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Rooibos shows promise in curbing diabetes

On 14 November 2011 – World Diabetes Day – the world will focus on this silent, killer disease that is fast escalating into a global health epidemic. Obesity is directly associated with development of type 2 diabetes.

A group of leading South African researchers are focusing their attention on a unique South African herbal tea – Rooibos – and specifically its anti-diabetic and anti-obesity properties. Dr Johan Louw at the Diabetes Discovery Platform at the Medical Research Council (MRC) and Prof Lizette Joubert at the Agricultural Research Council (ARC) are jointly supervising the research project. They are collaborating with an international biotechnology group – the MC2 Biotek Group.

“In healthy people, their cells take up and use glucose effectively and the process is controlled by the insulin hormone, but in diabetics these processes are impaired,” Louw explains. “We have obtained encouraging results for Rooibos extracts in our pre-clinical studies with diabetic animals, as well as in cell models, showing that compounds in Rooibos can play a role in these processes.”

“We plan to continue with follow-up work to look at Rooibos and obesity in animals and humans.”

A positive outcome of this research in humans could lead to nutraceutical applications of Rooibos extract which could have far-reaching health implications.

This research project is supported by the South African Rooibos Council (SARC), as part of a portfolio of independent research projects to clarify and understand the health properties of Rooibos tea. SARC will invest about R1 million over three years in this specific study.

Notes for editors

- More than 300 million people have diabetes. If no effective intervention is found, this number is likely to more than double by 2030. Almost 80% of diabetes deaths occur in low- and middle-income countries. (Source: World Health Organisation). World Diabetes Day is celebrated on 14 November to mark the birthday of Frederick Banting who, along with Charles Best, was instrumental in the discovery of insulin in 1922, a life-saving treatment for diabetes patients.



- South Africa's focus on the potential of rooibos to manage diabetes builds on research in other countries: Slovak¹ scientists have recommended Rooibos to help prevent and treat diabetic vascular complications, especially in eye membranes. Japanese² scientists found that Rooibos, helps improve the glucose uptake of muscle cells, thereby maintaining normal blood sugar levels in diabetic mice, and also that it stimulates pancreatic beta-cells to secrete insulin.
- Summaries of the most recent rooibos studies published in peer-reviewed scientific journals can be found on www.sarooibos.co.za

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¹ Uličná, O., Vančová, O. Božek, P., Čársky, J., Šebeková, K., Boor, P., Nakano, M., Greksák, M., 2006. Rooibos tea (*Aspalathus linearis*) partially prevents oxidative stress in streptozotocin-induced diabetic rats. *Physiology Research* 55, 157 – 164.

² Kawano, M., Nakamura, H., Hata, S., Minakawa, M., Minura, Y., Yagasaki, K., 2009. Hypoglycemic effect of aspalathin, a rooibos tea component from *Aspalathus linearis*, in type 2 diabetic model db/db mice. *Phytomedicine* 16, 437 – 443.