# Greengold: Success stories in the economic use of SADC indigenous plants

A Symposium organized by AAMPS with funding from ICART 14-16 September 2009

Farm Inn, Pretoria, South Africa

SECOND CIRCULAR

Please note that due to logistical difficulties in paying Euros to register and then paying the funds back to people who arrive at the symposium as stated in the first circular, no registration fees are required.

The Southern African Development Corporation (SADC) countries contain in the order of 32 000 plant species representing about an eighth of the plant species diversity of the world. This is a very important resource that represents green gold with a potential of delivering valuable economical development to SADC countries if properly used.

To encourage research and development in this field, policy makers and funders have to be convinced of the potential and also of the work involved in getting a product onto the market. Networks between different SADC countries and especially between different role players also have to be strengthened.

The Association for African Medicinal Plant Standards (AAMPS) in collaboration with CRIAA (Centre for Research Information Action in Africa) and ASNAPP (Agribusiness in Sustainable Natural Plant Products) have received European Union funding from ICART (Implementation and Coordination of Agricultural Research and Training) in SADC to hold a symposium that should highlight the success stories in the economic use of SADC indigenous plants. This could focus on any aspect with a commercial potential including medicinal, nutritional, fruit, cosmetic, floral, etc. The whole process from discovery, efficacy evaluation, safety evaluation, patenting, cultivation, manufacturing, clinical trials, registration, marketing, access and benefit sharing could all be addressed. Although there will be some high level scientific presentations of original research data, we would also like to hear stories that are understandable to lay people. For one product such as Amarula liqueur there may be several presentations addressing different aspects.

A number of people will be invited to deliver lectures, but there will be opportunity for many oral and poster presentations over the three days of the meeting. Due to the ICART regulations we will only be able to provide financial support to delegates from SADC and European Union countries. Due to logistical reasons only abstracts submitted before 7 August will be considered for financial support. The focus should also be on plants indigenous to SADC countries. This financial support to a limited number of delegates will include travel and accommodation costs at the symposium venue. The support will be based on the quality and relevance of the abstracts of the presentations to be delivered and wide representation from different SADC countries. Delegates from other countries are more than welcome to attend and to participate fully in the conference at their own cost.

We will pay the registration costs of the symposium including lunch as far as possible but we have to spend the budgeted funds within the terms of reference and we may have to limit the number attending based on financial restrictions.

We plan to hold the Annual General Meeting of the Association for African Medicinal Plant Standards during the symposium as well.

For more information on the venue where accommodation is also available see: http://www.farminn.co.za/

The evaluation of the abstracts submitted and the programme composition will be finalized under the guidance of AAMPS Scientific committee consisting of: Proff. Marian Addy, Dora Akunyili, Eddie Ayensu, Kobus Eloff (Chairman), Ameenah Gurib-Fakim (ex officio), Ben-Erik van Wyk, Arnold Vlietinck.

The local organizing committee will consist of Ameenah Gurib-Fakim, Ben-Erik van Wyk, Kobus Eloff (Chairman) and Tharien de Winnaar (Secretary)

This symposium is supported by several organizations active in this field including CRIAA (Centre for Research Information Action in Africa) and ASNAPP (Agribusiness in Sustainable Natural Plant Products), IPUF (Indigenous Plant Use Forum) SANBI (South African National Biodiversity Institute), Phytotrade, The Phytomedicine Programme at the University of Pretoria, NAPRECA (NATURAL PRODUCT RESEARCH NETWORK FOR EASTERN AND CENTRAL AFRICA), DST (Department of Science and Technology).

Please complete the form on the next page if you are interested in attending.

Please indicate your interest by typing and submitting the following information by e-mail to greengold@up.ac.za as soon as possible to help us plan the meeting:

Title: Initials: Surname: Full names as in passport
E-mail address: Repeat e-mail address
Address:

Country:
Telephone number: Fax number:
Citizenship (country which passport you have): Passport number if not from RSA
Field of expertise:
I would like to present (delete what is not applicable)

- A long lecture 30 minutes (limited number available)
- A short lecture 15 minutes
- A poster
- Nothing, I would only like to attend

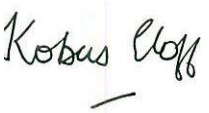
Financial support (delete what is not applicable, only available for SADC or EU citizens selected on the relevance and quality of abstract)

- I will not be able to attend without financial support; estimated travel support required in €
- I will be able to bear my own travel and accommodation costs

Airport from where you will depart and return to:
Title of presentation (Abstracts now have to be submitted –see next page):

Send this completed form to Tharien de Winnaar, my secretary greengold@up.ac.za immediately to help us plan the meeting. Abstracts must be submitted by 10 August if you require financial support or 14 August in order to facilitate allocation of funding and preparing the programme and book of abstracts. Format for the abstract is on the next page.

We would like to welcome you to Pretoria and make or renew contact with colleagues working in the same field.



Kobus Eloff, Chairman Organizing Committee

Please use the following format for your abstract. Body of the abstract must not be more than 300 words. Underline the presenter and contact person among the authors. The deadline for abstract submission is 14 August. If you require financial support the deadline for submission is 7 August.

# The possible interaction between an edible insect and five antibacterial kaempferol methyl ethers isolated from *Dodonaea viscosa* Jacq. var. *angustifolia* (Sapindaceae) leaf extracts)

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*Dodonaea viscosa* Jacq.var. *angustifolia* (Sapindaceae) a medicinal plant use in folk medicine to treat diseases and inflammatory conditions was investigated for its antioxidant and antibacterial properties because it is the sole host plant for the edible stinkbug, *Encosternum delegorguei* Spinola, a traditional delicacy for the Vhavenda tribe of Limpopo Province of South Africa. As insects are known to sequester compounds from their host plants (Harborne, 1993), we were interested to investigate the medicinal properties of *D. viscosa* and determine if the same compounds occur in the insect. *D. viscosa* methanol leaf extracts has antibacterial activity against several bacteria and viruses (Getie et al., 2003). Bioassay guided fractionation of dichloromethane and acetone fractions from serial extraction of *Dodonaea viscosa* Jacq. var. *angustifolia* leaf powder yielded 3, 5, 7-trihydroxy-4'-methoxyflavone (kaempferide) (1); 5, 7, 4'-trihydroxy-3, 6-dimethoxyflavone (2); 5, 7-dihydroxy-3, 6, 4'-trimethoxyflavone (santin) (3); and 5-hydroxy -3, 7, 4'-trimethoxyflavone (4) and kaempferol (5). MIC of isolated compounds against *Staphylococcus aureus*, *Enterococcus faecalis*, *Escherichia coli* and *Pseudomonas aeruginosa* varied from 16 µg/ml to more than 250 µg/ml. Good structure activity relationships could be established. There were no ninhydrin positive compounds present in insect extracts (i.e. peptides frequently responsible for antibacterial activities in many insects probably absent). From bioautography of insect extracts zones of inhibition coinciding with the $R_f$ of some isolated compounds were found indicating that some of the compounds present in *D. viscosa* could be present in the insect.

*Acknowledgements* The NRF provided funding.

References: 1. Harborne, J.B., 1982. The flavonoids: Advances in Research. In: T.J. Mabry (Ed.), Chapman and Hall Ltd. Cambridge, UK.
2. Getie, M., Gebre-Mariam, T., Rietz, R., Höhne, C., Huschka, C., Schmidte, M., Abate, A. and Neubert, R.H.H., 2003. Evaluation of the anti-microbial and anti-inflammatory activities of the medicinal plants *Dodonaea viscosa*, *Rumex nervosus* and *Rumex abyssinicus*. Fitoterapia 74, 139-143