Cancer-slowing compound also combats Malaria, researchers find (Medical Express, Mar 2013)

An extract from a shrub often used for medicinal purposes in tropical Africa may have lethal effects against a dangerous parasite that transmits malaria, according to a multi-institutional team of scientists led by researchers at Virginia Tech...Read more. To view the article click here.

Indigenous knowledge must be harvested for development (University World News, Mar 2013)

There is a rich body of indigenous knowledge embodied in Africa’s cultural and ecological diversities, and African people have drawn on this knowledge for hundreds of years to solve specific developmental and environmental problems...Read more

Help from nature in fighting cancer: compounds based on a fungal chemical show potent anti-tumor activity (Science Daily, Feb 2013)

Inspired by a chemical that fungi secrete to defend their territory, MIT chemists have synthesized and tested several dozen compounds that may hold promise as potential cancer drugs. A few years ago, MIT researchers led by associate professor of chemistry Mohammad Movassaghi became the first to chemically synthesize 11,11'-dideoxyverticillin, a highly complex fungal compound that has shown anti-cancer activity in previous studies...Read more

RECENTLY PUBLISHED BOOK

Understanding medicinal plants: their chemistry and therapeutic action

Understanding Medicinal Plants: Their Chemistry and Therapeutic Action is designed to teach the chemical concepts necessary to understand the actions of medicinal plants to people who are intimidated by chemistry. This beautifully illustrated, accessibly written guide explores the molecules of medicinal plants and the pharmacology behind their actions on the human body. The book will be valuable to non-science majors, biology majors, interested scientists of different disciplines, and practitioners and students of herbalism and complementary medicine.

Interest in alternative medicine and herbal products has never been higher than it is now. Understanding Medicinal Plants aims for the middle ground between technical manuals for highly trained individuals and books for the general public that may oversimplify the material. This introductory work provides you with a wealth of suggested reading materials, tables, figures, and illustrations. Three case studies illustrate specific plant drugs and their molecular constituents. This resource also provides an extensive glossary for easy reference.
Tshidi Moroka’s Story

Following the success of the SMME workshop that took place in October last year, we thought it fitting to introduce the force behind this event, Tshidi Moroka.

Tshidi Moroka is currently the R&D Outcomes Manager in Biosciences at the CSIR where she is the link between research and stakeholders; the stakeholders being local communities, NGO’s, traditional healers, universities, science councils and government officials. Her areas of interest include agro-processing, natural products and biotechnology but her true passion is food and nutrition; looking specifically at technology transfer and how these technologies can be made available to improve livelihoods.

Starting off her career Tshidi completed a Diploma in Pharmacy in Botswana and went on to work as a pharmacy technician for six years. After being awarded a scholarship she was afforded the opportunity to study in the United States where she obtained her Bachelor of Science in Chemistry, Food and Nutrition at the Rutgers University. Subsequently she started her masters in Nutrition and eventually became a researcher in that field. It was while being employed at the CSIR as a researcher in Nutrition that Tshidi moved into management and now holds the position of R&D Outcomes Manager.

Tshidi’s current role is rather broad and includes interfacing with the government, SMME’s, traditional healers, communities, hosting workshops, procuring funding opportunities, finding innovative solutions to address the needs of the stakeholders and many more. What she enjoys most about her work is the ability to interact with members from different institutions and finding solutions to the challenges she is faced with daily.

While hosting the SMME workshop Tshidi and her team were successful in creating linkages between the SMME’s and the implementing agencies such as SEDA, financial support organisations as well as those involved in policy and legislation. Tshidi is hopeful that in the future they will be able to follow up on this workshop and possibly support the entrepreneurs to form an organization that would represent and support all local SMME’s.

SABINA ANNOUNCEMENT

Dear readers,

Since this is my last newsletter I would like to take this opportunity to say goodbye. Many thanks to all who responded so positively to the newsletter and all who made significant contributions over the years. I hope that you will all continue to support the VRE initiative and assist the new facilitator where necessary.

I wish you all success in your future endeavours.

Kind Regards

Natalie
Ethnobotanical study of medicinal plants used for the treatment of malaria in plateau of Allada, Benin (West Africa)


Malaria remains one of the most important illnesses in sub-Saharan Africa. In Benin, it constitutes a major public health preoccupation particularly for children and pregnant women. Until now, population still mostly relies on herbal medicine for malaria healing. Hence this study was carried out to document the medicinal plants used in the plateau of Allada in Benin and to assess local knowledge on traditional medicine in the management of malaria and related symptoms. Data were collected from 53 informants composed of 23 traditional healers and 30 medicinal plants sellers using a structured questionnaire. This study provides plant species used in the plateau of Allada for malaria and related symptoms treatment. We hope that this study could be important for the conservation of traditional knowledge on the antimalarial plants and the improvement of malaria management.

Novel naphthoquinone derivatives: Synthesis and activity against human African trypanosomiasis


A series of naphthoquinone derivatives has been synthesized and tested for its biological activity against human African trypanosomiasis. The use of reverse micellar medium not only enhanced the conversion rate, but also showed selectivity towards mon coupiled product in aryl chloride–aniline coupling reactions. Two derivatives of naphthoquinone (9b and 9c) exhibited potent activity against Trypanosoma brucei in vitro with low cytotoxicity.

Anti-inflammatory and mutagenic evaluation of medicinal plants used by Venda people against venereal and related diseases


Inflammation is a major risk factor for various human diseases including venereal diseases, often resulting in treatment complications. Plants have been traditionally used for treatment of many different diseases and have been successfully proven to be an alternative source in treatment of infectious diseases. This study was aimed at evaluating the anti-inflammatory activities and the mutagenic properties of 12 medicinal plants used by the Venda people against venereal and related diseases. The plants were evaluated for their anti-inflammatory activity against the cyclooxygenase (COX-1 and -2) enzymes and genotoxicity using the Ames test, with and without S9 (metabolic activation) against Salmonella typhimurium tester strain TA98.

In vitro antioxidant and antimicrobial activities of two edible mushroom mycelia obtained in the presence of different nitrogen sources

Vamanu, E 2013, *Journal of Medicinal Food*, 16, 2, pp. 155-166

The antioxidant and antimicrobial properties of two edible mushrooms (Pleurotus ostreatus PBS281009 and Coprinus comatus M8102) were evaluated in this study. The mycelium ethanolic extract obtained in the presence of four different nitrogen sources was investigated with regard to their production of phenolic compounds, β-carotene, lycopene, and their antimicrobial and antioxidant properties. Significant differences in phenol and β-carotene concentrations in mycelia grown in different nitrogen sources were observed. Corn extract proved to be the most appropriate source for increasing bioactive properties, leading to the lowest EC(50) and minimum inhibitory concentration values in the P. ostreatus PBS281009 species, while peptone was the most suitable for the C. comatus M8102 species. The antimicrobial capacity was screened against Gram-positive and Gram-negative bacteria and against two species of Candida. These results indicate that the mycelia from these two edible mushrooms can be used as nutraceuticals and functional products.