

Phylogenetic workshops 2010 – 2011

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The Phylogenetic Workshops presented under the auspices of the CTHB focus on the theoretical and applied aspects of the majority of methods used to infer phylogenetic relationships amongst organisms. Within CTHB/TPCP context, understanding phylogenetic relationships is an essential aspect of pest and pathogen identification and management. These workshops were initiated after a realization that most researchers have limited experience in the practical application of evolutionary models and tree building algorithms, as well as the execution of computer software used for the analyses. A major objective for the workshops has been to provide "hands on" experience in the use of databases available on the world-wide-web and the different software, both commercial and freeware, currently available for evolutionary biologists. The workshops cater for researchers ranging from novices to those having advanced background in the field. Dr Martin Coetzee, Senior Lecturer at the University of Pretoria, is the driving force behind the workshops.

Two advanced-level phylogenetic workshops were held in 2010. The first was held 17-21 May and attended by five researchers from the ARC, one from Medunsa and 12 researchers from the CTHB. The second workshop took place from 1- 5 November. This workshop was attended by three researchers from the National Institute for Communicable Diseases (NICD), one from the University of Nairobi (Kenya), one from the University of Buea (Cameroon), one from the Nelson Mandela Metropolitan University, one from the University of Fort Hare, three from UFS, and six from UP, three of whom were from the CTHB/TPCP programme.

Two advanced workshops were planned for 2011. The first workshop was held 16 – 20 May and was attended by researchers from UP and other Institutes in South Africa. The participants included five researchers from FABI, two from the Department of Genetics (UP), one from the Department of Medical Virology (UP), one from the National Institute for Communicable Diseases and one from the Department of Microbiology, Biochemical and Food Biotechnology (University of the Free State). The second workshop will be presented at UP from 14 to 18 November 2011.

In 2010 and 2011, one Introductory workshop was run each year in addition to the advanced phylogenetic workshops. This workshop was presented by Dr Jane Wright, previously a post-doctoral fellow in the CTHB. She was contracted in a joint venture between the CTHB and Inqaba Biotechnical Industries to steer the workshops. The aim of these introductory workshops is to provide a basic understanding of various phylogenetic techniques and to cover the steps required in this process, from checking a sequence to constructing a tree. The instruction format is a mixture of presentations, exercises and discussions. Although Dr Wright has joined a new company in 2011, she remains responsible for assisting Dr Coetzee in running Phylogenetic workshops.

The phylogenetic workshops have been a huge success in the CTHB. They have achieved the aim of providing a platform for students and researchers of the TPCP and CTHB to improve their skills in applying the different phylogenetic models. In addition, the workshops have become extremely popular with other research programmes in UP, as well as those in other parts of the country.