



SABINA

Southern African Biochemistry and Informatics for Natural Products



UJ node supports research in natural products

University of Johannesburg, Department of Biochemistry
Auckland Park, South Africa

The Southern African Biochemistry and Informatics for Natural Products (SABINA) is one of five networks of the Regional Initiative in Science Education (RISE). It is funded by the Carnegie Corporation of New York through the Science Initiative Group and the South African Department on Science and Technology (DST). SABINA enjoys collaborative support from eight network partners in the Southern African Development Community (SADC) region, which each house a natural products research node with specialist areas of expertise. These nodes support capacity building, infrastructure development, and postgraduate education and training to develop a network of excellence in natural products for SADC.

• Bioanalytical Laboratory for

Phytochemical Analyses

This laboratory is equipped with instruments for plant metabolite extraction, concentration and analysis. This includes homogenisers, a freeze drier, centrifuges, rotary evaporators, spectrophotometers, thin layer chromatography, gas chromatography, liquid chromatography and mass spectrometry. Some of the equipment in the lab is available for collaborative projects with prior consultation with the node coordinator.

Expertise

- Plant metabolomics
- Natural products
- Secondary metabolism

Research focus areas

- Plant-microbe interactions
- Disease resistance
- Bioactive products

Potential areas for collaboration

- Metabolite profiling
- Metabolite identification

Current projects:

Prof Ian Dubery

- Metabolomics of plant-pathogen interactions to determine metabolites associated with defense and resistance
- Metabolomics of defense priming by plant beneficial bacteria
- Enhancement of bioactive metabolite synthesis in medicinal plants

Dr Edwin Madala

- Pressurised hot water extraction methods
- Metabolite profiling of indigenous medicinal and food plants
- Mass spectrometric identification of bioactive natural products in plants

Equipment and infrastructure



- Rotary evaporator: Heidolph
- Gas chromatography-mass spectrometer (GC-MS)
- UHPLC-3Q mass spectrometer
- PLC-IT-TOF mass spectrometer

The equipment at this node is not limited to the items mentioned above.

Contact information

Prof Ian Dubery
idubery@uj.ac.za

Visit our website for details of all node members.

