

Research on bioactive compounds
from soft corals and associated fungi collected from the South China Sea

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The research team has discovered nearly 300 new structures and carbon skeleton compounds from advantageous marine resources; And significant breakthroughs have been made in the fields of chemical structure analysis and configuration determination: in response to the problem of repeated discovery of known compounds and the challenge of low-cost production, molecular network Cytoscape is used to identify specific chemical structural features in complex systems, efficiently screening samples with chemical novelty; A new module self-assembly method has been developed based on Python programming language, molecular mechanics, and quantum chemistry computer professional calculations for multi season carbon oligohydrogen correction molecules that are difficult to identify by nuclear magnetic methods; The residual dipole coupling (RDC) method was optimized to address the problem of difficult determination of the stereoconfiguration of macrocyclic flexible molecules, achieving accurate determination of the stereoconfiguration of macrocyclic flexible molecules and improving the effectiveness of the research method. So far, he has published 44 SCI papers as the first/corresponding author, with 468 citations (H-factor: 18). In 2013, he won the "Sanofi Youth Biopharmaceutical Award" from the Chinese Pharmaceutical Association (a total of 8 nationwide). In 2023, won the second prize (first place) of Shandong Ocean Science and Technology Award. Hosted 7 national level scientific research projects and 3 provincial-level ones. Multi targeted optimization has been achieved for the separation, identification, and configuration determination of marine natural products, effectively promoting the exploration of marine natural medicines.