

Formulation and Evaluation of Herbal Syrup for platelet enhancement in Dengue using *Carica Papaya* and *Tinospora Cordifolia*

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Abstract: Dengue fever, a mosquito-borne viral illness, continues to pose severe health challenges, particularly in tropical and subtropical regions. One of its most critical complications is thrombocytopenia, a dangerous reduction in platelet count that can lead to severe internal bleeding and life-threatening conditions such as dengue hemorrhagic fever. Despite advances in supportive care, there is no specific antiviral therapy available. Therefore, the demand for safe, effective, and affordable supportive treatments has escalated. Among various natural remedies, *Carica papaya* and *Tinospora cordifolia* have shown potential in enhancing platelet counts and modulating the immune response. This review explores their phytochemical constituents, mechanisms of action, formulation into a stable herbal syrup, comprehensive evaluation methodologies, current challenges, future directions, and regulatory considerations across different regions.

Keywords: Dengue fever, thrombocytopenia, *Carica papaya*, *Tinospora cordifolia*, platelet enhancement, herbal syrup, polyherbal formulation, phytochemical screening, natural remedy, immunomodulator

