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## Discovery of active compounds from plants used as anti-diabetics in traditional medicine in DR Congo

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**B**eside infectious diseases such as HIV/AIDS and malaria, type 2 diabetes mellitus is becoming a major public health problem in Africa. Access to conventional medicine being limited, Traditional Medicine (TM) remains, for most of the patients, the major and, often, the only source of care. Thus, the aim of this study was to research plants used in TM to obtain active products that can be proposed to treat diabetes. A survey of herbs used as antidiabetic in TM was conducted in Lubumbashi on 49 tradipraticians. Among 95 cited plants, 9 were selected for biological and chemical studies, based on their citation frequency and bibliographic information indicating the absence of data on antidiabetic activity. An *in vivo* oral glucose tolerance test was performed on *Cavia porcellus* L. to evaluate their antihyperglycemic activity. Bio-guided fractionation of the most active extract, *Vitex madiensis* Oliv (Verbenaceae) from the nine plants investigated was undertaken. Its leaves extract led to the isolation and characterization of 20-hydroxyecdysone. Biological tests indicate that this compound has a marked antihyperglycemic activity. In conclusion, tradipraticians cited both herbs already known for their antidiabetic effect (34 plants) and so far not cited herbs that proved active in our model. Thus, some plants used in TM contain active molecules and can serve as a starting point for the drug discovery. The use of biotechnology for the selection and engineering of high-level producing plants and for large scale production of interesting active molecules appears as a captivating option for a good management of natural resources.

## **Biography**

Bakari Amuri has obtained his Diploma in Pharmacy at the University of Lubumbashi (2008). Presently his is a Lecturer at the University of Lubumbashi. Recently, he co-published in Science an interesting paper on African Traditional Medicine.

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