

论文

中国乌头的研究——X. 关白附子中的新生物碱

高宏瑾;岳凤先;朱任宏

*南京大学,教师;中国科学院药物研究所,上海

摘要:

从关白附子(*Aconitum koreanum* R.Raymund)中共分得六种生物碱。其中一种是已知生物碱,即次乌头碱,另五种为新生物碱,暂称为关附甲素 $C_{24}H_{31}O_6N$ 、乙素 $C_{22}H_{29}O_5N$ 、丙素 $C_{22}H_{33}O_2N$ 、丁素 $C_{24}H_{35}O_3N$ 及戊素 $C_{29}H_{43}O_7N$ 。关附甲素是关附乙素的一乙酸酯。关附甲素、乙素、丙素的示性式分别定为: $C_{19}H_{20}(OH)_2(CH_3COO)_2(CH_3)(:N\cdot)$, $C_{19}H_{20}(OH)_3(CH_3COO)(CH_3)(:N\cdot)$, $C_{19}H_{23}(OH)_2(CH_3)(N-C_2H_5)$ 。后二种生物碱因量少尚待研究。

关键词:

The Alkaloids of Chinese Drug, *Aconitum* spp. — X. New Alkaloids from Guan-Bai-Fu-Tzu, *Aconitum koreanum*

GAO HONG-GIN YE FENG-HIAN CHU JEN-HUNG

Abstract:

Six alkaloids have been isolated from the Chinese drug, Guan-Bai-Fu-Tzu, *Aconitum koreanum* R.Raymund. One of them was found to be identical with hyaconitine and the other five appeared to be new alkaloids, which are provisionally named as guan-fu base A, B, C, D and E respectively. Physical and chemical data of these new alkaloids are as follows: The guan-fu base A, $C_{24}H_{31}O_6N$, m.p. 198°C, $[\alpha]_D^{22.8} + 49^\circ$ (chloroform). Several crystalline salts and derivative were prepared: nitrate, m.p. 265°C; hydrochloride, m.p. 290°C; hydrobromide, m.p. 293°C; perchlorate, m.p. 272—273°C; methiodide, m.p. 284.5—285.5°C and diacetate, m.p. 154.5—155°C. When it was hydrolysed in methanolic potassium hydroxide, an amino alcohol $C_{20}H_{27}O_4N$, m.p. 243—244°C and acetic acid were obtained. On oxidation with acidic permanganate it gave two crystalline products, $C_{22}H_{27}O_7N$, m.p. 204°C and $C_{23}H_{29}O_8N \cdot HClO_4$, m.p. 286°C (dec.) respectively. It was easily reduced to dihydro compound $C_{24}H_{35}O_6N$, m.p. 200°C, in the presence of Adams platinum catalyst. The guan-fu base B has the formula $C_{22}H_{29}O_5N$, m.p. 204°C, $[\alpha]_D^{26.6} + 16^\circ$ (chloroform). The following crystalline salts and derivative were prepared: hydrobromide, m.p. 257—258°C; perchlorate, m.p. 255—256°C; methiodide, m.p. 317—318°C and triacetate, m.p. 154—155°C. Its monoacetate was to be identical with the guan-fu base A. The guan-fu base C has the formula $C_{22}H_{33}O_2N$, m.p. 150°C, $[\alpha]_D^{16.4} - 21.2^\circ$ (alcohol). The following crystalline salts and derivative were obtained: nitrate, m.p. 222°C; hydrobromide, m.p. 235°C and diacetic hydrochlorate, m.p. 222.5—224°C. The guan-fu base D and E have not been obtained yet in crystalline states. However, the nitrate of guan-fu base D, $C_{24}H_{35}O_3N \cdot HNO_3$, m.p. 210—211°C and the perchlorate of guan-fu base E, $C_{29}H_{43}O_7N \cdot HClO_4$, m.p. 272°C were prepared. The partial formula of guan-fu base A, B and C are expressed as $C_{19}H_{20}(OH)_2(CH_3COO)_2(CH_3)(:N\cdot)$, $C_{19}H_{20}(OH)_3(CH_3COO)(CH_3)(:N\cdot)$ and $C_{19}H_{23}(OH)_2(CH_3)(N-C_2H_5)$ respectively.

Keywords:

收稿日期 1965-06-07 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者:

作者简介:

参考文献:

扩展功能

本文信息

- ▶ Supporting info
- ▶ PDF (442KB)
- ▶ [HTML全文]
- ▶ 参考文献

服务与反馈

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ 引用本文
- ▶ Email Alert
- ▶ 文章反馈
- ▶ 浏览反馈信息

本文关键词相关文章

本文作者相关文章

- ▶ 高宏瑾
- ▶ 岳凤先
- ▶ 朱任宏

PubMed

- ▶ Article by
- ▶ Article by
- ▶ Article by

文章评论 (请注意:本站实行文责自负, 请不要发表与学术无关的内容!评论内容不代表本站观点.)

反馈人	<input type="text"/>	邮箱地址	<input type="text"/>
反馈标题	<input type="text"/>	验证码	<input type="text"/> 3969