



**Pharmacological and Toxicological study of Medicinally Important Plants:
Solanum virginianum (kantakari)**

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This Thesis Paper is submitted to the Department of Pharmacy, East West University, Bangladesh, in partial fulfillment of the requirements for the Degree of Masters of Pharmacy.

This Research paper is dedicated to my beloved

Mother

DECLARATION BY THE CANDIDATE

I hereby declare that this dissertation, entitled “**Pharmacological and Toxicological study of Medicinally Important Plants: *Solanum virginianum***” is an authentic and genuine research work carried out by me under the guidance of Dr. Shamsun Nahar Khan (Ph. D, Postdoc, Harvard University, Chairperson, Department of Pharmacy, East West University, Dhaka).

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ENDORSEMENT BY HEAD OF THE DEPARTMENT

This is to certify that the dissertation entitled “**Pharmacological and Toxicological study of Medicinally Important Plants: *Solanum virginianum***” is a genuine research work carried out by , Fatema Akther under the supervision of Shamsun Nahar Khan (Ph. D, Postdoc, Harvard University, Chairperson, Department of Pharmacy, East West University, Dhaka). I further certify that no part of the thesis has been submitted for any other degree and all the resources of the information in thus connection are duly acknowledged.

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CERTIFICATE

This is to certify that, the research work on “Pharmacological and Toxicological study of Medicinally Important Plants: *Solanum virginianum*” submitted to Department of Pharmacy, East West University, Jahurul Islam city, Aftabnagar, Dhaka-1212, in partial fulfilment of the requirements for the degree of Masters of Pharmacy (M.Pharm) was carried out by Fatema Akther (ID: 2014-1-79-033) under the guidance and supervision and that not part of thesis has been submitted for any other degree. We further certify that all the sources of information of this connection are duly acknowledged.

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ABSTRACT

Purpose: The research work was carried out to determine the Pharmacological and Toxicological study of Medicinally Important Plants: *Solanum virginianum*.

Method: Methanolic extract was administered orally to the animal model (*Swiss albino*) and the effects were determined by comparing with respect to control group which were treated with 5% CMC. For every experiment positive control was used. Different experiments were used to determine the pharmacological profile which was Collected from internationally published publications and journals.

Result: The CNS activity was evaluated by open field method and hole board test. In the open field method and hole board experiment the crude extract of *Solanum virginianum*. (200mg/kg, 400mg/kg & 800mg/kg) dose dependently reduces the number of peripheral locomotion, central locomotion and leaning in the open field test and reduces the number of head dipping and head poking in the hole board test. The reduction is significant when it is compared to the standard drug.

The aim of the study was also to investigate the possible toxicity of the plant *Solanum virginianum* and especially to establish the safety of the methanolic extract of this plant by focusing on its chronic toxicity in mice. For finding chronic toxicity several tests are done such as CBC (Cell Blood count) test, Hepatic enzyme test and histopathological Studies.

All data were analyzed by using SPSS analytical method.

Conclusion: After summarize all the results it can say that *Solanum virginianum* may have several pharmacological activities but to prove the hypothesis it need further higher studies.

Keywords: *Solanum virginianum*, Neuropharmacological effect and Toxicity test.

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