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Effect of the treatment of *Copaifera duckei* Dwyer oil resin (Copaiba) in diabetic rats induced by Streptozotocin

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Diabetes mellitus (DM) is a syndrome that reaches more than 382 million people worldwide, it interferes with the metabolism of carbohydrates causing chronic hyperglycemia and generating several complications. Faced with this health problem, the objective of this study was to evaluate the effect of the *Copaifera duckei* Dwyer oleoresin (OR) on streptozotocin-induced (STZ) diabetic rats. This study was based on the induction of DM by STZ (55 mg/kg i.p) in Wistar rats and treated with doses of OR (250 and 500 mg/kg, v.o). Subsequently, the clinical, biochemical and histopathological of the pancreas parameters were evaluated. Gas chromatographic analysis indicated that β-bisabolene (22.29%), β-caryophyllene (21.25%) and α-farnesene (15.58%) sesquiterpenes were the major components of the OR. In STZ-induced DM, it was possible to observe that the OR treatment had a significant effect ($p<0.001$) on the clinical parameters (improving positively). Attenuated the urea, creatinine and transaminases (AST and ALT) alterations ($p<0.001$) observed in animals with DM, as well as, significantly reduced ($p<0.001$) values of total cholesterol, triglycerides and glucose. In the histopathological analyses of the pancreas, it was observed that the OR was able to restore β-cells and increase the quantity and diameter of the Langerhans islets significantly ($p<0.05$) when compared to the diabetic group. The treatment with *Copaifera duckei* Dwyer OR Copaiba, employed under the conditions of this study, presented anti-diabetic activity and can improve the complications found in this syndrome. Possibly the agents responsible for the OR effect are the majority sesquiterpenes.

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