# ANTI-DIABETIC AGENTS FROM THE MARINE-DERIVED FUNGUS MEIRA SP. 1210CH-42

Min Ah Lee[1,2] and Hee Jae Shin*†[1]

[1]Korea Institute of Ocean Science and Technology – Corée du Sud
[2]Pukyong National University – Corée du Sud

**Résumé**

Seven new metabolites, including one thiolactone (**1**), along with one revised thiolactone (**2**), two Δ8,9-steroids (**4**–**5**), and three 4,5-diol derivatives (**7**–**9**), were isolated from the *Meira* sp. 1210CH-42, together with two known compounds (**3** and **6**). In 2023, we reported the first marine-derived *Meira* sp. 1210CH-42, which was isolated from a seawater sample collected in the Chuuk Islands, Federated States of Micronesia (1). Preliminary screening indicated that the *Meira* sp. 1210CH-42 strain exhibited significant bioactivity. Therefore, we mass-cultured the strain, and as a result, we could isolate bioactive secondary metabolites from the 1210CH-42 strain. Their structures were elucidated based on the detailed analysis of 1D and 2D NMR, HR-ESIMS spectroscopic data, and ECD calculations. The biological activities of the compounds were assessed, including antioxidant, $\alpha$-glucosidase inhibitory, and cytotoxic effects. Interestingly, these compounds demonstrated potent $\alpha$-glucosidase inhibitory activity with IC50 values ranging from 86.0 to 279.7 $\mu$M, compared to acarbose (IC50 = 301.9 _˜ 418.9 $\mu$M) (1-2).

(**Acknowledgments:** This work was supported by the Korea Institute of Marine Science and Technology Promotion (KIMST) funded by the Ministry of Oceans and Fisheries, Korea (grant No.: 20220027) and by the Korea Institute of Ocean Science and Technology (grant numbers: PEA0121 and PEA0211); H.J. Shin is the Investigator.)

**Mots-Clés:** Antidiabetic, Marine fungi, NMR, Structure elucidation

*Intervenant
†Auteur correspondant: