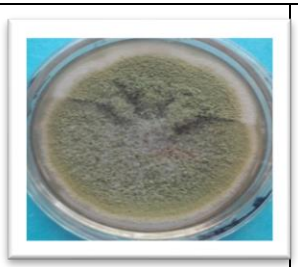
Aim

The goal of the workshop is to demonstrate and teach traditional methods and new molecular, chemical and immunological systems for rapid, robust and user-friendly identification of mycotoxins and toxigenic fungi in the food chain. Much of the course will be spent on practical training in the laboratory.

Topics

- ***Lectures***:
  - Overviews of major methods for mycotoxins/toxigenic fungi detection.
  - Extraction techniques and sample preparation protocols
- ***Laboratory:***
  - morphological identification of major toxigenic species of *Aspergillus*, *Penicillium* and *Fusarium*;
  - molecular techniques for identification and quantification of toxigenic fungi.
  - chemical/immunochemical analysis of major mycotoxins (aflatoxins, ochratoxin A, fumonisins);



MYCOTOXIN WORKSHOP

(HEC NRPU PROJECT NO. 16850)

"Detection techniques for mycotoxins and toxigenic fungi in food & feed"

(For Post-graduate students only)

December 06-07, 2023

UVAS
UNIVERSITY OF VETERINARY AND ANIMAL SCIENCES LAHORE

Organized by:
Quality Operations Laboratory
University of Veterinary and Animal Sciences
Lahore-Pakistan
www.uvas.edu.pk

Introduction

Contamination of foodstuffs with mycotoxins is one of the most concerning problems in food and feed safety. In most developing countries, agriculture is the backbone of the economy and export crops are greatly depended upon as a source of foreign exchange to finance productive activities and other essential services. Most of these crops are cereals and oil seeds that are highly susceptible to fungal growth and mycotoxin production. The mycotoxins are not only hazardous to consumer health but also affect food quality resulting in huge economic losses for these countries.

Cultivation and storage of food and animal feed may contribute to the spread of moulds, which produce mycotoxins-toxic secondary metabolites. Their consumption can lead to serious health damage in both humans and animals.

Objectives

- Provide an overview of mycotoxins and toxigenic fungi, their importance, and their implications for food and feed safety.
- Train students on the latest techniques and methodologies for detecting mycotoxins and toxigenic fungi in various food and feed matrices.
- Offer hands-on laboratory sessions, where students can practice using specific detection instruments and techniques, such as CHARM-EZ, ELISA, PCR and HPLC.

Program

Wednesday 06th December, 2023

Inaugural session

08:00 Registration

09:00 Recitation of Holy Quran

09:10 Welcome – Introduction Workshop Program

09:20 Refreshment

Technical Session-I

10:00 Worldwide Mycotoxin regulatory standards in food & feed
(Prof. Dr. Masood Rabbani)

11:00 Mycotoxins and Mycotoxicosis
(Prof. Dr. Aftab Ahmad Anjum)

12:00 Various methodologies for mycotoxin analysis in food products
(Dr. Mateen Abbas)

01:00 Lunch and Prayer break

Technical Session-II
(Hands-on Training)

02:00 Isolation and Identification of fungi
(Miss. Tehreem Ali/Miss. Faiza)

02:45 Molecular detection of fungi by PCR
(Miss. Ayesha/Miss. Tehreem Ali)

03:30 HPLC Analysis: Extraction and Sample preparation (Ms. Nabila Bashir/Mr. Samee Ullah)

Thursday 07th December, 2023

Technical Session-I

09:00 Probiotics as novel mycotoxin binder
(Prof. Dr. Muhammad Nawaz)

10:00 Molecular detection of toxigenic fungi
(Dr. Muhammad Asad Ali)

(Hands-on Training)

11:00 Quantification of mycotoxins by ELISA
(Miss. Attia/Miss. Areeza)

01:15 Lunch and Prayer break

02:15 Quantitative estimation of mycotoxins by HPLC (Dr. Abdul Muqeet Khan)

Concluding Ceremony

03:30 Certificate Distribution Ceremony

Patron

- **Prof. Dr. Nasim Ahmad, *SI***
  Vice Chancellor,
  UVAS, Lahore

Chief Organizer

- **Prof. Dr. Aftab Ahmad Anjum**
  Director,
  Institute of Microbiology,
  UVAS, Lahore

Organizers

- **Prof. Dr. Muhammad Nawaz**
- **Dr. Mateen Abbas (Workshop Secretary)**
  Coordinator, QOL
  Cell No. 0333-6546752
  E-mail: mateen.abbas@uvas.edu.pk
- **Dr. Muhammad Asad Ali**
- **Miss. Tehreem Ali**

Venue

Quality Operations Laboratory (QOL)

University of Veterinary and Animal Sciences, Lahore

Registration

Registration Link:
https://docs.google.com/forms/d/e/1FAIpQLSccWecC8wTXZ3zetTHRsIN_8ntZrsYK9GpKYcer3GxInsCteA/viewform?usp=pp_url

Seats are limited (25 only); selected candidates will be contacted via email.