



Synthetic Microbial Research- Challenges and Prospects

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Role of Medicinal Plants in Developing Biocompatible Therapeutics for Multidrug Resistant (MDR) Pathogens

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Abstract:

Multidrug resistance (MDR) has emerged as a global threat to human health and economy. Inappropriate and continuous use of antibiotics for long duration of time resulted in the emergence of antimicrobial resistance among various pathogens which resulted in prolonged morbidity and increased mortality. Multidrug resistance of various pathogens towards standard synthetic antibiotics has initiated the need to develop alternative cost-effective novel therapeutics using natural products. Plants are rich sources of diverse bioactive compounds which can be explored to develop novel antibiotics to tackle MDR microbes. Many studies using medicinal plant extracts, their compounds and traditional formulations have proved the efficacy antimicrobial potential of plants over standard antibiotics. This chapter discusses in detail about multidrug resistance (MDR), its epidemiology, mechanisms and the role of medicinal plants in developing novel therapeutic agents to combat multidrug resistance.

Keywords: Multidrug resistance (MDR), herbal antibiotics, medicinal plants, antimicrobial activity, bioactive compounds.