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ETHNOBOTANICAL SURVEY OF MEDICINAL PLANTS USED IN PHARMACOPEIA TO TREAT DIABETES IN GABON AND *IN VIVO* ACTIVITIES OF FIVE OF THEM

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Background: Diabetes mellitus is a disease highly associated with lifestyle. In Sub-Saharan Africa, Gabon is the fourth most affected country. As in most developing regions, people commonly use medicinal plants for various diseases including diabetes. The purpose of the present work was to identify the plants used in the Gabonese pharmacopoeia to treat diabetes, and to evaluate the activity of five of them still unexplored.

Methods: An ethnobotanical survey was conducted in three provinces of the country, to identify medicinal recipes used by traditional healers to treat diabetes. The antidiabetic potential of five selected species was evaluated using both the Oral Glucose Tolerance Test (OGTT). Acute toxicity tests were also performed, using albino mice.

Results: Ethnobotanical data revealed that 50 plants commonly used to treat the disease locally in three of the provinces surveyed. Nine of these plants were more cited as a cure for diabetes, with citation rates ranging from 6 to 10%. OGTT results showed that animals pre-treated with extracts had a faster blood glucose recovery than the control group. *Guibourtia tessmanii* and *Milicia excelsa* extracts demonstrated better hypoglycaemic activity (61.67% and 53.06%, respectively). None of the extracts showed significant toxicity.

Conclusions: Additional studies are underway to confirm the efficacy and safety of these plants.

BIOGRAPHY

Pauline Tjeck is a PhD student of Animal Physiology and Pharmacology at the Faculty of Sciences, Sciences Technical University of Masuku, Gabon. She is currently completing a research project in antidiabetic medicinal plants at University of Buea, Cameroon, as an OWSD funded-exchange student. In 2015, she was winner of Gabon-Oregon Seed Grant on antidiabetic medicinal plants. In 2013, at the University of Reunion, France, she has completed a master's degree in Ecology where she gained much experience in the importance of plants as medicines.

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