Monoamine oxidase inhibitors from *Dictamnus albus*, *Evodia officinalis* and *Cudrania tricuspidata*

Xiagn Hua Han, Seon A Lee, Chul Lee, Qinghao Jin, Dayu Li, Bang Yeon Hwang

College of Pharmacy, Chungbuk National University, Cheongju 361-763 Korea

Monoamine oxidase (MAO) catalyzes the oxidative deamination of a number of neurotransmitters including dopamine (DA), norepinephrine (NE), and 5-hydroxytryptamine (5-HT). MAO is classified into two forms, MAO-A and MAO-B, which differ in amino acid sequence, substrate specificity, susceptibility to specific inhibitors, and tissue distribution. MAO-A preferentially deaminates the neurotransmitters 5-HT, NE, and epinephrine and is irreversibly inhibited by low concentrations of clorgyline. MAO-B preferentially deaminates β-phenylethylamine and benzylamine and is irreversibly inhibited by l-deprenyl. Selective MAO-A inhibitors are used in the treatment of neurological disorders such as depression, whereas the MAO-B inhibitors are useful for the treatment of Parkinson's disease and Alzheimer's disease.

As a part of our ongoing research on MAO inhibitors of higher plant origin, the methanol extracts of *Dictamnus albus*, *Evodia officinalis*, and *Cudrania tricuspidata* were found to possess significant inhibitory effects on mouse brain MAO. We present herein the isolation and structural determination of MAO inhibitors in *D. albus*, *E. officinalis* and *C. tricuspidata*, together with MAO inhibitory activities of the isolated compounds. [This work was supported by the Korea Research Foundation Grant funded by the Korean Government (MOEHRD) (The Regional Research Universities Program / Chungbuk BIT Research-Oriented University Consortium)].

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