New 4-Methylated and 18-,19-Oxygenated Steroids from the Soft Coral *Nephthea chabroli*

碩二 黃雅靖 M955020031

Abstract

Soft corals belonging to the genus *Nephthea* have been found to be a rich source of steroids.[1–5] Chromatographic fractionations of the soft coral *Nephthea chabroli* resulted in the isolation of sixteen new steroids (**1**–**16**), together with four known compounds (**17**–**20**). Among them, compound **12** possesses a novel skeleton. The structures of these metabolites were elucidated by extensive spectral analyses and anti-inflammatory activities were performed. Compounds **2**, **4**, **5** and **6** at a concentration of 10 μM significantly reduce the levels of iNOS to 20.2 ± 2.6 %, 43.1 ± 7.8 %, 76.9 ± 9.4 % and 0 ± 0 %, respectively and COX-2 to 75.3 ± 3.3 %, 57.4 ± 5.1 %, 72.0 ± 10.5 % and 63.9 ± 10.9 % respectively, in comparison with those of the control groups. Compounds **1**, **3** and **7** could significantly reduce the iNOS protein expression (9.6 ± 1.0 %, 32.8 ± 6.8 % and 0 ± 0 %, respectively), but did not inhibit the COX-2 protein expression.

References:

1. Duh. C.-Y.; Wang, S.-K.; Chu, M.-J.; Sheu, J.-H. *J. Nat. Prod*. **1998**, *61*, 1002.
2. Zhang, W.-H.; Liu, W.-K.; Che, C.-T. *Chem. Pharm. Bull*. **2003**, *5*, 1009.
3. Cheng, S.-Y.; Dai, C.-F.; Duh, C.-Y. *J. Nat. Prod*. **2007**, *70*, 1449.
4. Cheng, S.-Y.; Dai, C.-F.; Duh, C.-Y. *Steroids* **2007**, *72*, 653.
5. Ma, K.; Li, W.; Fu, H.-W.; Koike, K.-Z.; Lin, W.-H.; Ofwegen, L.-V.; Fu, H.-Z. *Steroids* **2007**, *72*, 901.