

Anthranoyl-substituted Norditerpene Alkaloids from *Aconitum vulparia* Rchb. and Their Cytotoxic Activities

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Z. Naturforsch. **2007**, *62b*, 135 – 141; received August 8, 2006

Extensive chromatographic purification of the alkaloid fraction of *Aconitum vulparia* Rchb. led to the isolation of a new norditerpene alkaloid, vulparine (**1**), besides the known compounds septentriodine (**2**), finetiadine (**3**), anthranoyllycoctonine (**4**), *N*-methyl-*N*-deethyllycoctonine (**5**) and delectinine (**6**). The structure of the new compound was determined by means of HRMS, 1D and 2D NMR spectroscopy. Detailed NMR studies, including ¹H-¹H COSY, NOESY, HSQC and HMBC experiments, resulted in complete and unambiguous ¹H chemical shift assignments for **2** and **6**, and revision of some ¹³C NMR data. Compounds **1**–**4** were evaluated for their cytotoxic activities, and **1**, **3** and **4** were found to exhibit marginal cell growth inhibitory activity against breast adenocarcinoma (MCF-7) and cervix adenocarcinoma (HeLa) cells.

Key words: *Aconitum vulparia*, Norditerpene Alkaloid, Cytotoxicity