



## Herbal tablet of Pueraria tuberosa water extract suppresses the alloxan induced liver damage and hyperglycemia in rats

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### Abstract:

Background- Liver damage is one of the major metabolic complication of diabetes .As an effective antioxidant & anti-inflammatory agent ,Pueraria tuberosa could protective diabetic liver.

Objective – To study the protective response of herbal formulation (tablets) of Pueraria tuberosa water extract (PTAB) on alloxan induced rat diabetic model.

Material & Method- Alloxan (120 mg/kg bw) was injected intraperitoneally. Rats were divided into three groups: group 1 as normal, group 2 as diabetic control and group 3 were given PTAB upto 14 days. Blood glucose and liver function tests were done using their respective kits. Hematoxyline and eosin staining was done to evaluate the morphological changes in liver tissues. Through immunohistochemistry, we have checked the protein expression of VEGF, MMP9 and ki67.

Result – PTAB significantly decreases blood glucose level in a time dependent manner up to 14 days. As compared to diabetic control, PTAB decreases SGOT, SGPT and alkaline phosphates after 14 days of treatment. In diabetic control, the morphology of liver tissues were found damaged due to deformed hepatocytes and dilated lobules. Most of the hepatocytes after PTAB treatment were comparatively found similar to normal rats tissues, along with dilated blood vessels and normalized liver lobules. In addition to these results, PTAB suppresses the expressions of VEGF and MMP 9.

Conclusion --PTAB was found to act as an effective hypoglycemic agent. In addition to this, PTAB also found to inhibit inflammation and apoptosis of liver. Thus, can be taken as a potential drug in liver diseases.

Keywords – Pueraria tuberosa, VEGF, hypoglycaemia, hepatocytes and liver .

### Biography:

Harsh Pandey is completed his Ph. D. Topic : Pharmacological Evaluation and Formulation Development of solid dosage form of Pueraria tuberosa (Roxb. ex. willd ) DC. Working as Prof. Yamini Bhusan Tripathi ,Department of Medicinal Chemistry , Dean, Institute of Medical Science , Banaras Hindu University, Varanasi. He has published more than 17 papers



in reputed national and international journals.

### Publication of speakers:

1. Srivastava, Shivani & Shree, Priya & Pandey, Harsh & Tripathi, Yamini Bhusan. (2018). Incretin hormones receptor signaling plays the key role in antidiabetic potential of PTY-2 against STZ-induced pancreatitis. *Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie*. 97. 330-338. 10.1016/j.biopha.2017.10.071.
2. Srivastava, Shivani & Pandey, Harsh & Tripathi, Yamini Bhusan. (2018). Expression kinetics reveal the self-adaptive role of  $\beta$  cells during the progression of diabetes. *Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie*. 106C. 472-482. 10.1016/j.biopha.2018.06.168.
3. Pandey, Harsh & Srivastava, Shivani & Kumar, Rajesh & Tripathi, Yamini Bhusan. (2018). Preclinical acute and repeated dose toxicity of Pueraria tuberosa (PTWE) on charles foster rats.. *International Journal of Pharmaceutical Sciences and Research*. 9. 4572-4581. 10.13040/IJPSR.0975-8232.9(11).4572-81.
4. Pandey, Harsh & Srivastava, Shivani & Mishra, Brahmeshwar & Saxena, Riden & Tripathi, Yamini Bhusan. (2018). Development and evaluation of Herbal Tablet loaded with Pueraria tuberosa water extract with use of different Excipients. *Asian Journal of Pharmaceutics*. 12. 786-793. 10.22377/ajp.v12i02.2493.

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