

Effect of jali extract (*coixlacrimajobi l*) on the mice with diabetes mellitus' blood glucose *in vivo*

Nanny¹, Kathena², Ingrid³ and Yanti⁴
Jaya Catholic University, Indonesia

Background: Type 2 diabetes mellitus (DM) is a chronic disease marked by the elevation of blood glucose. There are many factors that can cause type 2 DM, such as genetics, poor dietary habits, life style, and many more. Choices of the correct food ingredients can help control blood glucose in patients with type 2 DM. Jali (*Coix Lacrima Jobi L*) is a tropical grain that belongs to the Poaceae family or flowering plants (grass). In a study of twelve antidiabetic plants, Jali has been demonstrated to have the antidiabetic effects that can reduce blood glucose in patients with type 2 DM.8

Purpose: To determine the effect of Jali extract on the mice's blood glucose with diabetes mellitus.

Methods: An experimental study has been conducted in five groups of ten male mice and each has been administered with 10 mg of jali extract and 50 mg/kg in aquadest daily for 30 days. The groups are (1) negative control

(without aloxan and aquadest), (2) positive control (with injections of aloxan and aquadest), (3) glibenclamide (GC)-50 standard (with injections of aloxan and GC 50 mg/kg), (4) polysaccharide extract (BSF)-10 (induction of aloxan and BSF 10 mg/kg), and (5) BSF-50 (induction of aloxan and BSF 50 mg/kg). From each animal, serum blood glucose was recorded and analyzed before the experiment started as the baseline, on the 15th, and 30th days, these mice are then sacrificed by euthanasia on the 30th day. The results demonstrated that jali has the effect of reducing mice's serum blood glucose in 30 days and it shows the efficacy of jali polysaccharide fraction as an antidiabetic agent.

Results: The use of jali polysaccharide extract 50mg/kg body weight significantly reduce blood glucose.

Conclusion: The use of jali extract as a natural antidiabetic agent.

 Notes: