

Media Manipulations and the Culture of Beneficial Endophytic Fungi in the Leaves and Stem Bark of *Grewia lasiocarpa* E. Mey. Ex Harv

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Abstract : A significantly high number of microbes exist in higher plants; these microbes include bacteria, fungi, and actinomycetes. There are reports on the benefits of endophytic fungi and their products of metabolism to the host plant and man, consequently, it is expedient to explore the changes that could arise as a result of manipulating their growth media. *Grewia lasiocarpa* E. Mey. ex Harv. (Malvaceae) is an indigenous Southern African plant, that belongs to a genus with known medicinal properties. Three media were used to culture the endophytic fungi viz., Potato Dextrose Agar (PDA), Malt Extract Agar (MEA), and Bacteriological Agar (BA) were used singly, and supplemented with three dilutions of the leaves and stem bark extracts. The manipulated growth media composition had a significant effect on the diversity of the isolated fungal populations. Several endophytic fungi were isolated; their distribution and diversity revealed a significant relatedness with the manipulated media. The media supplemented with the plant extracts was observed to give a significant increase in the growth rate and yield of the endophytes. To the best of our knowledge, this is the first study describing the endophytic fungi present in the leaves and stem bark of *G. lasiocarpa* E. Mey. ex Harv.

Keywords : *Grewia lasiocarpa*, plant-based extracts, endophytic fungi, Malvaceae

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