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Development and Pharmacological Assessment of A Polyherbal Formulation with Analgesic and Anti- Inflammatory Potentials

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Abstract: *The present study investigates the pharmacognostic, phytochemical, and antioxidant potential of selected medicinal plants—Black pepper, Amla, Ginger, Cinnamon, and Basil—and evaluates their suitability for the development of a polyherbal formulation. Preliminary phytochemical screening confirmed the presence of key bioactive constituents such as alkaloids, glycosides, flavonoids, phenols, diterpenes, and saponins, which collectively contribute to their therapeutic properties. Antioxidant activity assessed through DPPH and ABTS radical scavenging assays demonstrated significant free radical inhibition, particularly in extracts rich in phenolics and flavonoids. The results highlight the synergistic pharmacological potential of combining these herbs for improved antioxidant and therapeutic benefits. This study provides a scientific basis for utilizing these plant extracts in formulating an effective polyherbal preparation with enhanced efficacy against oxidative stress and related disorders*

Keywords: Pharmacognosy; Phytochemical Screening; Antioxidant Activity; Polyherbal Formulation; Medicinal Plants; Amla; Cinnamon; Free Radical Scavenging; Ginger; Basil; Black Pepper

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