

PATRON-IN-CHIEF

Dr. Raja Ali Raza Anwar, Chairman, PAEC, HI., Pride of performance

PATRON

Dr. Masood Iqbal, Chief Scientist, Member (Science), PAEC

Dr. Muhammad Yussouf Saleem, CS, DG (A&B), PAEC

ORGANIZING COMMITTEE

Dr. Uzma Maqbool, (DCS), Director, NIAB, Faisalabad

Dr. M. Kashif Riaz Khan, (DCS/ Head PBG Div. NIAB)

Dr. Muhammad Rashid (DCS/ Rice GL, NIAB, Organizer)

Dr. Hafiz M. Imran Arshad (PS, NIAB, Co-Organizer)

Dr. Zia-ul-Qamar, DCS (Rice Group)

Dr. Adeel Khan, JS (Rice Group)

Ms. Benish Iltaf, JS (Rice Group)

RESOURCE PERSONS

Dr. Uzma Maqbool, (DCS), Director, NIAB, Faisalabad

Dr. M. Kashif Riaz Khan, (DCS/ Head PBG Div. NIAB)

Dr. M. Ahtar, (DCS/Head SESD Div. NIAB)

Dr. Sajid Nadeem, (DCS/Head ASD Div. NIAB)

Dr. Muhammad Rashid (DCS/ PBG Div. NIAB)

Dr. Hafiz Muhammad Imran Arshad (PS, NIAB)

Dr. Muhammad Saleem (PS, SESD, NIAB)

FOR FURTHER INFORMATION

Dr. Muhammad Rashid

Deputy Chief Scientist/Fellowship Organizer Rice Group,

Plant Breeding and Genetics Division

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



APPLICATION FORM

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.

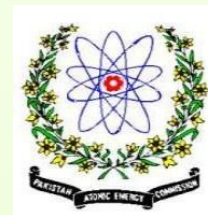
Signature of Applicant.....

Recommendation by
Head of Institution/Dept.

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**Fellowship on Integrated Use of
Mutation Breeding and Pathology
for Development of Biotic and
Abiotic Stress Resistance in Rice
under NIAB-IAEA-CC activity # 1.3.2**

(15th September to 3rd October, 2025)



Organized
by

**NUCLEAR INSTITUTE FOR
AGRICULTURE AND BIOLOGY (NIAB)
Faisalabad, Pakistan**

(PAKISTAN ATOMIC ENERGY COMMISSION)

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

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

Fellowship Description

The fellowship on the Integrated Use of Mutation Breeding and Pathology for the Development of Biotic and Abiotic Stress Resistance in Rice aims to strengthen capacity in combining advanced mutation breeding techniques with plant pathology and physiology tools to address current and emerging challenges in rice production. Rice, being a staple for billions, faces significant yield and quality losses due to biotic stresses such as bacterial leaf blight, blast, and sheath blight, as well as abiotic constraints including heat, drought, salinity, and water scarcity. This fellowship will provide hands-on training in induced mutation, molecular characterization, and pathogen diagnostics, enabling the development of resilient rice genotypes. By integrating nuclear techniques with disease screening and resistance evaluation, the fellowship will foster innovation in varietal improvement, contribute to food security, and support climate-smart agriculture in line with global sustainable development goals (SDGs).

Fellowship Benefits

The fellowship will benefit students, researchers, rice pathologists, and breeders by enhancing their knowledge and skills for improving rice crops against biotic and abiotic stresses in the context of a changing climate.

Eligibility

Young early career researchers, breeders plant pathologists, agronomists, graduate and postgraduate students.

Topic coverage

- Overview of Global Rice Production Challenges
- Principles and Applications of Mutation Breeding Techniques
- Mutation Breeding Workflow
- Target Trait Identification
- Major Rice Diseases
- Abiotic Stress Physiology in Rice
- Pathogen Isolation, Culture, and Identification
- Molecular Diagnostics in Plant Pathology
- Screening and Evaluation for Disease Resistance
- Abiotic Stress Screening through biochemical markers
- Molecular Marker-Assisted Selection (MAS)
- Bioinformatics for biotic & abiotic stresses
- Data Analysis and Experimental Design
- Case Studies of Success Stories

Labs Visit

- Rice Lab PBGD
- Marker Assisted Breeding (MAB) Group Lab, PBGD
- Molecular Pathology Group Lab., PPD
- Stress Physiology, SESD

SCHEDULE

Date and venue:

September 15, 2025

Rice Group, PBG Division, NIAB, Jhang Road, Faisalabad, Pakistan

How to apply:

Duly filled Application form along with copy of CNIC and two passport size photographs must reach the organizer by **September 12, 2025**

Application form can be downloaded from NIAB website (www.niab.org.pk).

Soft copy of application can be send to email: mrashid_niab@yahoo.com

Fellowship Fee: Rs.5000/-

Fee will be collected at the time of participation

Award of certificates: Certificates will be awarded to all participants who would successfully complete the fellowship.

Travel accommodation & Lunch :

Travel, accommodation, and lunch costs will be the responsibility of the candidates.