The evolution of chemical diversity in plants : pyrrolizidine alkaloids and cytochrome P450s in Jacobaea

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Curriculum Vitae

Yangan Chen was born in Zhangping, Fujian Province in China on May 8, 1987 (the 11th day of the 4th month according to the lunar calendar of that year). She started her undergraduate study in Wuhan University majoring in pharmaceutical sciences in 2006 and got her BSc degree in June, 2010. Later on in August 2010, she started her master study at the University of Macau, resulting in the thesis entitled "Phytochemical analysis of *Microctis folium*, *Puerariae lobatae* Radix and *Puerariae thomsonii* Radix". She obtained the degree of Master of Science in Chinese Medicinal Science in August 2013. From September 2013 to August 2014, she worked as a research assistant at the Beijing University of Chinese Medicine. After that, she received financial support from the China Scholarship Council for her PhD research at the Institute of Biology, Leiden University. In October 2014, she started her PhD project in the group of Plant Ecology under the supervision of Prof.dr. Peter Klinkhamer and Dr. Klaas Vrieling, and in the group of Plant Cell Physiology under the supervision of Prof.dr. Johan Memelink. Her work about the evolution of chemical diversity in plants using pyrrolizidine alkaloids in *Jacobaea* species as the study system is described in this thesis.

Publication list

- **Chen Y**, Mulder PPJ, Schaap O, Memelink J, Klinkhamer PGL, Vrieling K. (2019) The evolution of pyrrolizidine alkaloid diversity among and within *Jacobaea* species. (submitted)
- **Chen Y**, Klinkhamer PGL, Memelink J, Vrieling K. (2019) Diversity and evolution of cytochrome P450s of *Jacobaea vulgaris* and *Jacobaea aquatica*. (submitted and under revision)
- **Chen Y***, Song Y*, Wang Y, Yuan Y, Huang X, Ye W, Wang Y, Zhang Q. (2014) Metabolic differentiations of *Pueraria lobata* and *Pueraria thomsonii* using ^{1}H NMR spectroscopy and multivariate statistical analysis. *Journal of Pharmaceutical and Biomedical Analysis* 93:51-58. (*Co-first author)
- **Chen Y***, Li P*, Li P, Yan R, Zhang X, Wang Y, Zhang X, Ye W, Zhang Q. (2013) α-Glucosidase inhibitory effect and HPLC-DAD analysis of *Microctis Folium*. *Molecules* 18:4221-4232. (*Co-first author)
- Song Y, Jing W, **Chen Y**, Yuan Y, Yan R, Wang Y. (2014) ^{1}H nuclear magnetic resonance based-metabolomic characterization of Peucedani Radix and simultaneous determination of praeruptorin A and praeruptorin B. *Journal of Pharmaceutical and Biomedical Analysis* 93:86-94.

Patent

- Li J, Zhang Q, Tu P, Sun Q, Wang J, Zhao Y, Zhang J, **Chen Y**. (2017) The methods of isolation of aescin from *Semen aesculi*. (in application for a patent in China: CN 106589045 A)