Antimicrobial and antituberculosis activities of plant and microbes compounds

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Tuberculosis (TB) is the second leading killer of people worldwide due to Mycobacterium tuberculosis. WHO reported that in 2012, 8.6 million people fell ill with TB and 1.3 million died from TB. Over 95% of TB deaths occur in low- and middle-income countries, and it is among the top three causes of death for women aged 15 to 44. In 2012, an estimated 530,000 children became ill with TB and 74,000 HIV-negative children died of TB. However, this problem has become serious as Mycobacterium tuberculosis developed resistance against both the first line as also the second line drugs. The emergence of multi-drug resistant (MDR) and extensively-drug resistant (XDR) strains of Mycobacterium tuberculosis has further complicated the problem of tuberculosis (TB) control. Medicinal plants offer a hope for developing alternate medicines for the treatment of TB. Medicinal plants offer a great hope to fulfill these needs and have been used for curing diseases for many centuries. These have been used extensively as pure compounds or as a crude material. Production of several classes of secondary metabolites from plants and microbes with a great pharmacological potential, mainly alkaloids, terpenes, quinovic acid glycosides, flavonoids, and coumarins with antimicrobial and antimycobacterial properties were included. The present study involved various isolated chemical constituents from plants and microbes responsible for antimicrobial and anti-tubercular activity. The results indicated that some of the molecules showed good activity against bacteria and Mycobacterium tuberculosis.

Biography

V Duraipandiyan has completed his PhD from the University of Madras and postdoctoral studies from the Entomology Research Institute, Loyola College, Chennai. Presently He is working as Assistant Professor in Department of Botany and Microbiology, King Saud University, Saudi Arabia. He is very interested in to isolate bioactive molecules from plants and microbes against pathogenic microbes, diabetes and cancer. He has published more than 55 papers in reputed peer reviewed journals and serving as an editorial board member and Guest editor of reputed Journals 'Medicinal & Aromatic plants and International Journal of Fundamental and Applied Science. He also acts as reviewer in many international peer reviewed journals.

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