

综述

疾病机制与治疗：蛋白激酶及其抑制剂与心血管疾病

陈东芹¹, 祁峰¹, 张伟¹, 朱卫忠²

1南通大学医学院药理教研室, 江苏 南通 226001; 2 美国国立卫生研究院老年化研究所, 老年病研究中心, 心血管科学实验室, 马里兰州 巴尔的摩市 21224, 美国
收稿日期 2007-10-23 修回日期 2008-3-14 网络版发布日期 2009-8-3 接受日期 2008-3-14

摘要 在当今世界上, 心血管疾病是导致发病率和死亡率升高的主要原因。到目前为止, 对心血管疾病的病理生理学研究与治疗的认识已经取得了实质上的进展。人体心血管系统有许多细胞信号级联放大系统, 其中一些是有益的, 一些是代偿的, 而其它则是有害的。这些信号级联放大系统中转导途径是否平衡决定了机体有无疾病。在这其中, 把细胞外刺激转导到细胞内是通过蛋白质磷酸化来完成的, 而蛋白质磷酸化又被蛋白激酶介导。这种用来选择性地阻断信号转导途径的蛋白激酶抑制剂可能是一种潜在的有利的受体阻断剂。到目前为止, 人们发现了各种各样的可用于治疗一些疾病的蛋白激酶抑制剂, 并且用蛋白激酶抑制剂成功治疗肿瘤强有力地支持其在心血管疾病治疗中的应用。在此, 我们将总结一些已经能用于心血管疾病的蛋白激酶靶位, 以及一些鉴定与心血管疾病有关蛋白激酶假定的治疗靶位的难点。

关键词 [蛋白激酶类](#); [蛋白激酶抑制剂](#); [心血管疾病](#)

分类号 [R363.2](#)

Disease mechanisms and emergence therapies: protein kinases and their inhibitors in cardiovascular diseases

CHEN Dong-qin¹, QI Feng¹, ZHANG Wei¹, ZHU Wei-zhong²△

1Department of Pharmacology, Nantong University Medical College, Nantong 226001, China;

2Laboratory of Cardiovascular Science, Gerontology Research Center, National Institute on Aging, NIH, Baltimore, MD 21224, USA. E-mail: ZhuW@grc.nia.nih.gov

Abstract

Cardiovascular diseases (CVDs) are a major cause of morbidity and mortality in the world. So far, there has been substantial progress toward understanding the pathophysiology and treatment of CVDs. There are multiple cell signaling cascades, some of which are beneficial or compensatory and others deleterious. The balance between these pathways determines the outcome as a diseased or non-diseased state. Protein phosphorylation, which is mediated by enzymes, called protein kinases, is a major mechanism for transducing external stimuli into intracellular signals. Electively targeting of signaling pathways using protein kinase inhibitors would have a potential advantage over receptor blockers. By now, there are types of protein kinase inhibitors available for treating several diseases. The success of kinase inhibitors in cancer treatment has strongly supported application in the treatment of CVDs. Here, we will review several kinds of protein kinases as potential targets for CVDs and some difficulty in identifying a protein kinase as a putative therapeutic target for CVDs.

Key words [Protein kinases](#). [Protein kinase inhibitors](#). [Cardiovascular diseases](#).

DOI: 1000-4718

通讯作者 朱卫忠 ZhuW@grc.nia.nih.gov

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(1341KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [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](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

相关信息

- ▶ 本刊中 包含“[蛋白激酶类](#);[蛋白激酶抑制剂](#);[心血管疾病](#)”的[相关文章](#)
- ▶ 本文作者相关文章

- [陈东芹](#)
- [祁峰](#)
- [张伟](#)
- [朱卫忠](#)