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## PEROXYNITRITE SCAVENGING ACTIVITY OF HERB EXTRACTS

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Peroxynitrite (ONOO<sup>-</sup>) is one of cytotoxic species produced by the reaction between superoxide (·O<sub>2</sub><sup>-</sup>) and nitric oxide (NO). The aim of this study was to characterize ONOO<sup>-</sup> scavenging constituents from herbs. Methanolic extract derived from one hundred fifty nine herbs were screened out for their ONOO<sup>-</sup> scavenging activities. It was investigated that about 33 herbs was excellent scavengers of ONOO<sup>-</sup>. The extracts exhibited dose-dependent ONOO<sup>-</sup> scavenging activities. One of the most effective herbs, *Artemisia iwayomogi* was fractioned with several solvents. The ONOO<sup>-</sup> scavenging activity of fractions was in order of ethyl acetate > n-butanol > dichloromethane > water fraction. The ethyl acetate and n-BuOH soluble fractions exhibiting strong ONOO<sup>-</sup> scavenging activities were further purified by repeating silicagel and Sephadex LH-20 column chromatographies to yield apigenin 7-methylether (genkwanin), scopoletin, apigenin 7,4'-di-*O* methylether (jaceosidin), apigenin 7,4'-di-*O*-methylether from the EtOAc fraction and chlorogenic acid, 2,4-dihydroxy 6-methoxy acetophenone 4-*O*-β-D-glucoside, quebrachitol, and scopolin from the n-BuOH fraction. Among them, chlorogenic acid, genkwanin, and scopoletin scavenged authentic ONOO<sup>-</sup> more efficiently, compared to a well-known ONOO<sup>-</sup> scavenger, penicillamine (1.76 ± 0.18 μM). It is suggested that chlorogenic acid might be developed as an effective ONOO<sup>-</sup> scavenger for prevention of ONOO<sup>-</sup> involved diseases.