World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

Screening of New Antimicrobial Agents from Heterocyclic Derivatives

Authors : W. Mazari, K. Boucherit, Z. Boucherit-Otmani, M. N. Rahmoun, M. Benabdallah

Abstract : The hospital or any other establishment of care can be considered as an ecosystem where the patient comes into contact with a frightening microbial universe and a risk to contract infection that is referred to as nosocomial or health care-associated. In these last years, the incidence of these infections has risen sharply. Several microorganisms are the cause of these nosocomial infections and the emergence of resistance of the microbial strains against antibiotics creates a danger to public health. The search for new antimicrobial agents to overcome this problem has produced interesting compounds through chemical synthesis, which plays a very important role in the research and discovery of new drugs. It is in this framework that our study was conducted at our laboratory and it involves evaluating the antibacterial activity of thirteen 2-pyridone derivatives synthesized by two methods, the diffusion disc method and the dilution method against eight Gram negative bacterial strains. The results seem interesting especially for two products that have shown the best activities against Escherichia coli ATCC 25922 and Enterobacter cloacae ATCC 13047 with CMI of 512µg/ml.

Keywords : heterocyclic derivatives, chemical synthesis, antimicrobial activity, biotechnology
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020