

综述

## 黄酮类化合物对脂氧合酶活性的影响及其生物学作用

黄云, 胡建安

(中南大学公共卫生学院劳动卫生与环境卫生学系, 湖南 长沙 410078)

收稿日期 2009-4-9 修回日期 网络版发布日期 2009-11-25 接受日期 2009-10-5

**摘要** 脂氧合酶(LOX)与急性炎症、动脉粥样硬化、高血压和肿瘤等多种疾病的发生发展有关,抑制其活性可能对这些疾病的预防和治疗起重要作用。多种黄酮类化合物,如查耳酮、黄酮醇、黄酮和黄烷醇等对5-LOX,12-LOX和15-LOX具有抑制作用,其机制可能为抑制LOX的表达、与酶结合或与酶活性中心产生的自由基反应等,且抑制作用与结构有关。黄酮类化合物对LOX的抑制作用可能是其具有抗炎、抗肿瘤和抗心脑血管疾病等生物学作用的原因之一。

**关键词** [黄酮类](#) [脂氧合酶](#)

**分类号** [R285.5](#)

## Effects of flavonoids on lipoxygenase activities and their biological functions

HUANG Yun, HU Jian-An

(Department of Occupational and Environmental Health, School of Public Health, Central South University, Changsha 410078, China)

### Abstract

Lipoxygenase(LOX) is related to emergence and development of many diseases, such as acute and chronic inflammation, atherosclerosis, hypertension and tumor. Therefore, the inhibition of LOX may play an important role in the prevention and treatment of these diseases. Many kinds of flavonoids, such as chalcones, flavonols, flavones and flavanols, have inhibitory effect on 5-LOX, 12-LOX and 15-LOX probably through inhibiting expression of LOX, bonding to the enzyme or reacting with free radicals generated at the active site of the enzyme. Their inhibitory activities are related to their structures. The inhibitory effects of flavonoids on LOX maybe one of mechanisms of flavonoids' some biological functions, such as anti-inflammatory, anti-tumor and reducing the risk of cardiovascular disease and cerebrovascular disease.

**Key words** [flavonoids](#); [lipoxygenase](#)

DOI: 10.3867/j.issn.1000 3002.2009.06.012

通讯作者 胡建安 [jiananhu@xysm.net](mailto:jiananhu@xysm.net)

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