The Anti-inflammatory effects of Brei, a marine compound from the soft coral Briareum excavatum on carrageenan-induced inflammatory rats

研究生：李麒民　指導教授：溫志宏

Recently, the attempts to develop drugs from marine organisms are greatly increasing with the discovery of a variety number of bioactive natural products, and several of these compounds are now under clinical trials. However, the occurrence of many diseases of mankind and the inflammatory response are closely linked. Therefore, with the anti-inflammatory drugs for research and development is very urgent. We have isolated two cembranolides compounds, A-1, A-2, from the soft coral Lobophytum sarcophytoides and the brianolide compound, Brei from the Briareum excavatum. In present study, we demonstrate that Brei significantly inhibited the expression of the pro-inflammatory proteins, inducible nitric oxide synthase (iNOS) and cyclooxygenase-2 (COX-2), in LPS-stimulated RAW 264.7 cells. An in vivo inflammation model was induced by intraplantar injection of carrageenan into rat hind paws. And using Histopathology to analyze the therapeutic effects of Brei on carrageenan-induced paw edema in rats. Furthermore, we propose that the possible mechanism by which Brei exerts its anti-inflammatory and analgesic effects involves the inhibition of neutrophil infiltration. Therefore, we suggest that the marine natural compound Brei could be a therapeutic potential for acute inflammation.