ABSTRACT

The study assessed the anti-diabetic property of the crude extracts that were isolated from the leaves of *Tithonia diversifolia* and *Helianthus annuus*. Twenty four (24) albino mice were induced with diabetes using commercially available alloxan monohydrate. The alloxan-induced albino mice were divided into three experimental groups: T_1 - 25% combined leaf extract, T_2 - 50% combined leaf extract and T_3 - 75% combined leaf extract. After 4 weeks of administration of treatments, the mean blood sugar level of T_1 (25% combined leaf extract), decreased from 221 mg/dL to to 91.875 mg/dL. T_2 (50% combined leaf extract) with a mean blood sugar level of 236 mg/dL, decreased to 92 mg/dL. Lastly, the mean blood sugar level of T_3 (75% combined leaf extract) decreased from 263.25 mg/dL to 98.5 mg/dL. Phytochemical compounds of *T. diversifolia* and *H. annuus* such as sesquiterpene lactones, flavonoids, glucosides and alkaloids may be the factors that have caused this hypoglycemic effect. There was no significant difference on the effect of 25%, 50% and 75% concentration of the combined leaf extract in terms of reducing the blood sugar level of diabetic albino mice. Hence, *T. diversifolia* and *H. annuus* leaf extracts can be used as an alternative herbal medicine in reducing the blood sugar level.

Key Terms: alloxan monohydrate, anti-diabetic property, diabetes, *H. annuus*, hypoglycemic effect, phytochemical compounds, *T. diversifolia*