Accepted Manuscript

Novel aminopyrimidinyl benzimidazoles as potentially antimicrobial agents: Design, synthesis and biological evaluation

Han-Bo Liu, Wei-Wei Gao, Vijai Kumar Reddy Tangadanchu, Cheng-He Zhou, Rong-Xia Geng

PII: S0223-5234(17)30922-4

DOI: 10.1016/j.ejmech.2017.11.027

Reference: EJMECH 9902

To appear in: European Journal of Medicinal Chemistry

Received Date: 11 May 2017

Revised Date: 26 October 2017

Accepted Date: 8 November 2017

Please cite this article as: H.-B. Liu, W.-W. Gao, V.K.R. Tangadanchu, C.-H. Zhou, R.-X. Geng, Novel aminopyrimidinyl benzimidazoles as potentially antimicrobial agents: Design, synthesis and biological evaluation, *European Journal of Medicinal Chemistry* (2017), doi: 10.1016/j.ejmech.2017.11.027.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



ACCEPTED MANUSCRIPT

Graphical Abstract

Novel aminopyrimidinyl benzimidazoles as potentially antimicrobial agents: Design, synthesis and biological evaluation

Han-Bo Liu, Wei-Wei Gao, Vijai Kumar Reddy Tangadanchu[†], Cheng-He Zhou^{*} and Rong-Xia Geng^{*}

Institute of Bioorganic & Medicinal Chemistry, Key Laboratory of Applied Chemistry of Chongqing Municipality, School of Chemistry and Chemical Engineering, Southwest University, Chongqing 400715, China;

† Postdoctoral researcher from CSIR-Indian Institute of Chemical Technology, Hyderabad 500007, India

* Corresponding Address:

Tel.: +86-23-68254967; fax: +86-23-68254967; E-mail: zhouch@swu.edu.cn (Cheng-He Zhou); geng0712@swu.edu.cn (Rong-Xia Geng).

A series of novel aminopyrimidinyl benzimidazoles were synthesized and screened for their antimicrobial activities. Molecular modeling and experimental investigation with DNA suggested the possible antibacterial mechanism.



Broad antimicrobial spectrum and potent bioactivity Inducing bacterial resistance slowly Low cytotoxicity to hepatocyte cells Beneficial regulation for ROS generation Stable complex to block DNA replication Suitable binding affinity to HSA Download English Version:

https://daneshyari.com/en/article/7797299

Download Persian Version:

https://daneshyari.com/article/7797299

Daneshyari.com