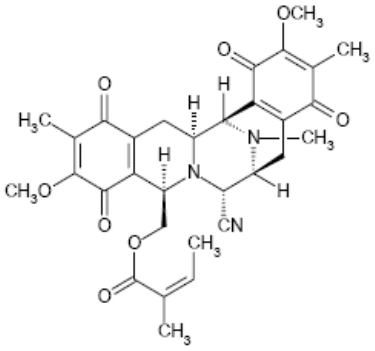
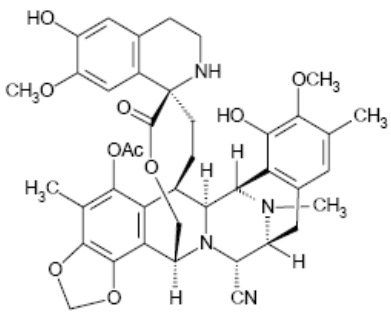
Abstract

Marine organisms have been recognized as a source for new anticancer natural products since the availability of ara-C, a sponge-derived nucleoside, for the treatment of acute myeloid leukemia and non-Hodgkin's lymphoma. Later, searches for new marinederived compounds have been world widely explored to develop potential anticancer agents such as dolastatins, bryostatins, didemnins, aplidins, kalahalides, and ecteinascidins. In this presentation, we also discuss the investigation of two highly cytotoxic tetrahydroisoquinoline alkaloids, including renieramycins and ecteinascidins from the Thai sponge *Xestospongia* sp. and the Thai ascidian *Ecteinascidia thurstoni*, respectively. With large quantities of these natural products in hand, chemical transformations and the structure-cytoxicity relationships of these compounds have been studied for further development of these cytotoxic alkaloids as new anticancer agents from in-the-sea farming Thai marine organisms.



Renieramycin M



Ecteinascidin 770

Keywords: marine natural products, anticancer agents, cytotoxicity, renieramycins, ecteinascidins.