



### (异)螺甾烷型甾体皂苷元的选择性开环反应研究

程水连<sup>1,2</sup>, 雷泽<sup>1,3</sup>, 胡大伟<sup>1</sup>, 蒋明忠<sup>1</sup>, 祝正辉<sup>1</sup>, 温晓江<sup>3</sup>, 木晓云<sup>3</sup>, 朱洪友<sup>1,3</sup>

1. 云南大学 教育部自然资源药物化学重点实验室, 云南 昆明 650091;
2. 国家家用杀虫用品质量监督检验中心, 湖南 益阳 413000;
3. 昆明云大医药开发有限公司, 云南 昆明 650222

### Study on the selective ring-opening reaction of (Iso)spirostanol saponins

CHENG Shui-lian<sup>1,2</sup>, LEI Ze<sup>1,3</sup>, HU Da-wei<sup>1</sup>, JIANG Ming-zhong<sup>1</sup>, ZHU Zheng-hui<sup>1</sup>, WEN Xiao-Jiang<sup>3</sup>, MU Xiao-yun<sup>3</sup>, ZHU Hong-you<sup>1,3</sup>

1. Key Laboratory of Medicinal Chemistry for Natural Resource (Yunnan University)Ministry of Education, Kunming 650091, China;
2. National Quality Supervision and Inspection Center, Yiyang 413000, China;
3. Kunming Yunnan University Medical Development Co., Ltd, Kunming 650222, China

- 摘要
- 参考文献
- 相关文章

全文: PDF (991 KB) HTML (1 KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 利用一种全新的甾体皂苷元E/F全开环体系,即室温下,加入催化量的无水AlCl<sub>3</sub>,以CH<sub>3</sub>COCl作开环试剂、CH<sub>2</sub>Cl<sub>2</sub>作溶剂的开环体系,以良好的收率及选择性实现了甾体工业重要基础原料薯蓣皂苷元、剑麻皂苷元的E/F全开环,提出了可能的开环反应机理.开环产物具有胆甾烷的完整碳骨架并在C16,C22,C26位引入了具有良好衍生能力的多个官能团,该产物为一系列高活性甾体化合物的简捷合成提供了原料.

关键词: 薯蓣皂苷元 剑麻皂苷元 26-氯-16β-乙酰氧基-22-酮-骨架 E/F全开环

Abstract: The highly selective conversion of the side chain in diosgenin and tigogenin into 26-chloro-16β-acetoxy-22-one-framework was achieved in good yields using the new E/F ring-opening system,namely acetyl chloride and CH<sub>2</sub>Cl<sub>2</sub> in the presence of catalytic amount of anhydrous AlCl<sub>3</sub>.The corresponding ring-opened products have been prepared and characterized.Mechanism has been proposed for this new reaction.These ring-opened products were particularly suitable as new starting material for synthesizing bioactive steroids with side chain,because of having the intact skeleton of cholestanol alkanes and several functional groups at the positions of C16,C22 and C26.

Key words:

收稿日期: 2010-03-12:

通讯作者: 朱洪友(1968-),男,重庆人,教授,硕士生导师,主要从事药物合成方面的研究,E-mail: hongyouzhu@sohu.com.

引用本文:

程水连,雷泽,胡大伟等. (异)螺甾烷型甾体皂苷元的选择性开环反应研究[J]. 云南大学学报(自然科学版), 2010, 32(5): 583-586, .

\$author.xingMing\_EN,\$author.xingMing\_EN,\$author.xingMing\_EN et al. Study on the selective ring-opening reaction of (Iso)spirostanol saponins[J]. , 2010, 32(5): 583-586, .

没有本文参考文献

没有找到本文相关文献

#### 服务

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ E-mail Alert
- ▶ RSS

#### 作者相关文章

- ▶ 程水连
- ▶ 雷泽
- ▶ 胡大伟
- ▶ 蒋明忠
- ▶ 祝正辉
- ▶ 温晓江
- ▶ 木晓云
- ▶ 朱洪友

版权所有 © 《云南大学学报(自然科学版)》编辑部

编辑出版：云南大学学报编辑部（昆明市翠湖北路2号，650091）

电话：0871-5033829(传真) 5031498 5031662 E-mail: yndxxb@ynu.edu.cn yndxxb@163.com