

Antimicrobial activity of the ethanolic and aqueous extract of *Vicia faba* L. (Fabaceae)

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The aqueous and ethanolic extract of *Vicia faba* L. (Fabaceae) exhibited antimicrobial activity against the pathogenic microorganisms: *E. coli*, *S. aureus*, *K. pneumoniae* and *C. albicans*. This was evaluated using the Disc Diffusion Assay under aseptic conditions. Antimicrobial activity was not induced by the solvent, ethanol nor water as the diameter zone of inhibition (DZOI) was less than 5 mm. The highest area of zone of inhibition (AZOI) was 153.9 mm² and the lowest 12.56 mm². Negligible Zone of Inhibition (ZOI) was observed in several instances. The aqueous extract of the fruit also induced negligible zone of inhibition. In comparison to the reference, Ampicillin and Nystatin, values are less. As the concentration of the metal salt, Zn(OAc)₂·2H₂O and ethanolic extract increases, there seem to be a variation in antimicrobial activity. Zn(OAc)₂·2H₂O appears to intensify the antimicrobial activity of *Vicia faba* L. ethanolic and aqueous extract. Zn(OAc)₂·2H₂O in the absence of any extracts exhibited antimicrobial activity, the AZOI range from 47.2 mm² to 117.8 mm². Antimicrobial selectivity was also observed in several instances, for example, the ethanolic extract induces AZOI of 50 mm² against *C. albicans* whereas negligible AZOI was obtained against *K. pneumoniae* and *E. coli*.

Biography

R C Jagessar has obtained his BSc in Chemistry/Biology from the University of Guyana in 1992. He has then proceeded on a scholarship to pursue his PhD in the UK which he obtained in 1995. He pursued his Postdoctoral Research in the USA at the University of South Carolina, Wichita State University and later at the University of the West Indies, UWI. His research interests are broad, covering the spectrum of pure and applied chemistry, chemical biology, pharmaceutical and medicinal chemistry. He has won several international awards such as the Chartered Chemist, CChem of the Royal Society of Chemistry, Fellow of the Royal Society of Chemistry, FRSC, Royal Society Chemistry Research Grants etc. He is currently one of the recipients of the World Bank Grant from the University of Guyana Science & Technology Support Project Research Grant (2014-2016), UGSTSP. He has published 65 full peer reviewed papers, inclusive of four book chapters, exclusive of research abstracts, presented at conferences, both locally and internationally and has been a Reviewer of several international journals. He is currently a Lecturer of Chemistry in the Department of Chemistry.

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