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In-silico docking study of Terminalia catappa Linn as a potent anti-diabetic agent



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Diabetes mellitus is one of the life threatening diseases in Africa, especially in Nigeria which has been shown to have the highest number of people with diabetes with an estimated 3.9 million people. The present study investigates the anti-diabetic active constituent present in *Terminalia catappa* Linn which bind at active site of G-protein coupled bile acid receptor 1 (TGR5), with lowest binding energy using Autodock/Vina 4.2. Molecular screening of phytochemicals constituent found in *Terminalia catappa* Linn reveals that farnesyl acetone with a docking score of -7.9 kcal/mol in comparison with cholic acid with a docking score of -7.9 kcal/mol which is a standard agonist of G-protein coupled bile acid receptor 1 (TGR5) has high anti-diabetic potency. From the result, it can be concluded that farnesyl acetone acts as a potent anti-diabetic agent and can be developed into a potent drug for type 2 diabetes.

Biography

Olusola Abiola Ladokun is a Professor of Nutritional Biochemistry in the Department of Biochemistry, Faculty of Sciences, Lead City University, Ibadan, Nigeria. She holds a PhD in Agricultural Biochemistry and Nutrition from the University of Ibadan, Ibadan, Nigeria. She is the current serving Dean of the Faculty of Basic Medical and Applied Sciences. She has to her credit several articles in both local and international journals, chapters in books and conference proceedings. Her areas of research include Food Chemistry, Ethnopharmacology, and Functional Foods. She has attended and presented papers in conferences and workshops in Nigeria and Internationally.

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