

Pre-ICY2004 Course

## **"Phenotypic and Genotypic Fungal Characterisation and Identification Techniques"**

11-14. August 2004

Fundação Oswaldo Cruz, Av. Brasil, 4365, Rio de Janeiro, Brazil.  
Auditório do Pavilhão Arthur Neiva.

### **Organized by:**

Dr. Marcia dos Santos Lazera (Fundacao Oswaldo Cruz, Rio de Janeiro, Brazil)  
Dr. Wieland Meyer (University of Sydney at Westmead hospital, Sydney, Australia)  
Dr. Vincent Robert (Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands)  
Dr. Aristeia Velegraki (University of Athens, Athens, Greece)

### **Guest speakers:**

Dr. Teun Boekhout (Centraalbureau voor Schimmelcultures, Utrecht, The Netherlands)  
Dr. Bodo Wanke (Fundacao Oswaldo Cruz, Rio de Janeiro, Brazil)  
Prof. M. Andre Lachance (University of western Ontario, London, Canada)???  
(additional invited speakers for specific subjects will be announced)

### **Wednesday 11.8.2004**

- 8.00      Inscriptions/Secretary activities
- 9.00      Opening of the Course / **Self-Introduction of all Participants**
- 9.30      Welcome reception/coffee-break
- 10.00     Marcia Lazera : **"Morphology of fungi in parasitism and cultures. Isolation and identification of fungal strains from clinical specimens"**
- 11.00     Bodo Wanke: **"Isolation of agents of systemic mycoses from the Environment. Our experience with histoplasmosis, coccidioidomycosis and cryptococcosis"**
- 12.00     **Lunch**
- 13.30     Marilia Martins Nishikawa: **"Morphological features and physiological tests used in yeast identification: tube, auxanographic and microplate test"**
- 14.30     Aristeia Velegraki: **"Commercial physiology based identification test: API, MicroLog YT Station BioLog, Vitek 2ID-YST, Micronaut C system Merlin-Diagnostika"**
- 15.00     **Coffee Break**
- 16:00     Vincent Robert: **"Fungal preservation techniques: cryopreservation, lyophilization, oil-, agar -storage"**
- 17.00     Wieland Meyer: **"Molecular biology as a basis for molecular fungal identification"**

18.00 Evening free

#### Thursday, 12.8.2004

- 9.00 Wieland Meyer: **"Specimen collection for molecular ID, DNA extraction, Commercial DNA based ID systems, Gene amplification"**
- 9.45 Wieland Meyer: **"RFLP analysis as tool for species ID, multilocus approaches (RAPD, AFLP, PCR-fingerprinting as tools for species and strain ID"**
- 10.30 Coffee Break
- 11.00 Aristeia Velegraki: **"Antifungal susceptibility testing: Methods for determining MICs for yeasts - Microdilution Methods (NCCLS and AFST-EUCAST) and Etest**
- 12.30 Lunch
- 13.30 Wieland Meyer: **"Phylogeny as basis for a taxonomy based on natural relationships and subsequent molecular ID, amplification of specific genes followed by sequencing for species ID, evaluation of ribosomal DNA and protein gene sequences"**
- 14.30 Aristeia Velegraki: **"The environment as a source of dermatophytic diseases affecting animals of economic importance and man. A case report involving infection in 10,000 farm animals, management and control of the infection spreading in EUcountries"**
- 15.30 Coffee Break
- 16.00 Vincent Robert: **"Algorithmic and organizational changes related to the integration of large volumes of heterogeneous data"**
- 17.00 Aristeia Velegraki: **"The Malassezia challenge - antifungal susceptibility testing and conventional versus molecular ID"**
- 18.00 Evening Free

#### Friday, 13.8.2004

- 9.00 Vincent Robert: **"Issues with sequence data handling and subsequent species identification - how to do a sequence search?"**
- 10.00 Wieland Meyer: **"Real time PCR"**
- 10.30 Coffee-Break
- 11.00 Aristeia Velegraki: **"Real time PCR for the detection of *Candida* species"**
- 12.00 Lunch
- 13.30 Wieland Meyer: **"Critical issues of DNA based fungal identification and future directions (reverse line blots, Macro- and Microarray technology)"**

- 14.30 Vincent Robert: **"Polyphasic yeast online and offline identification, classification and data mining"**
- 15.30 Coffee Break
- 16.00 Wieland Meyer: **"Epidemiological applications of molecular laboratory tools"**
- 20.00 COURSE DINNER

**Saturday, 14.8.2004**

- 9.00 Maria Diaz: **"Luminex based yeast identification"**
- 10.00 Teun Boekhout: **"AFLP analysis for strain typing"**
- 11.00 Coffee Break
- 11.30 Vincent Robert: **"Software solutions and yeast identification systems comparisons"**
- 12.30 Teun Boekhout: **"Food related yeasts"**
- 13.30 Lunch
- 15.00 **Mini quiz:** Aristeia Velegraki, Wieland Meyer, Vincent Robert, Teun Boekhout, Marcia Lazera, Bodo Wanke: **Discussion of the merits of molecular ID based on RFLP analysis of the ITS region, and other ribosomal DNA targets (28S) in the routine clinical lab using a couple of real life diagnostic problems.**
- 16.30 General Discussion and course evaluation
- 17.30 Closing of the workshop