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Research on Chronic Diseases

Anti-hyperglycemic Potency of Asthma Weed (Euphorbia hira Linn.) Leaves Crude Extract in Female White Mice (Mus musculus)

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Biography

Reynand Dumala-On has been teaching for 11 years cumulatively in the United States, the United Kingdom, and in the Philippines from middle school, high school, to college levels and graduate school for the subjects mentioned above with a relevant and competitive background especially in Science, Technology, Engineering, and Mathematics (STEM) area.

Asthma Weed (*Euphorbia hirta Linn*.) is an endemic plant species that is rich in phytochemicals which may offer potent cure for diseases especially in treating hyperglycemia. This experimental study was conducted to evaluate the anti-hyperglycemic potency of Asthma Weed (*Euphorbia hirta Linn*.)leaves crude extract in blood glucose level of female white mice(*Mus musculus*). The major findings of the study were: (1) The mean blood glucose level of the female white mice before the experimental phase was "moderate."; (2) The blood glucose levels of female white mice (*Mus musculus*) among the treatments administered were all considered moderate; (3) The blood glucose levels of female white mice (*Mus musculus*) 30 and 60 minutes after the treatments had been administered were described as "moderate"; (4) There were no significant differences in the blood glucose levels of female white mice (*Mus musculus*) considering the different treatments; (5) There were no significant differences in the blood glucose levels of female white mice (*Mus musculus*) among the time intervals after the administration of the treatments; (6) There was a significant difference in the blood sugar levels of the female white mice (*Mus musculus*) before the experimental phase and 30 and 60 minutes after the treatments had been administered.Outcomes of the study highly recommend the following: (1) The Department of Health in linkage with the Department of Environment and Natural Resources and the Bureau of Plant Industry may substitute expensive commercial anti-hyperglycemic agents with Asthma Weed (*Euphorbia hirta Linn*.) leaves crude extract. In addition, this may encourage the agencies to plan out programs and projects to propagate the plant and produce capsules, tablets and solutions as an alternative medicinal drug of choice; (2) The pharmaceutical industries may be encouraged to isolate the bioactive compounds in Asthma Weed (*Euphorbia hirta Linn*.) leaves and to produce cheap but effective commercial drugs from these as an anti-hyperglycemic agent possibly even at the 50 µL dosage concentration; (3) The researcher is encouraged to work with the local chemists to pursue the processing of plant leaves in dry crude preparation and so to produce capsulated product subjected to the Bureau of Food and Drugs (BFAD) approval; (4) The community, especially the hyperglycemic individuals may be informed of the results and advised to try the use of Asthma Weed (*Euphorbia hirta Linn*.) leaves crude extract as an alternative and easily prepared medicinal plant for hyperglycemia; (5) Other researchers may be motivated to conduct assays on Asthma Weed (*Euphorbia hirta Linn*.) like its allergenicity, mutagenicity, and toxicity to evaluate possible adverse effects; (6) Dissemination of information, propagation of the plant species, linkage with concerned agencies that could facilitate in-depth and wide implementation of project plan about the medicinal significance of Asthma Weed (*Euphorbia hirta Linn*.) are also recommended; and, (7) The whole of Asthma Weed (*Euphorbia hirta Linn*.) plant can be further evaluated for its various phytochemical structures and medicinal applications. Further tests can be conducted in terms of its potential antioxidant activity, antibacterial and antiangiogenic property.

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