

# European Pharma Congress

August 25-27, 2015 Valencia, Spain

## Neuroprotective effects of 3,4-seco-28-noroleanane triterpenes from the flowers of *Camellia japonica*

Oh Won Keun

Seoul National University, Republic of Korea

Bioassay-guided fractionation of *Camellia japonica* led to the isolation of six new 3,4-seco-28-noroleanane triterpenoids, (1) 4,7 $\beta$ ,17 $\beta$ ,29-tetrahydroxy-16-oxo-3,4-seco-28-norolean-12-en-3-oic acid, (2) 4,7 $\beta$ ,17 $\beta$ ,29-tetrahydroxy-16-oxo-3,4-seco-28-norolean-12-en-3-oic acid methyl ester, (3) 4,7 $\beta$ ,17 $\beta$ -trihydroxy-16-oxo-3,4-seco-28-norolean-12-en-3-oic acid n-butyl ester, (4) 4,17 $\beta$ ,29-trihydroxy-16-oxo-3,4-seco-28-norolean-12-en-3-oic acid methyl ester, (5) 4,17 $\beta$ ,29-trihydroxy-16-oxo-3,4-seco-28-norolean-12-en-3-oic acid n-butyl ester and (6) 17 $\beta$ ,29-dihydroxy-16-oxo-3,4-seco-28-norolean-4(23),12-dien-3-oic acid, and all of their molecular structures were elucidated by means of extensive spectroscopic analysis, including HRMS and 1D- and 2D-NMR data. In a rotenone model of Parkinson's disease (PD), compounds 3–6 showed potential neuroprotective effects on SH-SY5Y neuronal cells. Specially, compound 5 showed the strongest protective effects, and Real-time PCR and Western blot data revealed that this function may be related with its inhibitory effects on  $\alpha$ -synuclein aggregates. This study indicated a new class of chemical entities for developing bioactive compounds for PD treatment.

### Biography

Oh Won Keun has completed his PhD studies about natural products chemistry from Korea Advanced Institute of Science and Technology (KAIST) and Postdoctoral studies from Baylor College of Medicine, USA. He works as Associate Professor at College of Pharmacy in Seoul National University, Republic of Korea. He has published more than 115 SCI(E) papers in reputed journals and has been served as the Director of Korea Bioactive Natural Material Bank (KBNMB) and also as an Associate Editor in *Natural Product Sciences (NPS)*.

[hoyang@kist.re.kr](mailto:hoyang@kist.re.kr)

### Notes: