OMICS Group Conferences
Accelerating Scientific Discovery

2nd International Conference and Exhibition on
Pharmacognosy, Phytochemistry & Natural Products
August 25-27, 2014 DoubleTree by Hilton Beijing, China

Exploration of Morus plant as a source of bioactive chemicals

Euis Holisotan Hakim, Elvira Hermawati, Intan Timur Maesyarah, Lia Dewi Juliawaty, Yana Maolana Syah and **Sjamsul Arifin Achmad**
Bandung Institute of Technology, Indonesia

In the search for bioactive compounds from Indonesian tropical plants, a phytochemical investigation of several species of moraceous plants has been undertaken in author's laboratory. Morus is one of the most important genera belongs to Moraceae family, this genus consist of 15 species where the leaf of this plant are very popular for feeding of silk worm. Most of these species are used as traditional medicine in many places and well known as "sohakuhi" in Japan and "sangbaipi" in China. Phenolic compounds isolated from *Morus*, mainly stilbenoid and arylbenzofuran derivatives in addition to flavonoid and Diels-Alder type adducts, some of which have exhibited interesting biological activity including anti-tumor. Development of root culture of *M. macroura* yielded mostly Diels-Alder type adduct compounds, while shoots culture of this species produce a prenylated chalcones which identified as dienophile found in Diels-Alder type adduct of *Morus*. The root culture of *M. cathayana* afforded O-methylated Diels-Alder adduct compounds which were secreted to the media. Further elicitation of root culture of *M. macroura* by abiotic and biotic elicitor increased the production of secondary metabolite significantly. Further investigation of enzyme which responsible on Diels-alder adducts production of *Morus* plant showed a promising data for combinatorial biosynthesis study. And recently it is being tried to develop endophyte microbe of *Morus*, some strains of fungi content potential secondary metabolites.

Biography

Euis Holisotan Hakim received a Bachelor's degree in Chemistry from Institut Teknologi Bandung (1980) and she joined the research group of Professor Sjamsul Arifin Achmad at ITB. She received Master's degree (1989) and a PhD (1994) from the same University. She got a research Fellow at the University of Tokyo (1988), DSIR, New Zealand (1991), University of Western Australia (1992), and post-doctoral research with Prof. Shigeo Iwasaki, the University of Tokyo (1996) and with Prof. Takeya at Tokyo University of Pharmacy & Life Science (2000). She was promoted to associate professor in 2000 and as full professor in 2004. Her research interests include bioactive natural product compounds for anti-tumor and anti-malaria and development of plant tissue culture for secondary metabolite production and combinatorial biosynthesis.

euis@chem.itb.ac.id; ehhakim@yahoo.com