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A Study of Pueraria Lobata Extract in A Chemical-Induced Lung Cancer Model

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ABSTRACT

Pueraria lobata is a traditional medicinal plant widely known for its therapeutic properties and rich phytochemical composition. The extract of *Pueraria lobata* contains several bioactive compounds such as flavonoids, isoflavones, puerarin, daidzein, and genistein, which possess strong antioxidant, anti-inflammatory, and potential anti-cancer activities. In recent years, scientific studies have focused on evaluating the effect of *Pueraria lobata* extract in experimental models of Lung Cancer, particularly in chemical-induced lung cancer models used for laboratory research. In a chemical-induced lung cancer model, carcinogenic chemicals are used to induce tumor formation in experimental animals to study the development and treatment of cancer. Administration of *Pueraria lobata* extract in such models has shown promising protective and therapeutic effects. The bioactive compounds present in the extract help reduce oxidative stress, inhibit abnormal cell proliferation, and promote apoptosis (programmed cell death) in cancer cells. Additionally, these phytochemicals may suppress inflammatory pathways and protect lung tissues from damage caused by carcinogens. Research findings suggest that *Pueraria lobata* extract may significantly reduce tumor growth and improve overall lung tissue health in experimental conditions. Therefore, it is considered a promising natural candidate for further research in the development of plant-based therapies for lung cancer prevention and treatment. However, more detailed clinical and pharmacological studies are required to confirm its safety and effectiveness in humans.