



## R2m grant to help reveal rooibos's merit

SOUTH African researchers are hoping that a multimillion-rand research grant will bring them one step closer to scientifically showcasing the soothing, healing, disease-prevention and weight-loss properties of rooibos tea.

The SA Rooibos Council has set aside a R2 million budget for rooibos research for the year, which will include, among others, examining the anti-ageing, anti-obesity and cancer-preventing properties of rooibos tea, and the role of rooibos in performance during exercise and post-exercise recovery.

Strides have already been made in presenting scientific evidence that supports the "long-held belief" that a cup of rooibos tea helps one relax and cope better with stress.

A research team from the University of Stellenbosch's biochemistry department, led by Professor Amanda Swart, found that rooibos tea contains components that can help alleviate stress and anxiety.

Rooibos tea works by lowering the production of cortisol – a steroid hormone secreted by the adrenal gland, also known as the stress hormone. Researchers found that by lowering cortisol levels, the effect of the body's response to stress is also lowered.

Swart and her team identified two rare components in rooibos, aspalathin and nothofagin, that contribute to the stress-lowering effect. The findings were published in *The Journal of Steroid Biochemistry and Molecular Biology* late last year.

"Keeping the stress hormone at normal levels in our blood stream is a key part of a healthy lifestyle. Long-term exposure to high levels of cortisol in the blood is linked to diseases such as type 2 diabetes, heart diseases and high blood pressure. We are, therefore, very excited about these findings that rooibos may help alleviate the negative effects of high cortisol levels in the human body," she said.

Professor Wentzel Gelderblom will continue his 10-year research into the cancer-prevention properties of rooibos and honeybush teas. Previous research has found that the antioxidants in rooibos tea have the potential to prevent skin cancer.

In one study examining the effect of herbal tea extracts on UV-induced skin tumours in mice, green or unfermented rooibos reduced the number of tumours per mouse by 75 percent and by 91 percent with fermented rooibos. Both types of tea also shrunk the size of the tumours.

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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. Responding to the diabetes challenge, 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: Slovak scientists have recommended Rooibos to help prevent and treat diabetic vascular complications, especially in eye membranes. Japanese 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](http://www.sarooibos.co.za)

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