



## Isolation and screening of plant growth promoting actinomycetes from rhizosphere of some forest medicinal plants

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**Abstract :** Rhizosphere is the area of intense microbiological activity. Plant growth promoting rhizomicroflora inhabit rhizosphere of plants, enhance plant growth production and release of metabolites and also inhibit soil borne plant pathogens. In the present study, a total of 62 actinomycetal isolates were obtained from the rhizosphere of some forest medicinal plants viz, *Calycopteris floribunda*(CFB), *Maeruga oblongifolia* (MO), *Lantana camara* (LC), *Zingiber officinale* (ZO) and *Schleichera oleosa* (SO) grown in the Pakhal forest, Pakhal wild life sanctuary, Warangal (Dt), Telangana State, India. All the isolates were screened for their plant growth promoting activities viz, Ammonia production, IAA production, HCN production and phosphate solubilization. The results showed that the actinomycetal isolates differed in the levels of PGP activities. The range of percentage (%) of positive isolates for each of PGP activities varied greatly: 47(75%) isolates showed Ammonia production, 45 (72%) isolates for indole acetic acid (IAA) production, 32 (51%) for hydrogen cyanide (HCN) production and 18 (29%) for phosphate solubilization. These results demonstrate the biotechnological potential of these microorganisms. Therefore, the present study suggests that these plant growth promoting actinomycetes (PGPA) may be used as biofertilizers to enhance the growth and productivity of commercially important medicinal plants.

**Keywords :** Medicinal plants, Actinomycetes, PGP activities, PGP substances.

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