



## Endophytic Actinomycetes As Emerging Therapeutic Microorganisms

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**ABSTRACT:** Endophytic actinomycetes reside inside the plants and provide them defense mechanism as well as produce secondary metabolites. We are well known with the applications of actinomycetes isolated from various sources like soil, water etc. but drug resistance in bacteria, the appearance of life threatening viruses, the recurring problems with disease in persons with organ transplants, and the tremendous increase in the incidence of fungal infections in the world's population each only underscore our inadequacy to cope with these medical problems. So there is urgent need to explore the new sources, possibly from the unique niche which can provide novel secondary metabolites. A study also indicates that organisms and their biotopes that are subjected to constant metabolic and environmental interactions should produce even more secondary metabolites. Endophytes are microbes that inhabit such biotopes, namely, higher plants, which is why they are currently considered to be a pool of novel secondary metabolites offering the potential for medical, agricultural, and industrial applications. They are human friendly showing least side effects because they do not usually fall into category of pathogens. India is a country known for its diversity in flora and it is already reported that each and every plant is habitat for one or more endophytes. In the previous studies, application of endophytic actinomycetes have been focused for therapeutics but many areas are still to be discovered like diabetes and viral diseases where endophytic actinomycetes can be the most promising sources of drugs. © 2014 iGlobal Research and Publishing Foundation. All rights reserved.

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