EFFECT OF BAWANG DAYAK (*Eleutherine palmifolia* L., Merr) BULBS EXTRACT ON SKELETAL MUSCLE CELL APOPTOSIS AND BODY WEIGHT CHANGE IN RAT INDUCED BY ALLOXAN

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ABSTRACT

This study was undertaken to investigate the antidiabetic and antioxidant effect of *bawang dayak* bulbs (*Eleutherine palmifolia* L., Merr) extract (BDBE) on skeletal muscle cell apoptosis and body weight change in rat induced by alloxan. Single doses alloxan 120 mg/kgBW were administered intraperitoneally. Twenty four male Wistar rat of three months old were used in this study. Rat were devided into six groups: negative control group (were not diabetic and treated) (K0), positive control group (were diabetic and treated CMC-Na) (K1), drug control group (were diabetic and administrated metformin as a standard drug) (K2), BDBE dosed 200 (P1), 400 (P2), and 800 mg/kgBW (P3). The treatment was conducted for 14 days. Hypoglycemic effect and body weight measured of all mice was determined at day 7 and 14 of treatment. At the end of research, all of rat were sacrificed and *m.gastrocnemius* were collected for apoptosis analysis by TUNEL staining and atrophy analysis by Hematoxilin-Eosin staining. The result of this study showed that BDBE decreased skeletal muscle cell apoptosis and reduced skeletal muscle fiber diameter (atrophy). BDBE didn't affect on the body weight change in rat induced by alloxan.

Key words : *bawang dayak* (*Eleutherine palmifolia* L., Merr), diabetes mellitus, skeletal muscle apoptosis, skeletal muscle fiber diameter (atrophy), body weight change