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**Terpenoids from the hainan marine invertebrates: Structure, absolute stereochemistry and biological activities**

Marine benthic invertebrates (Sponges and soft corals etc.) are widely distributed in the coral reefs of the world oceans. Of them, the animals belonging to the genus Sarcophyton (phylum Cnidaria, class Anthozoa, subclass Octocorallia, order Alcyonacea, family Alcyoniidae) are very prolific and are the intense research subjects for marine natural product chemists. Literature checking revealed that Sarcophyton animals can produce different structural classes of secondary metabolites exhibiting various interesting biological activities ranging from antifouling, anti-inflammatory to cytotoxic activities. Among the metabolites reported, cembrane-type diterpenes are the most frequently encountered. Moreover, biscembranoids, characterized by the complex and highly oxygenated macrocyclic

frameworks, which are formally synthesized from two different cembranoid units via a probable [4+2] Diels-Alder cyclic addition, are unique and typical natural products from soft corals of the genera Sarcophyton. Due to the flexible nature of the macrocycles accompanying with the highly diverse substitution patterns, it has been being a challenging task for their structural, in particular, the absolute stereochemistry, determination by natural product chemists. In this presentation, I'll present the latest chemical studies and promising bioactivity results on the sarcophyton corals and sponge *Spongia officinalis* collected from South China Sea. All work has been performed in close collaboration with marine biologists and with pharmacologists.

**Biography**

Yue-Wei Guo is currently a Professor at Shanghai Institute of Material Medica, Chinese Academy of Sciences, China. He received his Bachelor degree from Beijing University of Traditional Chinese Medicine, China, Master degree from China Pharmaceutical University in 1988, and PhD degree from Naples University, Italy in 1997. He was then a postdoctoral researcher in Istituto di chimica Biomolecolare-CNR, Italy from 1997 to 1999 and visiting Professor in Hokaido University, Japan from 1999 to 2000. His research interests mainly focus on the chemistry, chemoecology and bioactivity of the secondary metabolites from marine benthic invertebrates (molluscs, sponges and coelenterates etc.) and flora. He has authored over 400 original research papers and reviews in peer-reviewed and SCI-indexed journals and 14 invited book chapters for international/national publishers such as Wiley and American Scientific Publishers etc. He has received several international or domestic awards in recognition of his scientific work, such as Paul-Scheuer-Award in the year of 2010.

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