Larvicidal activity of 1,3,4- oxadiazole analogues and their Molecular Docking Studies

Publisher: IEEE

Cite This PDF

K. Santhanalakshmi ; Gomathi Thandapani ; K. Margandan ; N. Neelakandeswari All Authors

Abstract:
A new series of 2-(5-bromo-2-(trifluoromethoxy)phenyl)-5-aryl-1,3,4-oxadiazole 4a-4h compounds (aryl = C 6 H 5 , p-ClC 6 H 4 , p-NO 2 C 6 H 4 , C 5 H 4 N, p-OCH 3 C 6 H 4 , p-BrC 6 H 4 , p-OHC 6 H 4 , p-CH 3 OC 6 H 4) were synthesiazed by recting acid hydrazide with 5-bromo-2-(trifluoromethoxy) benzoic acid in POCl 3 . The new synthetic approach concluded with good results. The structure of synthesized Oxadiazole derivatives have been confirmed by Fourier transform infrared spectroscopy, Proton nuclear magnetic resonance and Carbon-13 NMR spectroscopy. The intention of this study to evaluate strong larvacidal activity of synthesized compounds towards Culex quinquefasciatus mosquitoes. The outcomes indicated that larvacidal activity of the synthesized compounds due to the existence of groups in the phenyl ring present of oxadiazole derivatives.

Published in: 2022 International Conference on Smart Technologies and Systems for Next Generation Computing (ICSTSN)

Date of Conference: 25-26 March 2022

Date Added to IEEE *Xplore*: 25 April 2022

ISBN Information:

INSPEC Accession Number: 21760142

DOI: 10.1109/ICSTSN53084.2022.9761366

Publisher: IEEE

Conference Location: Villupuram, India

I. INTRODUCTION

Mosquitoes are routes for a enormous number of infections especially in the tropics which includes filariasis transmitted by Culexquinquefasciatus, Anopheles gambiae causes malaria and Aedes aegypti reasons for dengue fever and yellow fever [1]–