

## **Advanced Course on the Identification of Pathogenic Fungi**

This one-day course will expand on the basic principles used in the identification of pathogenic fungi often isolated in the diagnostic laboratory.

It builds on the contents of the separate Common Pathogenic Fungi and Dermatophyte identification courses with a focus on more complex morphologies and challenging identification. For example, delegates will learn to identify holoblastic fungi, mucoraceous fungi, and structures of common environmental fungi including sexual structures, and how such attributes can be used in the identification of fungi.

### **Who would benefit from this course**

This course is designed for microbiologists at all levels including, but not limited to, biomedical/healthcare scientists and medical microbiologists who are currently working in the laboratory and want to improve or refresh their knowledge and experience of handling and identifying fungi with more complex morphologies and challenging identification. Moderate level of baseline fungal identification and experience is required (e.g. Pathogenic Fungi course).

### **Course Outline**

**Total duration of learning activities 6 hrs:**

**Lecture:** Clinical Pathogenic Fungi; the scope and significance of fungal isolation in the clinical laboratory **(1 hour)**

**Tutorial:** Practical aspects of microscopy and culture of unknown or unrecognised fungi (including discussion of potential isolation of CL3 organisms and appropriate precautionary measures) **(1 hour)**

**Practical:** Identification of holoblastic, mucoraceous and environmental fungi isolated in clinical laboratories. There will be the opportunity to compare morphologies with isolates from previous courses **(4 hours)**.

**Assessment:** At the end of the course, competency will be assessed by examination of a selection of unlabelled example cultures **(30 mins)**.

Delegates will be required to highlight through textual and drawn descriptions, key morphological features from each unknown culture which have led them to their identification. The ability to handle, prepare, and examine microscopic preparations will be observed and provided commentary on their approach to each specimen will be assessed. A particular focus will be placed on the approach delegates would take when provided with details to determine the significance of isolates, and any additional work that may be required.

To achieve the certificate of competency for the advanced identification of pathogenic fungi 80% accuracy, with appropriate reasoning, will be required.

### **Learning Objectives for the course**

- To facilitate delegates with the skills to handle and approach the identification of potentially pathogenic fungi.
- To demonstrate the different methods for the preparation of microscopic mounts, the benefits/disadvantages to different approaches.
- To recognise the key morphological features seen in holoblastic fungi, mucoraceous fungi and some frequent environmental fungi often isolated in the diagnostic laboratory.
- Delegates will be able to recognise mucoraceous fungal growth and key features, understand the appearance of yeast-like fungi such as *Exophiala* spp. and differentiate between enteroblastic and holoblastic conidiogenesis.
- Delegates will be able to provide reasonable indication of the likelihood of significance of isolation of fungal species from different sample types and patient groups.

**CPD Credits available: 6**