

论文

中药大黄的综合研究 I. 大黄中蒽醌衍生物抗菌效价的研究

陈琼华; 郑武飞; 苏学良; 赖渭声

天津医科大学生化教研组及微生物教研组

摘要:

关键词:

STUDIES ON CHINESE RHUBARB— I .PRELIMINARY STUDY ON THE ANTI BACTERIAL ACTIVITY OF ANTHRAQUINONE DERIVATIVES OF CHINESE RHUBARB(*RHEUM PALMATUM* L.)

CHEN CHIUNG-HUA CHENG WU-FEI SU HSUEH-LIANG LAI WEI-SHENG

Abstract:

Pure crystalline anthraquinone derivatives have been isolated from Chinese rhubarb (*Rheum palmatum* L.), and their antibacterial activity on 26 different species of pathogenic bacteria is investigated. From the preliminary result, it is observed that the antibacterial effect of rhubarb is mainly, though not exclusively, due to anthraquinone derivatives, among which rhein, emodin and aloemodin are more active. These derivatives are active against *Staphylococci*, *Streptococci*, *Cory. diphtheriae*, *B. substilis*, *B. anthracis*, *Sal. paratyphi*, *Shigella dysenteriae*, and *Sal. typhi* (the last one sensitive to rhein only). The staphylococci and streptococci are highly sensitive, being inhibited even at a concentration of 1.5--25 Y/ml. Other derivatives such as emodin monomethyl ether plus chrysophanol are less effective: they show bacteriostatic action only on *Sh. dysenteriae* at a concentration of 25 Y/ml., and require much higher concentration (100—600 Y/ml.) for other pathogens. As to non-anthraquinone derivatives, such as trihydroxy-dihydroanthracene, gallic acid, cinnamic acid, etc., the bacteriostatic activity is much inferior. For example, a concentration higher than 100 Y/ml. is required to inhibit the anthraquinone-derivative-sensitive staphylococci. The antibacterial effect of anthraquinone derivatives of Chinese rhubarb is related to their chemical structure. 1,9-Dihydroxyanthraquinone is the prerequisite of the fundamental structure. If acidic groups such as carboxyl group, hydroxyl group or methyl hydroxyl group are added at position 7 or 3, the bacteriostatic activity is much enhanced. On the other hand, if such groups are absent from position 1, 3, 7, or 9 or anthraquinone derivatives become anthracene derivatives, the inhibitory effect is much reduced.

Keywords:

收稿日期 1962-01-24 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:

本刊中的类似文章

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.)

扩展功能

本文信息

- ▶ Supporting info
- ▶ PDF(315KB)
- ▶ [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

- ▶ 陈琼华
- ▶ 郑武飞
- ▶ 苏学良
- ▶ 赖渭声

PubMed

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

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" value="8531"/>