Update on Pharmacological Activities, Security, and Pharmacokinetics of Aloe-Emodin

Haimeng Luo¹, Xiaoyun Ji¹, Mengyu Zhang¹, Yaoyao Ren², Rui Tan², Hezhong Jiang², and Xiaoqing Wu¹

¹Southwest Jiaotong University School of Life Science and Engineering
²Southwest Jiaotong University

August 28, 2023

Abstract

Aloe-Emodin (AE), a naturally occurring anthraquinone derivative, represents one of the principal active components found in various Chinese herbs such as Cassia occidentalis, Rheum palmatum L., Aloe vera, and Polygonum multiflorum Thumb. AE has been shown to possess a diverse range of pharmacological effects including anticancer, antivirus, anti-inflammatory, antibacterial, neuroprotective, and hepatoprotective properties. These remarkable therapeutic attributes provide a solid foundation for treating an array of diseases ranging from influenza virus, inflammation, sepsis, Alzheimer’s disease, glaucoma, malaria, liver fibrosis, psoriasis, Type 2 diabetes, growth disorders, and several types of cancers. However, despite its promising potential, clinical application of AE is somewhat limited by poor intestinal absorption, short elimination half-life, and low bioavailability. Furthermore, AE may exhibit potential liver and kidney toxicity. Therefore, this paper aims to review the pharmacological effects of AE along with its mechanism, pharmacokinetics, and safety studies, in order to offer valuable insights into the development and application of AE.

Hosted file
