



The Togolese Medicinal Recipe, *Diabeto-Dolvo*® Exerted Antidiabetic Effects in Wistar Rats

Holaly Efui Gbekley¹, Kokou Idoh², Nassifatou Titikpina³, Kodjovi Agbodeka¹, Kokou Anani¹, Gnatoulma Katawa¹, Bouraima Djeri¹, Tchadjobo Tchacondo¹, Simplicite Damintoti Karou^{1, 4*}, Yaovi Ameyapoh¹, Simpore Jacques⁴.

1. Ecole Supérieure des Techniques Biologiques et Alimentaires (ESTBA-UL), Université de Lomé, Togo.
2. Laboratoire de Physiologie et de Pharmacologie, Faculté des Sciences (FDS-UL) Université de Lomé, Togo.
3. Laboratoire de Botanique et Ecologie Végétale Faculté des Sciences (FDS-UL) Université de Lomé, Togo.
4. Centre de Recherche de Biologie Moléculaire Pietro-Annigoni (CERBA) Ouagadougou, Burkina-Faso.

Correspondence: Karou Damintoti Simplicite, Ecole Supérieure des Techniques Biologiques et Alimentaires (ESTBA-UL), Université de Lomé, 01 BP 1515, Lomé 01, Togo. Email: simplicitekarou@hotmail.com

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ABSTRACT

Objective: this study was to evaluate the toxicity of a herbal recipe *Diabeto-Dolvo*® (DD) and its efficacy in streptozotocin-induced diabetic Wistar rats.

Methodology and results: The toxicity test was performed by oral administration of the extract to rats while diabetes was induced with streptozotocin, the 250, and 500 mg / kg body weight. The results of the toxicity tests revealed no evidence of mortality or morbidity suggesting an LD50 greater than 5000 mg / kg. Similarly, the biochemical and haematological parameters remained unchanged. In antidiabetic tests, there was a progressive decrease followed by a normalization of the glucose level of the treated rats. Overall, the extract at 250 and 500 mg / kg body weight resulted in a significant reduction in glycated haemoglobin, amylase, lipase, G6PD and serum lipids.

Conclusion and application of results: This study revealed that, the treatment with the recipe might repair oxidative damages, hyperglycaemia and hyperlipidaemia in diabetic rats in the same way as the treatment with glibenclamide. This study is a contribution to the experimental validation of the DD recipe. In research and development application, the DD recipe will be used in the treatment of cases of diabetes mellitus. A natural product, it will support the multiple treatments of so-called conventional medicine, relatively expensive for the population.

Key words: *Diabeto-Dolvo*®; blood glucose; oxidative damage; streptozotocin; diabetes mellitus; Togo.