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The processing of *Panax notoginseng* and the transformation of its saponin components

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Notoginseng [the roots of *Panax notoginseng* (Burk.) F. H. Chen (Araliaceae)] is a well-known medicinal herb in traditional Chinese medicine and mostly cultivated in Yunnan province of China. Traditionally, notoginseng has been used in two forms, raw and processed ones. The former is mainly used for the treatment of injuries from falls, dissipating blood stasis, and cardiovascular disease, whereas the latter is used as a tonic. Notoginseng contains similar chemical constituents as Ginseng (Chinese Ginseng, Korean Ginseng or Asian Ginseng), and dammarane-type triterpenoid saponins are rich containing in this herb and recognized as the main bioactive ingredients. As one part of our systematic studies on *Panax* plants, the roots of *Panax notoginseng* were treated by different processing methods, including steaming and baking, along with the correlative dynamic curves of the transformation of saponins. It was also found, during the steaming process that the five main saponin constituents (ginsenosides Rg1, Rb1, Rd, and Re, and notoginsenoside R1) in raw notoginseng decreased gradually and some other new saponins were formed. Among these, eight newly converted major ginsenosides were identified as 20(S)-Rh1, 20(R)-Rh1, Rk3, Rh4, 20(S)-Rg3, 20(R)-Rg3, Rk1 and Rg5. In addition, more than 30 minor dammarane-type triterpenoids were identified. Some of them are new compounds with potential bioactivities.

Biography

Ying-Jun Zhang completed her PhD in pharmaceutical science at Nagasaki University, Japan on March 2002. She has one year of research experience in Institut de Chimie des Substances Naturelles, Centre National de la Recherche Scientifique, France (2005-2006). She is a group leader focused on plant resources and medicinal chemistry, at the State Key Laboratory of Phytochemistry & Plant Resources in West China, Kunming Institute of Botany, Chinese Academy of Sciences. She has published more than 90 papers in reputed journals.

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