

## Additional Azaphilones from the Marine Algae-Derived Fungus *Penicillium sclerotiorum* with Anti-angiogenic Activity

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Sixteen azaphilone derivatives, including four new compounds, penicilazaphilones H and I (**1** and **2**), 11-*epi*-geumsanol F (**3**), and 11-*epi*-geumsanol B (**4**), together with twelve known analogues (**5–16**), were isolated from the algae-derived fungus *Penicillium sclerotiorum* purified from the fresh marine macroalgae *Grateloupia* sp. The planar structures of **1–4** were identified by HRESIMS, IR, NMR, and UV spectroscopic analyses. Their absolute configurations were unambiguously determined by comparing the NMR and ECD spectra. These secondary metabolites were evaluated on the anti-angiogenic effect in human endothelial progenitor cells (EPCs). As a result, compounds **12**, **14**, and **16** exhibited anti-angiogenic activities by blocking cell growth, migration, and tube formation of EPCs. Additionally, the structure–activity relationships (SAR) for anti-angiogenic effects of isolated azaphilones were deduced.