

# Triterpenoid Saponins from *Metadina trichotoma*

Yu-Mei Zhang, Ning-Hua Tan, Huo-Qiang Huang, and Guang-Zhi Zeng

State Key Laboratory of Phytochemistry and Plant Resources in West China, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming, Yunnan 650204, P. R. China

Reprint requests to Prof. Dr. N.-H. Tan. Fax: +86-871-5223800. E-mail: nhtan@mail.kib.ac.cn

*Z. Naturforsch.* **2007**, *62b*, 745 – 748; received December 4, 2006

Two new 27-nor-triterpene glycosides, pyrocincholic acid  $3\beta$ -*O*- $\beta$ -D-glucopyranosyl-(1  $\rightarrow$  4)- $\beta$ -D-quinovopyranosyl-28-*O*- $\beta$ -D-glucopyranoside (Metatrichoside A, **1**), pyrocincholic acid  $3\beta$ -*O*- $\beta$ -D-glucopyranosyl-(1  $\rightarrow$  4)- $\beta$ -D-quinovopyranosyl-28-*O*- $\beta$ -D-glucopyranosyl-(1  $\rightarrow$  6)- $\beta$ -D-glucopyranoside (Metatrichoside B, **2**), together with pyrocincholic acid  $3\beta$ -*O*- $\beta$ -D-quinovopyranosyl-28-*O*- $\beta$ -D-glucopyranoside (**3**), pyrocincholic acid  $3\beta$ -*O*- $\beta$ -D-quinovopyranosyl-28-*O*- $\beta$ -D-glucopyranosyl-(1  $\rightarrow$  6)- $\beta$ -D-glucopyranoside (**4**), quinovic acid  $3\beta$ -*O*- $\beta$ -D-quinovopyranoside (**5**), quinovic acid  $3\beta$ -*O*- $\beta$ -D-quinovopyranosyl-28-*O*- $\beta$ -D-glucopyranoside (**6**), quinovic acid  $3\beta$ -*O*- $\beta$ -D-glucopyranoside (**7**) and quinovic acid  $3\beta$ -*O*- $\beta$ -D-glucopyranosyl-28-*O*- $\beta$ -D-glucopyranoside (**8**) were isolated from the barks of *Metadina trichotoma*. Their structures were mainly determined by mass spectrometric and 1D and 2D NMR spectroscopic methods. Compound **5** and **6** showed cytotoxic activities towards the A549 non-small-cell lung cancer cell line ( $IC_{50}$  = 8.43 and 6.06  $\mu$ m), and the methanol extract inhibited the activity of cathepsin B with an  $IC_{50}$  value of 0.77  $\mu$ g mL<sup>-1</sup>.

*Key words:* *Metadina trichotoma*, Triterpenoid Saponins, Metatrichoside A, Metatrichoside B