

### PATRON-IN-CHIEF

Dr. Raja Ali Raza Anwar, *HI, SI, PoP*  
Chairman, PAEC

### PATRON

Dr. Shakeel Abbas Rofi, *SI*  
Member (Science), PAEC  
Prof.Dr. M. Yussouf Saleem, *CS/DG (A&B), PAEC*

### ADVISORY COMMITTEE

Dr. Uzma Maqbool, *DCS/ Director, NIAB*  
Dr. Rehana Kausar, *PS/Acting Head, ASD*

### ORGANIZING COMMITTEE

Ms. Shumaila Yousaf, *SS, NIAB*  
(Course Organizer)  
Dr. Hafiz Noubahar Hussain, *PS, NIAB*  
(Course co-organizer)  
Dr. Salah-uddin Shah, *PS, NIAB*  
Dr. Muhammad Usman Mazhar, *SS, NIAB*  
Abdul Shakoor, *RO, ASD, NIAB*

### RESOURCE PERSONS

Ms. Shumaila Yousaf, Senior Scientist, NIAB  
Dr. Hafiz Noubahar Hussain, Principal Scientist, NIAB  
Dr. Salah-uddin Shah, Principal Scientist, NIAB  
Dr. Imran Amin, DCS, NIBGE, Faisalabad  
Dr. Shakira, Ghazanfar, NIGAB, Islamabad  
Muhammad Usman Mazhar, *SS, ASD, NIAB*  
Dr. Syed Wajih-ul-Hassan, PS, NIAB  
Abdul Shakoor, *RO, ASD, NIAB*  
Haider Ali, *SA-II, ASD, NIAB*

### CONTACT INFORMATION

Ms. Shumaila Yousaf, Senior Scientist  
**Nuclear Institute for Agriculture and Biology**  
(NIAB), P. O. Box No. 128, Jhang Road,  
Faisalabad, PAKISTAN.  
Tel:(041)9201751– 60 (Ext: 3064, 3063)  
Cell: (0321-7669647) (0345-2261745)  
<http://www.niab.org.pk>

## APPLICATION

Name :.....

Father's Name:.....

CNIC No.

Official Position: .....

Uni./Organization: .....

Address: .....

Phone(off):..... Cell: .....

Fax: ..... Email: .....

Date of Birth: .....

Academic qualification:

Degree	Institution	Subject	Year
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M.Sc.

M.Phil.

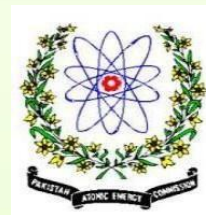
Ph.D.

Signature of Applicant.....

Recommendation by  
Head of Dept/institute. ....

NIAB, P. O. Box 128, Jhang Road, Faisalabad,  
Pakistan.

Web:<http://www.niab.org.pk>



### Workshop

on

**“Use of Mutations for Microbial Strain  
Improvement related to Probiotics and**

**Metabolites in Poultry” under**

**NIAB-IAEA-CC**

**activity # 1.3.17**

*(September 23-25, 2025)*



*Organized  
by*

**NUCLEAR INSTITUTE FOR  
AGRICULTURE AND BIOLOGY  
(NIAB)**

## INTRODUCTION

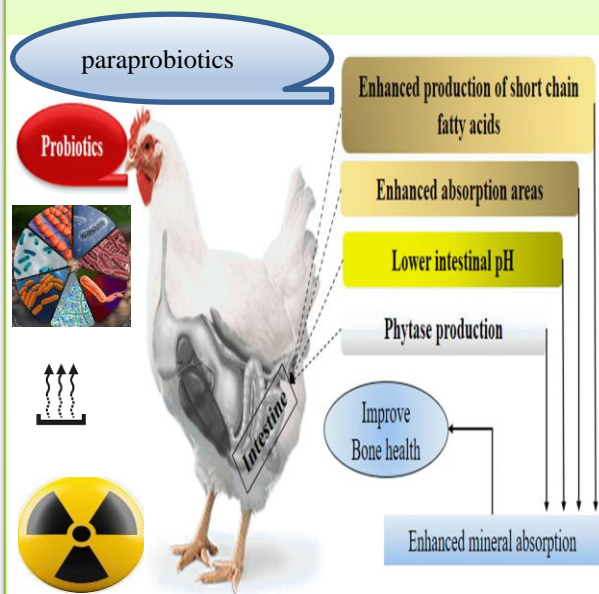
The Nuclear Institute for Agriculture and Biology (NIAB), part of the Pakistan Atomic Energy Commission (PAEC), is a research Institute involved in goal oriented biological and agricultural research using nuclear and other advanced techniques. In collaboration with the International Atomic Energy Agency (IAEA), NIAB is offering an upcoming training course on “Use of Mutation for Microbial Strain Improvement related to Probiotics and Metabolites in Poultry”. This training course includes both theoretical and practical components providing participants with essential knowledge and hands-on skills on the use of radiations for microbial strain improvement, screening of efficient probiotic strains and Artificial Intelligence/Machine Learning driven probiotic selection. In the current scenario of serious AMR crises, and consumer's pressure to reduce the use of antibiotic growth promoters (AGPs), there is a dire need to find the sustainable alternatives of AGPs. Dietary use of Probiotics/Para-probiotics is emerging as a sustainable potential alternative to AGPs. Integrating these approaches into poultry farming can play a pivotal role in mitigating AMR at the national level, supporting both animal productivity and public health within a One Health framework. The researchers involved in Microbiological, Biotechnological and Veterinary Sciences can participate and learn these techniques to support their research, enhance their skills and practical insight at their own work.

## SELECTION

Only the selected applicants will be allowed to attend the training. Selection will be conveyed through email or post.

### COURSE DESCRIPTION

- ❖ Introduction to mutation methods and their applications in microbial strain improvement
- ❖ Overview of advanced techniques for para-probiotic development and screening for field application
- ❖ Artificial Intelligence/Machine Learning driven probiotic selection.
- ❖ Biosafety & Radiation safety measures essential for handling microbial cultures



## SCHEDULE

### TIME AND VANUE

23 – 25 September, 2025

Animal Sciences Division, NIAB, Faisalabad

### RECIEPT AND APPLICATION

A duly filled application form, along with copy of CNIC and a passport-size photograph, must reach the organizer by **17 September, 2025**. Application forms can be downloaded from NIAB website ([www.niab.org.pk](http://www.niab.org.pk)). An advance copy of application may also be sent via email to

[syalvi@niab.org.pk](mailto:syalvi@niab.org.pk) or [usmandvm@gmail.com](mailto:usmandvm@gmail.com)

### REGISTRATION FEE

Officials/ Faculty/Researchers: Rs. 5000/-  
Students: Rs. 3000/-

Candidates are advised to deposit registration fee, after selection through a bank draft in favour of Head LAO, NIAB,

Faisalabad.

### AWARD OF CERTIFICATE

Certificates will be awarded to the participants on completion of the course in the concluding ceremony.

### TRAVEL AND ACCOMMODATION

The nominating Institution or participants themselves shall bear the cost of travel and stay at Faisalabad. Transport to and from the venue of the course may be provided for fixed points in the city of Faisalabad, if required.