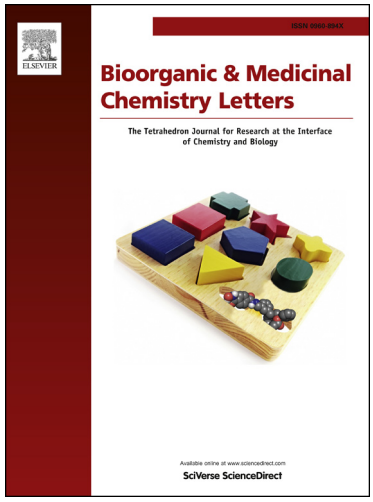

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Vuong Van Truong[a], Tran Duy Nam[a], Truong Ngoc Hung[b], Nguyen Thi Nga[b], Pham Minh Quan[b], Luu Van Chinh[b*] and Sang-Hun Jung[c*]

[a]*Vietnam – Russia Tropical Centre, 2-Nguyen Van Huyen-Cau Giay-Hanoi-Vietnam*

[b]*Institute of Natural Products Chemistry, Vietnam academy of Science and Technology, 18-Hoang Quoc Viet-Cau Giay-Hanoi-Vietnam. Email: chinhluuvan@gmail.com*

[c]*College of Pharmacy, Chungnam National University, Daejeon, Korea. jungshh@cnu.ac.kr*

Abstract

The conjugation of azazerumbone ((3*E*,7*E*,11*E*)-5,5,8,12-tetramethylazacyclododeca-3,7,11-trien-2-one (**7**)) and 2,4-dihydroxychalcones was carried out for the preparation of novel target compounds **9a-g** with 1-ethylene-4-methylene-1,2,3-triazole linker and **10a-f** with propylene linker between amide nitrogen of azazerumbone and 4-hydroxy group of chalcone. The anti-proliferative activity of these compounds against the LU-1, Hep-G2, MCF-7 and SW480 human cancer cell lines were significantly improved compared to those of azazerumbone or zerumbone. The anti-proliferative activities of (*3E,7E,11E*)-1-((1-(2-(3-hydroxy-4-((*E*)-3-(3-methoxyphenyl)acryloyl)phenoxy)ethyl)-1*H*-1,2,3-triazol-4-yl)methyl)-5,5,8,12-tetramethyl azacyclododeca-3,7,11-trien-2-one (**9b**) and (*3E,7E,11E*)-1-(3-(4-((*E*)-3-(3,4,5-trimethoxyphenyl)acryloyl)phenoxy)propyl)-5,5,8,12-tetramethylazacyclododeca-3,7,11-trien-2-one (**10d**) are nearly comparable to those of ellipticine.

Keywords: Zerumbone, Azazerumbone, Chalcone, Conjugate, Anti-proliferative Activity.