Medicinal Chemistry

SYNTHESIS AND ANTIBACTERIAL ACTIVITY OF NEW DIPEPTIDE TYPE LINEZOLID ANALOGUES

Adrián Ochoa-Terán

Tecnológico Nacional de México campus, MexicoDenmark

Abstract

Worldwide studies towards development of new drugs with a lower rate in emergence of bacterial resistance have been conducted. The molecular docking analysis gives a possibility to predict the activity of new compounds before to perform their synthesis. In this work, the molecular docking analysis of 64 Linezolid dipeptide type analogues was performed to predict their activity. The most negative scores correspond to six Fmoc-protected analogues where Fmoc group interacts in PTC for Linezolid. Twenty-six different Fmoc-protected Linezolid dipeptide-type analogues were synthesized from the chemical modification of -aminoacids and tested in antimicrobial experiments. Some of the tasted compounds show significant activity against group A Streptococcus clinical isolated and ATCC 25923 Staphylococcus aureus strain, as well as clinical isolated methicillin resistant Staphylococcus aureus strains, with MIC values lower than Linezolid. The activity of these analogues also was tasted against multidrug-resistant clinical isolates of Mycobacterium tuberculosis with moderate results.

Biography

Adrian Ochoa-Terán has completed his PhD at the age of 27 years from Tecnológico Nacional de México, México. He is professor of Chemistry and Engineering at the Tecnológico Nacional de México and member of the National Program of Scientists and the Supramolecular Thematic Network in México. He has 62 publications that have been cited over 700 times, and his publication H-index is 16 and has been serving as reviewer of reputed Journals.

12th World Congress on Chemistry and Medicinal Chemistry
Rome, Italy | February 18-19, 2022

Citation: Adrián Ochoa-Terán, Synthesis and antibacterial activity of new dipeptide type Linezolid analogues, , Chemistry 2022, 12th World Congress on Chemistry and Medicinal Chemistry, Rome, Italy | Feb 18-19, 2022