

PubMed

Format: Abstract

Full text links

J Pharmacol Exp Ther. 2016 Apr;357(1):84-93. doi: 10.1124/jpet.115.231670. Epub 2016 Jan 19.



Targeting Epigenetic Mechanisms for Chronic Pain: A Valid Approach for the Development of Novel Therapeutics.

Ligon CO¹, Moloney RD¹, Greenwood-Van Meerveld B².

Author information

Abstract

Chronic pain is a multifaceted and complex condition. Broadly classified into somatic, visceral, or neuropathic pain, it is poorly managed despite its prevalence. Current drugs used for the treatment of chronic pain are limited by tolerance with long-term use, abuse potential, and multiple adverse side effects. The persistent nature of pain suggests that epigenetic machinery may be a critical factor driving chronic pain. In this review, we discuss the latest insights into epigenetic processes, including DNA methylation, histone modifications, and microRNAs, and we describe their involvement in the pathophysiology of chronic pain and whether epigenetic modifications could be applied as future therapeutic targets for chronic pain. We provide evidence from experimental models and translational research in human tissue that have enhanced our understanding of epigenetic processes mediating nociception, and we then speculate on the potential future use of more specific and selective agents that target epigenetic mechanisms to attenuate pain.

U.S. Government work not protected by U.S. copyright.

PMID: 26787772 DOI: [10.1124/jpet.115.231670](https://doi.org/10.1124/jpet.115.231670)

[PubMed - indexed for MEDLINE]



Publication Types, MeSH Terms, Substances

LinkOut - more resources

PubMed Commons

[PubMed Commons home](#)

0 comments

[How to join PubMed Commons](#)