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A Review -Synergistic Anticancer Potential of Ginger, Bloodroot, and Aloevera: Development and Mechanistic Evaluation of A Polyherbal Formulation

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Abstract: *The present study focuses on the optimization and standardization of a polyherbal anticancer tablet formulation using three medicinal plants: Aloe vera, Bloodroot, and Ginger, selected for their known anticancer properties. Phytochemical analysis revealed the presence of flavonoids, alkaloids, phytosterols, and phenolic compounds in the plant extracts. The physical properties of the tablet granules, including angle of repose, bulk density, Hausner ratio, and compressibility index, indicated good flow characteristics. Tablets demonstrated uniformity in weight, adequate hardness, mechanical stability, and appropriate disintegration times within pharmacopoeial limits. Stability studies over three months showed no significant deviations in key parameters, confirming the formulation's stability. Acute toxicity tests, conducted in line with WHO and OECD guidelines, indicated high LD50 values, affirming the safety of the plant extracts. The in vivo anticancer activity was tested at concentrations of 200 and 400 mg/kg, with histopathological studies revealing the effect on solid tumors in various tissues. The polyherbal tablet formulation, developed on a laboratory scale, shows promise as a stable, cost- effective dosage form for potential use in cancer management, combining traditional medicinal knowledge with modern pharmaceutical techniques*

Keywords: Bloodroot, Aloe vera, Ginger, Polyherbal

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