

## 2<sup>nd</sup> International Conference and Exhibition on Pharmacognosy, Phytochemistry & Natural Products

August 25-27, 2014 DoubleTree by Hilton Beijing, China

### Antibacterial and neuroprotective activities of *Mikania scandens* (L.) Willd. (Asteraceae)

Sumi Wijaya<sup>1</sup>, Ting Kang Nee<sup>2</sup>, Khoo Teng Jin<sup>1</sup> and Christophe Wiart<sup>2</sup>

<sup>1</sup>Widya Mandala Catholic University, Indonesia

<sup>2</sup>The University of Nottingham, Malaysia

The hexane, ethyl acetate and ethanol extract of *Mikania scandens* (L.) Willd. were assessed for their antibacterial, antioxidant, anti-inflammatory and acetylcholinesterase inhibitory activities. The antibacterial activity was evaluated by the pour-plate disc diffusion assay, the minimum inhibitory concentration, the minimum bactericidal concentration and the death kinetic assay. The antioxidant activity was evaluated by the ferric-reducing antioxidant power (FRAP), 2,2-diphenyl-1-picrylhydrazyl (DPPH) and  $\beta$ -carotene bleaching assays. The anti-inflammatory activity was determined by 5-lipoxygenase inhibitory activity (5-Lox), meanwhile acetylcholinesterase activity was determined by the TLC-bioautography assay. Among the extracts, the hexane extract showed the best antibacterial properties. The ethanol extract showed the highest antioxidant and good 5-lipoxygenase inhibitory activity with an IC<sub>50</sub> value equal to 23.87  $\mu$ g/ml. The best acetylcholinesterase inhibitory activity was elicited by the hexane and ethanol extracts. The total phenolic content values were in the range 106.67 mg/g to 1066.67 mg/g gallic acid equivalent in the Folin-Ciocalteu assay. The results suggest that *Mikania scandens* (L.) Willd. may provide a natural source of antibacterial, antioxidant, anti-inflammatory and acetylcholinesterase agents.

#### Biography

Sumi Wijaya works in Widya Mandala Catholic University, Indonesia. She has keen interest in bio constituents from Natural Source.

[sumiwijaya@yahoo.com](mailto:sumiwijaya@yahoo.com)