Chapter 2
Aims and Objective
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AIMS AND OBJECTIVES

1. To study hypoglycemic effect of water extract of central part of stem of *Musa sapientum* in normal and diabetic animal models.

2. To isolate, purify and identify active hypoglycemic component from water extract.

3. To study the mechanism of action of hypoglycemic component from water extract of stem of *Musa Sapientum* in normal and diabetic animals by studying its effect on:
   - Levels of serum insulin, C-peptide, glycosylated hemoglobin and lipid profile.
   - Glucose transporters, auto phosphorylation of insulin receptors and release of insulin from pancreatic β cells (*in vitro studies*).
   - Enzymes of carbohydrate metabolism viz. Glucokinase, Glucose 6 phosphatase, Phosphofructokinase, and lipid metabolism, HMG CoA Reductase, Acetyl coA carboxylase.
   - Tissue constituents like glycogen, lipids and proteins in liver & muscle.

4. To carry out toxicity studies in order to establish the safety of this Component.