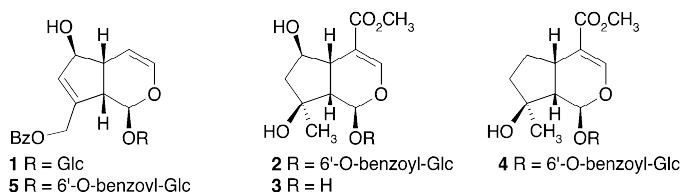


**B119 New iridoid glycosides from *Rhinanthus glacialis***S. Sturm<sup>a</sup>, M. Ladurner<sup>a</sup>, E. Ellmerer-Müller<sup>b</sup>, C. Seger<sup>c</sup> and H. Stuppner<sup>a</sup><sup>a</sup>Institute of Pharmacy, Department of Pharmacognosy, University of Innsbruck, Innrain 52, A-6020 Innsbruck, Austria. <sup>b</sup>Institute of Organic Chemistry, University of Innsbruck, Innrain 52a, A-6020 Innsbruck, Austria. <sup>c</sup>Institute of Pharmaceutical Chemistry and Pharmaceutical Technology, University of Graz, Universitätsplatz 1, A-8010 Graz, Austria.

*Rhinanthus glacialis* Personn., a widespread herb of alpine meadows, belongs to the family of Scrophulariaceae, which is known for its variety of iridoid glycosides (1). This class of compounds proved not only to be of chemotaxonomic interest within the Scrophulariaceae (2) but has also shown a broad variety of bioactivities, among these antimicrobial, antitumoral, hemodynamic, choleric, hepatoprotective and anti-inflammatory activities (3). *Rhinanthus glacialis* has to our best knowledge never been the aim of any phytochemical research attempt. In this presentation we report on the isolation and structure elucidation of the known iridoid-glycosides melampyroside (1), 6'-O-benzoylshanzhiside methylester (2) and the aglycon (5) shanzhigenin methylester (3) and two new iridoid glycosides namely 6'-O-benzoylmussaenoside (4) and 6'-O-benzoylmelampyroside (5). The structures were elucidated by utilizing different 1D- and 2D-NMR techniques as well as MS and HPLC-MS/MS (ESI).



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**B120 Xanthenes from *Polygala vulgaris***

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With the aim to search for new antitumor agents from plants we considered *Polygala vulgaris* (Polygalaceae).

Members of Polygalaceae are well known for containing a variety of different chemical constituents, many of which exhibit significant biological activity. In fact, previous phytochemical investigations on different *Polygala* species yielded a large number of different compounds: lignans, xanthenes and styrylpyrones (1, 2).

In the course of our studies, the chloroform extracts from both roots and aerial parts showed activity against LoVo cell line. Fractionation of the active extracts led to the isolation of several phenolic compounds.

This paper reports the characterization of a new chloroxanthone, 7-chloro-1,2,3-trihydroxy-6-methoxyxanthone, and two polyoxygenated xanthenes, 1,3-dihydroxy-2,4,7-trimethoxyxanthone and 4,7-dihydroxy-2,3-methylenedioxyxanthone, from the chloroform extract of aerial parts of *P. vulgaris*. The presence of chloroxanthenes in higher plants were firstly reported by Hu et al. from *Hypericum ascyron* (3). Structures of isolated compounds were elucidated by 1D and 2D NMR techniques including 1D TOCSY, HMBC, HMQC, COSY, NOESY and by HR-MS. Compounds were tested for antiproliferative activity against human intestinal adenocarcinoma cell lines (LoVo) and its drug resistance sub clone (LoVo/Doxo). As reference compound doxorubicine hydrochloride was used. The chloroxanthone showed the highest activity.

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