



Section: 02

Chemical diversity and antimicrobial activity of endophytic fungi associated with Geissospermum sp.

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The search for novel bioactive compounds has positioned the bioprospecting of endophytic fungi as a strategic field, due to the ability of these microorganisms to synthesize metabolites of biotechnological and pharmacological relevance. Therefore, the flora of the Atlantic Forest represents a rich reservoir of bioactive substances, with the genus *Geissospermum* notable for its traditional medicinal applications and chemical profile, which includes indole and bis-indole alkaloids and derivatives such as flavopereirine and geissosquizoline, compounds associated with antifungal, antileishmanial, and anticancer activities. Consequently, endophytic fungi associated with *Geissospermum* constitute a promising source for the discovery of bioactive molecules with high therapeutic potential. This study aimed to isolate and characterize the endophytic microbiota of *Geissospermum* and to evaluate the chemical profiles and biological activities of the obtained extracts. Leaves and stems of *Geissospermum* spp. were surface-sterilized and inoculated on various culture media for 15 days, followed by successive subculturing to obtain pure colonies. For extract production, the isolates were cultivated in potato dextrose broth under constant agitation at room temperature for 14 days, and metabolites were recovered through liquid-liquid extraction with ethyl acetate. HPLC analyses of the extracts revealed distinct chromatographic profiles, reflecting the chemical diversity of these strains. Notably, four isolates exhibited antimicrobial activity against *Staphylococcus aureus*. The authors would like to thank the funding bodies CAPES, CNPq, and FAPERJ.

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