

甘青琉璃草中两个新的生物碱类成分结构确定

靳元鹏¹, 师彦平^{1,2*}

¹中国科学院兰州化学物理研究所, 甘肃省天然药物重点实验室, 兰州 730000; ²兰州大学功能有机分子化学国家重点实验室, 兰州 730000

E-mail: shiyip@lzb.ac.cn

紫草科琉璃草属植物甘青琉璃草为西北干旱地区特色植物, 资源丰富。该属植物中的部分植物是常用的中草药, 具有清热解毒、利尿消肿、活血调经的功效。为了系统的研究该属植物的药理活性成分, 我们首先就甘青琉璃草的化学成分进行了研究, 从中发现了两个新的生物碱类化合物, 命名为: 甘青琉璃草素 (1) 和 8-甲氧基-2-羧基-二氢喹啉-4-甲酸 (2), 通过多种现代先进的光谱和波谱技术 (如: HR-ESIMS, 1D-NMR, COSY, HMQC, HMBC, UV, IR) 确定了它们的结构, 并准确归属了所有碳原子和质子的化学位移。

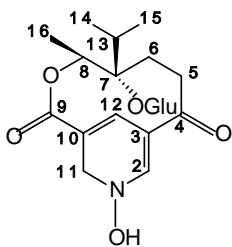


Fig.1 Structure of compound 1 and its relative peaks in HMBC.

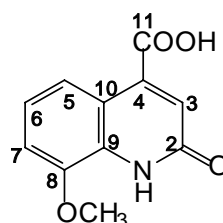
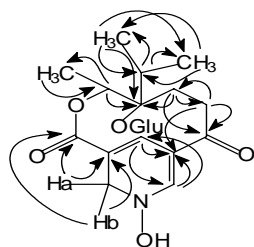
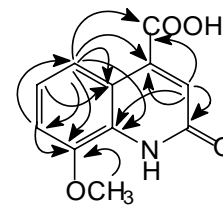


Fig.2 Structure of compound 2 and its relative peaks in HMBC.



关键词: 甘青琉璃草; 紫草科; 生物碱类; 甘青琉璃草素 A。

参考文献:

- [1] S.B.Zhong, Y.J.Deng, F.M.Fu, A.Q.Mi, Y.Z.Jiang, HeCheng HuaXue, 1997, vol. 5, No. 2, 113-114
 [2] H.Y. Gong, Carbon-13 of natural organic compounds., Yunnan science and technology press, 1986, p.299.

基金项目: 国家自然科学基金资助项目, 编号: 20021001, 20372029 和 20475057。

Two Novel Alkaloids from *Cynoglossum gansuense*

Yuan-Peng Jin¹, Yan-Ping Shi^{1,2*}

¹Key Laboratory for Natural Medicine of Gansu Province, Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences, Lanzhou 730000; ²State Key Laboratory of Applied Organic Chemistry, Lanzhou University, Lanzhou 730000

Two novel alkaloids, named Cynogansuensine A (1) and 8-methoxyl-2-oxo-1,2-dihydroquinoline-4-carboxylic acid (2) were isolated from the alcoholic extract of the whole plant of *Cynoglossum gansuense*. Their structure was characterized by 1D-, 2D-NMR and HR-ESIMS.