



SABINA

Southern African Biochemistry and Informatics for Natural Products



Wits node supports research in natural products

University of the Witwatersrand, School of Chemistry,
Braamfontein, 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.

Organic Research Facility

This facility can accommodate up to 40 postgraduate students. It is equipped with fume hoods, nuclear magnetic resonance (NMR) (300 MHz, 400 MHz, 500 MHz), 4D-mass spectrometer, a benchtop mass spectrometer and all requisite equipment for conducting organic synthesis.

Expertise

- Organic synthesis
- Medicinal chemistry
- Biocatalysis

Research focus areas

- Design and synthesis of compounds with antimalarial activity
- New routes to synthesise aromatic and heteroaromatic systems
- Synthesis of heterocyclic compounds as anticancer and antimalarial agents
- Design and synthesis of novel protease inhibitors and nucleoside and non-nucleoside reverse transcriptase inhibitors (NRTIs and NNRTIs)
- Use of enzymes in organic synthesis (biocatalysis)

Current projects of SABINA fellows at Wits:

- Biologically active hybrid molecules with activity against cancer and parasitic diseases:
Jean Dam (PhD)
- New synthesis routes to natural angucyline antibiotics:
Kennedy Ngwira (PhD)
- The synthesis of anhydrofusarubin lactone and related ferrocene containing compounds:
Jimmy Sumani (PhD)



Equipment and infrastructure

The following equipment was sponsored (in full or in part) by Carnegie (SIG-RISE)

- Expression CMS benchtop mass spectrophotometer

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

Contact information

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Visit our website for details of all node members.

