

Pharmacological characterization of Bioactive compounds of medicinal plants

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Abstract

The Indian sub-continent is known as botanical garden of the world having rich culture and global use of medicinal herbs with wide botanical diversity. Plants are the richest bio-resource of drugs of traditional systems of medicine, modern medicines, nutraceuticals, food supplements, folk medicines, pharmaceutical intermediates and chemical entities for synthetic drugs. From the ancient time, plants have been playing a major key role for the improvement of humanity, presenting as an astonishing source of natural medicine. Plant-derived substances have recently become of great concern owing to their multifaceted applications. All Plant parts including stem, roots leaves, flowers consist of various secondary metabolites or the bioactive compounds like alkaloids, flavonoids, saponins etc. which are otherwise known as the inherent silent tools of self-protection among plants or semio-chemicals in plants. Their pharmacological characterization depends upon isolation and extraction of compounds using methods like Filtration, Centrifugation, Soxhlet and analysis is done using techniques like Gas Chromatography- Mass Spectroscopy (GC-MS), Thin Layer Chromatography (TLC), High Liquid Chromatography (HPTLC), Fourier Transform Infrared Spectral (FTIR) etc. These plant-derived components exhibit potent pharmacological actions and are found to be effective in the treatment of various ailments like Cancer, Tuberculosis, Diabetes etc. and further research can help in finding new sources of plants and bioactive compounds associated within them, so that more complex diseases can be cured by this eco-friendly and cost-effective approach.

Received Date: July 5, 2022

Accepted Date: July 10, 2022

Published Date: July 28, 2022

Biography

Dr Navneet Joshi is presently working as Professor, Department of Bioscience, School of Liberal Arts and Sciences, Mody University of Science and Technology, Lakshmangarh, Sikar, Rajasthan, India. He did his Ph.D on molecular characterization of microbial isolates with industrial applications and their cyto-morphological analysis under heavy metal abiotic stress from University of Rajasthan India. His research area is associated with Microbial Bioprocess Biotechnology/Plant biotechnology & Molecular Biology with special reference to molecular characterization of industrial isolates. He has more than twenty scientific articulations in the form of research papers, books, seminars and conferences. He is associate fellow of ISC, NEA, BRSI, AMI and hold collaborative projects at TERI, CLRI, CCMB, IIT-KGP and JNU. He is having a total of thirteen (13) research articles of national and

international repute into his account. Also, he is having two international books and 05 book chapters in to his academic publication account. He has attended various workshops, conferences and refresher/ training courses of national and international repute and also fetched few grants for minor projects. He had got first position in the university during first and second year; and third position in the university in the university during third year of his Bachelors and received Gold medal award of Masters Biotechnology degree. He fetched prestigious scientific awards from national and international agencies and Presently, he is working on molecular characterization of industrially important microorganisms-imo's and development of potential microbial consortia using recombinant technology.