



Article

Novel Pharmacological Activity of Artesunate and Artemisinin: Their Potential as Anti-Tubercular Agents

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Abstract: Tuberculosis is a major infectious disease that globally causes the highest human mortality. From this aspect, this study was carried out to evaluate novel pharmacological activities/effects of artesunate and artemisinin causing anti-tubercular activity/effects against *Mycobacterium tuberculosis* (Mtb). The anti-Mtb activities/effects of artesunate and artemisinin were evaluated using different anti-Mtb indicator assays, such as the resazurin microtiter assay, the Mycobacteria Growth Indicator Tube (MGIT) 960 system assay, and the Ogawa slant medium assay, as well as in vivo tests. Artesunate showed selective anti-Mtb effects by strongly inhibiting the growth of Mtb compared to artemisinin, and consistently induced anti-Mtb activity/effects by effectively inhibiting Mtb in the MGIT 960 system and in Ogawa slant medium for 21 days with a single dose; its minimum inhibitory concentration was 300 µg/mL in in vitro testing. Furthermore, artesunate demonstrated an anti-tubercular effect/action with a daily dose of 3.5 mg/kg in an in vivo test for four weeks, which did not indicate or induce toxicity and side effects. These results demonstrate that artesunate effectively inhibits the growth and/or proliferation of Mtb through novel pharmacological activities/actions, as well as induces anti-Mtb activity. This study shows its potential as a potent candidate agent for developing new anti-tuberculosis drugs of an effective/safe next generation, and suggests novel insights into its effective use by repurposing existing drugs through new pharmacological activity/effects as one of the substantive alternatives for inhibiting tuberculosis.

Keywords: artesunate; isoniazid; MGIT 960 system; Ogawa slant medium; susceptibility-test

1. Introduction

Mycobacterium tuberculosis (Mtb) is one of the most dangerous pathogens which cause the highest human mortality and morbidity among various infectious diseases worldwide, particularly in Africa and the developing countries including Southeast Asia. Tuberculosis (TB) indicated a high level of co-infection with HIV (human immunodeficiency virus) from 2004 to 2014, and the prevalence of TB cases co-infected with HIV was highest in the African region compared with other regions [1,2]. For these reasons, various anti-TB drugs, such as rifampicin, isoniazid, ethambutol, pyrazinamide, and second-line drugs (D-cycloserine, cephalosporin, viomycin, etc.), were developed for the treatment of TB patients. Furthermore, various studies and strategies on tuberculosis, which causes serious complications to patients and resistance to existing agents, have been carried out globally.

Recently, new compounds, such as PA-824, SQ-109, linezolid, bedaquiline, rifapentine, moxifloxacin, and gatifloxacin, have been consistently developed as new/repurposed anti-TB drugs through chemical tailoring and remodeling of the existing antibacterial drugs, which are presently

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Novel Pharmacological and Agrobiological Activities Vincent P. Gullo, Jennie C. Hunter-Cevera, Raymond Cooper, 1993

Developments in Industrial Microbiology Series, 1998

The Search for Bioactive Compounds from

Microorganisms Satoshi Omura, 2012-12-06 Biologically active compounds isolated from microorganisms continue to be vital to the development of new drugs and agricultural chemicals This book was prepared by current and past members of the laboratory of Dr Satoshi Omura of the Kitasato Institute in Japan Dr Omura and his colleagues have discovered and studied a number of important antibiotics and in their work they have pioneered new methods for screening microbes for interesting and important compounds This book presents strategies and methods for identifying novel molecules with several types of biological activity In addition the book discusses the identification of microbial compounds of agrochemical importance presents information on chemical screening methods and concludes with chapters on microbial strain selection fermentation technology and genetic engineering of antibiotic producing microorganisms This book will be of great interest to scientists working in the very active and competitive fields of antibiotic and agrochemical discovery **Novel Microbial**

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Boyce Thompson Institute Collected Research Papers, 1923 Proceedings from the Biotechnology of Microbial

Products Conference (BMP 97) C. Richard Hutchinson, James McAlpine, 1997 **Books in Print**, 1991 *Index of Conference Proceedings* British Library. Document Supply Centre, 2002 *Characterization of the Doxorubicin Polyketide Synthase Genes of Streptomyces Peucetius and the Development of a System for Consistent Growth* Ann C. Grimm, 1995

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