

论文

石蒜科生物碱的研究 III. 紫花石蒜和其他两种石蒜中的生物碱及新生物碱紫花石蒜碱

洪山海; 马广恩

中国科学院药物研究所, 上海

摘要:

从紫花石蒜 Lycoris squamigera Maxim. 中分得19种结晶性生物碱, 其中12种生物碱分别证明为 lycorine, pseudolycorine, lycorenine, homolycorine, tazettine, norpluviine, galanthamine, epigalanthamine, vittatine, pluviine, lycoramine, hippeastrine; 分得一种新生物碱, 命名为紫花石蒜碱 squamigerine. 紫花石蒜碱, C<sub>18</sub>H<sub>21</sub>O<sub>5</sub>N, 熔点260°C, [α]<sub>D</sub><sup>34</sup> +165° (氯仿), 含有次甲二氧基、氯甲基、甲氧基、羟基和双键各1个. 紫花石蒜碱的分子式及官能团均与 tazettine 相同; 熔点, [α]<sub>D</sub> 及 R<sub>f</sub> 值不同. 因而推想紫花石蒜碱可能为 tazettine 的异构体. 我们进行了两者的紫外及红外吸收光谱的比较, 发现它们彼此非常相似. 因为紫花石蒜碱又与 epitazettine 显然不同, 所以推定它可能为 B/D 或 C/D 环系统结合不同于 tazettine 的立体异构体. 从红花石蒜 L. radiata Herb. 中分得7种已知生物碱: lycorine, homolycorine, tazettine, galanthamine, lycoramine, lycorenine 和 pseudolycorine. 从1种栽培的黄花石蒜中也分得上述7种生物碱.

关键词:

STUDIES ON THE ALKALOIDS OF AMARYLLIDACEAE—III. THE ALKALOIDS OF LYCORIS SQUAMIGERA MAXIM. AND OTHER TWO LYCORIS SPECIES, AND A NEW ALKALOID, SQUAMIGERINE  
HUNG SHAN-HAI MA GUANG-EN

Abstract:

Nineteen crystalline alkaloids have been isolated from the bulbs of *Lycoris squamigera Maxim.* Twelve of them have been proved to be identical with lycorine, pseudolycorine, lycorenine, homolycorine, tazettine, norpluviine, galanthamine, epigalanthamine, vittatine, pluviine, lycoramine, hippeastrine, respectively. One of them has been proved to be a new alkaloid, and named squamigerine. The new alkaloid, squamigerine, C<sub>18</sub>H<sub>21</sub>O<sub>5</sub>N, m. p. 260°C, [α]<sub>D</sub><sup>34</sup> 165° (CHCl<sub>3</sub>), contained one methylenedioxy, methoxy, N-methyl, hydroxy group and one double bond. Its molecular formula and functional groups were identical with those of tazettine, but its m. p., [α]<sub>D</sub> and R<sub>f</sub> were different from those of the latter. To confirm if squamigerine is the stereoisomer of tazettine, we compared the ultraviolet and infrared absorption spectra of them, and found that they resembled each other very closely. Because squamigerine is also apparently not identical to epitazettine, it was deduced to be the stereoisomer of tazettine, in which the B/D or C/D ring system was different from that of tazettine. Besides, seven crystalline alkaloids have been isolated from *L. radiata Herb.*, and proved to be identical with lycorine, pseudolycorine, homolycorine, tazettine, galanthamine, lycoramine and lycorenine respectively. The same seven alkaloids have also been isolated from *L. aurea Herb.*

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作者简介:

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