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RESTORATION OF INSULIN PRODUCTION AND PROTECTIVE ACTION AGAINST DIABETES COMPLICATIONS BY WAKOUBA AN EXTRACT OF LOCAL PLANT

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Statement of the Problem: Globally, an estimated 422 million adults were living with diabetes in 2014, compared to 108 million in 1980. Diabetes and obesity have reached such proportions worldwide we're talking about pandemic. Diabetes and its complications bring about substantial economic loss to people with diabetes and their families and to health systems and national economies through direct medical costs and loss of work and wages. The purpose of this study is to evaluate the restoration of insulin production by Wakouba in diabetic rats and evaluate the protective action against diabetes complications.

Methodology & Theoretical Orientation: We focused first on evaluating in diabetics rats treated by Wakouba, the rate of glucose and the level of insulin. Histopathological sections of the pancreas were observed. And secondly, we evaluated the evolution of NO production and the activity of catalase to see the action of Wakouba during the diabetes in these rats.

Findings: The results show, blood glucose decreases and normalizes and the production of insulin increases during the treatment of the diabetic animals by Wakouba. At the same time, Wakouba restores the integrity of the beta Langerhans cells. The treatment by Wakouba restores NO production which will play fully its physiological role in the nervous, cardiovascular, genitourinary and digestive and immune systems in diabetic rats.

Conclusion & Significance: Wakouba restores the integrity of the beta cells of Langerhans, by converting pancreatic α cells into pancreatic β cells. We can also say that Wakouba participates to the restoration of the nervous, cardio-vascular, genito-urinary, and digestive and immune systems, in the organism of these diabetic rats. Wakouba may be also involved in the fight against insulin resistance.

Biography

Kouame Felix is a PhD student in Biotechnology and Pharmacology of Natural Substances in the Laboratory of Pharmacodynamie Biochimique of Universite Felix Houphouet Boigny de Cocody Abidjan. He is working to find new medical molecular against diseases from natural substances. He is having a Bachelors degree in Biochemistry and Microbiology and Master's degree in Biotechnology and Pharmacology of Natural Substances. He also has a Master's degree in Business administration in Abidjan and a certificate in Marketing and Commercial Engineering. He is working for more than 14 years in Sales, Marketing, International Trades, Shipping and Logistics. He is currently working for an international agribusiness, as a commercial representative in charge of shipping and logistics.

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