CHAPTER 3

OBJECTIVE OF THE STUDY
3. **Objectives of the study**

- To study the effect of chronic unpredictable mild stress induced depression as a risk factor for diabetes and associated behavioural dysfunction.

- To investigate the effect of *Urtica dioica* (stinging nettle) on stress induced insulin resistance and behavioural dysfunction.

- To study the involvement of cholinergic system, insulin signaling cascade, autophagy and sonic hedgehog signaling pathway in the hippocampus region of brain during depressive like behaviour and the effect of *Urtica dioica*.

- To evaluate the effect of *Urtica dioica* on streptozotocin induced chronic diabetes and its associated depressive like behaviour and cognitive dysfunction.

- To evaluate the effect of *Urtica dioica* extract on diabetes associated molecular alterations in the hippocampus including insulin signaling pathway, cholinergic system, autophagy and inflammation.