

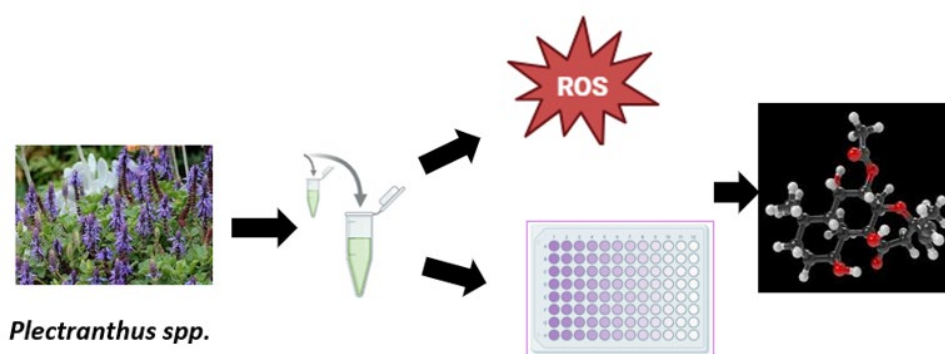
Project: Investigating of antioxidant and cytotoxicity activity of *Plectranthus* extracts

Brief description: Nowadays, plant-based medicines have been playing an important role in drug discovery and development. Natural products have gained attention as agents with the potential in management of various diseases. Compounds of natural origin, including flavonoids, alkaloids, coumarins, and terpenoids, have been investigated as potential for antioxidant and cytotoxic activities.

The genus *Plectranthus* (Lamiaceae) is used in traditional medicine in southern Africa, and it is known as a source of bioactive natural products. The major classes of secondary metabolites present in these plants are diterpene quinones, coleanones, and royleanones, with pharmacological activities. *Plectranthus* species are reported to possess antibacterial, antitumoral, antifungal, insecticidal, and antiplasmodial activities.

Objective: The aim of this project is to evaluate the antioxidant and cytotoxic activities of *Plectranthus* extracts. The extract will be evaluated against different cancer cell line such as HeLa (cervix carcinoma), B16 (melanoma), 4T07 (breast cancer) Caco2 (adenocarcinoma), U87 (glioblastoma), and cell viability assays will be conducted.

The student will prepare small quantities of different extracts of evaluate their biological activities and identify the bioactive component of the most active extract which may be responsible for the observed biological activity.



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