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Wild leafy vegetable *Mormodica foetida*, improves metabolic syndrome markers and sperm parameters in diet induced obese male rats

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Metabolic syndrome is a growing problem worldwide and in South Africa. It encompasses obesity and its associated complications including dyslipidemia, hypertension, insulin resistance which predisposes to the development of type-2 diabetes. Food plants are being investigated as nutraceuticals to combat obesity and its complications. *Mormodica foetida* is commonly used in the Eastern Cape of South Africa as a vegetable and condiment in food preparations. Additionally, it is used medicinally for the treatment of hypertension. In the present study, the effects of a hydroethanolic extract of *M. foetida* on metabolic syndrome were investigated in a high-energy diet-fed (HED) rat model at a dose 150 mg/kg body weight. After 12 weeks on HED, rats were treated daily with extract for five weeks. Untreated rats showed fat accumulation, glucose intolerance, increased blood pressure, increased LDL and reduced sperm motility with no change in sperm count. Treatment with *M. foetida* improved all parameters with an increase in sperm count. However, no significant change in serum HDL cholesterol was observed in both untreated and treated rats. These results show potential for *M. foetida* in the treatment of obesity and associated metabolic disorders.

Biography

Constance R Sewani-Rusike completed her PhD studies at Michigan State University (East Lansing, USA) after which she studied Medicine at the University of Zimbabwe. Her primary research interests are in Reproductive biology – investigating the effects of indigenous plant foods and medicinal plants on reproductive function.

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