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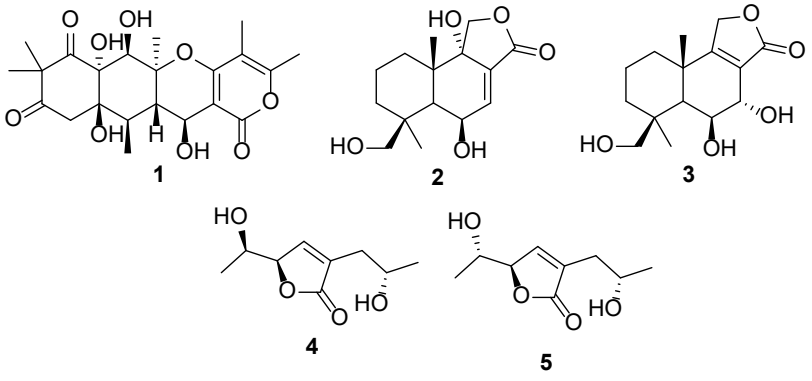
The secondary metabolites from the marine-derived fungus *Aspergillus flocculosus*

Key words: marine-derived fungi, secondary metabolites, meroterpenoids, polyketides

Marine-derived fungi are one of the most promising sources of biologically active compounds. The ability to produce the bioactive compounds depends on ecological conditions (e.g. substrate, temperature, salinity, competitive interaction with other organisms). Tropical waters with high bacterial diversity are good conditions for developing of bioactive metabolites producers [2].

The fungus *Aspergillus flocculosus* was isolated from the sediment sample, which collected in Nha Trang Bay (Vietnam). The careful chromatographic separation with silica gel, sephadex LH-20 and following normal and reversed phase HPLC purification yielded 10 individual compounds. The structures of isolated compounds were established by 1D and 2D NMR spectroscopy and high-resolution mass spectrometry as new meroterpenoid 12-epi-aspertetranone D (**1**) and its known epimer aspertetranone D [4], two new sesquiterpenoids **2** and **3** and their known p-nitrobenzoate derivatives [1], new tetraketide aspilactonol G (**4**) and two its known isomers aspilactonol A (**5**) and dihydroaspyrone, as well as known diketopiperazine mactanamide [3]. The absolute configurations of all stereocentres of **4** and **5** were confirmed by modified Mosher's method.



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The cytotoxicity of isolated compounds against human prostate cancer cell lines and murine neuroblastoma cell line was evaluated. In addition, the neuroprotective effect of these compounds in 6-hydroxydophamine model of Parkinson's disease was studied.

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