

综述

RNA干扰技术在动物寄生线虫研究中的局限性

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摘要

RNA干扰 (RNA interference, RNAi) 是一种应用广泛的基因功能研究技术, 不仅应用于模式生物秀丽隐杆线虫中, 而且已成为鉴定基因功能高通量的筛选方法。但是, 最近的研究发现, RNAi在动物寄生性线虫的应用上还存在一些问题, 如: RNAi 在不同线虫体内效果差异较大, 同一种线虫不同发育时期的效果差异也较大。产生这些问题的原因可能有: ①RNAi 传送途径的效率在不同的寄生性线虫中是不同的; ②RNAi 机制只存在于相关的线虫中, 大多寄生性线虫都存在着基因功能缺陷; ③RNAi 可能受线虫不同生活方式的影响。本文就RNA干扰技术在动物寄生性线虫研究中的局限性作一综述。

关键词 [RNA干扰](#) [动物](#) [线虫](#) [局限性](#)

分类号

Limitations of the Application of RNA Interference in the Study of Animal Parasitic Nematodes

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Abstract

RNA interference is a powerful tool for investigating gene function which has been used extensively in model organisms such as *Caenorhabditis elegans* and has been adapted as a high-throughput screening method to identify genes. However, recent research indicates that the application of RNAi to animal parasitic nematodes has some problems. For example, the variability of RNAi to different parasitic nematodes or the same nematode in different stages is great. Reasons to explain why RNAi does not work well in animal parasitic nematodes include: ① the efficacy of RNAi delivery methods in different nematodes is extremely variable; ② RNAi mechanism has been applied to related nematodes and most of them are gene functional defect; ③ different lifestyles of nematodes may influence on the efficacy of RNAi. If we can find out the methods which can solve these questions, there are still application prospects for using RNAi in parasitic nematodes with improved RNAi effect.

Key words [RNA interference](#) [Animal](#) [Nematode](#) [Limitation](#)

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