maintain two proprietary databases: the phiSITE[1] database of gene regulation in bacteriophages, and the phiBIOTICS[2] database of bacteriophage enzybiotics. Other general services cover mailing lists and a bulletin board system.

Education and Training

We supervise regular one-term undergraduate courses in Bioinformatics, Systems Biology and DNA Arrays at Comenius University, Faculty of Natural Sciences. Other irregular courses are also organised, mainly for PhD students and young scientists. In October 2010, we hosted an EBI SLING Bioinformatics Roadshow, with a focus on Structures, Protein Interactions and Mass Spectrometry-based Proteomics.

South African EMBnet node: AGM2011 report

Alan Gilbert Christoffels

South African National Bioinformatics Institute, Cape Town, South Africa

The South African National Bioinformatics Institute (SANBI) is part of the University of the Western Cape[1] situated outside Bellville, near Cape Town. The staff comprises five principal investigators supported by administrative and technical staff. Since 2010, we have seen an increase in graduate student registrations with a total of 18 postgraduate students, representing a range of countries on the African continent including Cameroon (1), Ethiopia (1), Ghana (1), Kenya (4), South Africa (10), Sudan (1).

URL: http://www.nepadst.org/sanbio/

Research

- Analysis and annotation of *Glossina*, the vector for the Tsetse fly;
- molecular epidemiology and dynamics of HIV cohorts in Africa;
- comparison of vector, host and pathogen genomes to deliver unique African knowledge of HIV, malaria, tuberculosis and crops;
- develop and apply understanding of normal and diseased human gene expression to diseases relevant to South Africans.

Funding

Since 2002, SANBI has been a Medical Research Council Unit for bioinformatics capacity development. Recently, we succeeded in a 5-year renewal funding cycle for the Unit. The only bioinformatics research chair in South Africa was awarded to the interim director of SANBI and funds nearly half of the postgraduate research projects.

1   www.phisite.org
2   www.phibiotics.org

1   http://www.uwc.ac.za/

EU Collaborative projects

SANBI faculty and post docs have enjoyed funded collaborations through EC-FP projects and currently we serve on the SYSCO programme[2] together with the Institute Pasteur in Tunis and Paris, and the Max Planck Institute in Berlin.

Facilities

The Institute has adequate scientific computing infrastructure, and is the site for a pair of high performance 32 CPU IBM P-690 servers, an 8 CPU Xserve cluster and 4 intel 8-core ubuntu servers which provide a significant proportion of the research computing infrastructure for bioinformatics in Africa. SANBI scientists have workstations and Internet access, as well as backup facilities and disk storage. During August 2010, we relocated to a new Life Sciences Building offering extensive training facilities, a visiting scientist facility and meeting rooms. SANBI is currently a development site for the Galaxy system and provides a development nexus for annotation systems.

Local Training

As part of the undergraduate training programme at the University of the Western Cape, the SANBI staff organises a six-week block of introductory lectures and practicals in bioinformatics to 3rd year undergraduate students in the biological sciences. During 2010 the number of undergraduate students registered for the bioinformatics module increased from 40 to 66. In December 2010, we initiated our first summer vacation internship programme for students registered in computer science, mathematics and statistics. A total of 14 students participated in a four-week research-based summer programme. Two students decided to continue their graduate studies at SANBI during 2011 and one computer science student opted to work part-time in the institute for one year.

National Training

The South African Department of Science and Technology has funded a two-month national training programme in bioinformatics for six years. As of February 2011, this programme has been hosted in the new training facilities at SANBI. The training programme is targeted at new graduat-ed students in South Africa with an annual intake of 25 participants.

During the past two years, we have hosted a popular two-day ENSEMBL workshop in collaboration with the ENSEMBL training team. In 2011, as in 2010, registrations were restricted to 30 individuals. Owing to demand in the previous years, the workshop has been extended to include a more advanced component that deals with access to the ENSEMBL database using the API instead of the browser. The workshop has been mirrored in Johannesburg as part of our attempts to extend the training across South Africa.

Regional Training on the African continent

Over the past four years the International Glossina Genome Initiative (IGGI) consortium, through SANBI, has provided bioinformatics training to African students. In 2009 we established a Glossina Functional Genomics Network. Underpinning these activities were the mentoring of 3 research fellows through short-term research visits. Three research fellows were identified in 2010 based on their research activity on the Trypanosomiasis and on the institutional commitment to support them after the two-month fellowship programme. Namely, Oliver Manangwa (Tsetse and Trypanosomiasis Research Institute, Tanzania), Paul Mireji (Egerton University, Kenya) and Sarah Mwangi (Kenyan studying at SANBI). These candidates were hosted at a Kenya laboratory for population studies, at the Liverpool School of Tropical Medicine and at the Institute of Tropical Medicine in Antwerp (Belgium), respectively. In collaboration with Erik Bongcam-Rudloff, we are providing eBioKit training courses at the Egerton University in Kenya and at the Trypanosomiasis Research Institute in Tanzania, during April 2011.

2   http://www.sysco.com/about-sysco/diversity-internship-program.html