Introduction

The SABINA network project received a grant of USD24 000 in July 2010, from Carnegie RISE to supplement the **SABINA/POL SABINA TRAINING AND NETWORKING WORKSHOP** that was planned for the end of August 2010. SABINA research activities require an understanding of the fundamentals of Project Management, High-Performance Liquid Chromatography (HPLC) and Bioinformatics. To this end, the ACGT Project Team, in conjunction with the University of Pretoria organised and coordinated a six-day training workshop starting Sunday 29 August 2010. The workshop was jointly funded by POL SABINA & the Carnegie Corporation. It was hosted at the University of Pretoria & Brooklyn Guest Houses in Pretoria. The workshop consisted of three-day parallel workshops on HPLC and Phylogenetics, plus a two-day training course in Project Management and one day spent visiting SABINA partner institutions CSIR and WITS. The week’s programme is attached.

The SABINA/POL SABINA training courses in Project Management, Phylogenetics and HPLC were held from August 29 to September 4 2010 in Pretoria, South Africa. Fifteen students and nine members of staff attended the Project Management Workshop. For the parallel workshops a total of seven staff members and students attended the Phylogenetics training workshop whilst the remainder of the participants attended the HPLC training workshop.

The overall objective of the training workshop was to provide SABINA staff and students with knowledge and an understanding of the main aspects of Project Management, Phylogenetics and HPLC. The students in particular would use the tools and techniques learned in the various courses to better execute their post-graduate research and studies.

**Training Courses**

Parallel three-day training workshops for HPLC and Phylogenetics were held from Monday 31 August 2010 to Wednesday 1 September 2010 at the University of Pretoria. The courses were run by Continuing Education University of Pretoria (CE@UP). The Project Management training course also run by CE@UP was held on Friday and Saturday 3rd & 4th September at Brooklyn Guest Houses in Pretoria.

**High-Performance Liquid Chromatography (HPLC) Training**

Seventeen delegates (4 staff members & 13 students) attended this workshop. The workshop was for beginners and introduced the participants to the theory of chromatography and demonstrated sample analysis of analytical UPLC, HPLC and preparative scale HPLC. The participants applied the theoretical knowledge to obtain good chromatograms on computer simulations of HPLC equipment.

The following are the learning outcomes of the course:

- design, perform and interpret the results of HPLC experiments;
- identify unknowns by retention time and UV/Vis spectrum match;
- obtain standard curves and quantify the unknown/s; and
- evaluate the quality of the results.
**Phylogenetics**

Three staff members and four students attended this workshop.

Phylogenetic trees are the most popular graphs widely used in scientific publications to demonstrate relationships between organisms. Many software tools are available on-line which build phylogenetic trees from the data provided by users, however; many of them do not explain requirements for the datasets, or the limitations associated with the method of choice. This workshop was to teach biological students and staff members how to prepare the initial data for a phylogenetic study and how to choose the most appropriate algorithm of tree calculation.

The learning outcomes are;
- Understanding the basics and principals of selection and preparation of biological materials for phylogenetic studies;
- Be prepared for a knowledge-based choice of the best algorithm and evolutionary model to resolve a given practical task;
- Be able to perform a statistical assessment of resulted phylogenetic trees;
- Be able to prepare informative and professionally looking tree graphs for scientific publications.

**Introduction to Project Management for Post-Graduate Application**

Twenty-four delegates (nine staff members and 15 students) attended this training workshop.

This course is designed to give an introduction to the main aspects of project management with specific reference to post-graduate studies. The tools and techniques learnt in this course will enable participants to complete their research on time, monitor and control research progress and foster good relationships in the research group. The course is suited to both post-graduate students and their supervisors.

The overall object of the course was to enable each participant to improve his/her project development and execution skills and create a thorough awareness of the factors that could influence the outcome of project objectives.

At the end of the programme the participants were able to:
- Identify, design and implement a research project life-cycle,
- Develop a detailed project scope document,
- Estimate resource & time allocation,
- Plan, schedule and optimise project time and resources,
- Identify, analyse and manage risks,
- Compile a Project Master Plan.

**South Africa Node Visits**

On Thursday 2 September 2010 the delegates had an opportunity to visit the South African Partner institutions, namely University of Witwatersrand (WITS) and CSIR. These field visits gave the members of the network an opportunity to network. Not only were they able to learn first-hand about the equipment and facilities available at the partner institutions, but they also got an insight into the research activities carried out by the South African nodes.
University of Witwatersrand (WITS)

At WITS the delegates were given a presentation which covered the following areas;
  • Chemistry at Wits
  • Philosophy of organic synthesis
  • Structure elucidation

After which they toured the laboratories and facilities including protein X-ray crystallography and NMRs.

CSIR

Delegates visited the CSIR’s Drug Discovery and Development Competency Area. The focus of this area is on bio-prospecting, discovery chemistry and aptamer technology. Dr Vinesh Maharaj, whose research focus is on bio-prospecting, hosted the visitors. They gained knowledge around the identification of potential drugs from the rich biodiversity in the country, as well as the use of medicinal plants based on indigenous knowledge. Furthermore, students were introduced to the infrastructure needed to run the programme, which includes facilities for large-scale compound extraction from plants and other living organisms, right through to high-tech analytical equipment used to identify active ingredients.