

2nd International Conference and Exhibition on

MARINE DRUGS AND NATURAL PRODUCTS

June 15-17, 2017 London, UK

Anti-inflammatory isochromans from an endophytic fungus *Annulohyphoxylon truncatum* of *Zizania caduciflora*

Sang Hee Shim¹, Wei Li², Soonok Kim³ and Young-Sang Koh⁴¹Duksung Women's University, South Korea²Korea Institute of Oriental Medicine, South Korea³National Institute of Biological Resources, South Korea⁴Jeju National University, South Korea

Six new isochroman derivatives (annulohyphoxylomans A–C, 1–3; annulohyphoxylomanols A and B, 6 and 7; and annulohyphoxyloside, 8), an isocoumarin (annulohyphoxylomarin A, 4), and an azaphilone derivative (xylariphilone, 5) were isolated from an ethyl acetate extract derived from cultures of the endophytic fungus JS540 found in the leaves of *Zizania caduciflora*. The JS540 strain was identified as *Annulohyphoxylon truncatum*. The structures of the isolated compounds were elucidated by one- and two-dimensional nuclear magnetic resonance and mass spectrometry, and by comparison with related compounds from the literature. The anti-inflammatory activities of the isolated compounds were evaluated in Lipo Polysaccharide (LPS)-stimulated bone marrow-derived dendritic cells. Xylariphilone (5) exhibited significant inhibitory effects on LPS-induced interleukin (IL)-6, IL-12 p40, and Tumor Necrosis Factor (TNF)- α production with IC₅₀ values of 5.3, 19.4, and 37.6 μ M, respectively.

Biography

Sang Hee Shim has her expertise in Natural Products Chemistry. She has done her studies on bioactive secondary metabolites from medicinal plants and their associated micro-biomes including endophytes. She investigated a lot of bioactive secondary metabolites from halophyte-derived microbial cultures and is trying to elucidate interactions between plants and their endophytes.

sangheeshim@duksung.ac.kr

Notes: