

## Significance

Modern molecular techniques are vital for insect pest management in ensuring global food security. Excessive and indiscriminate use of chemical pesticides has led to developing pesticide-resistant insect pest populations, threatening crop yields and food safety. The modern era of scientific advancements approaches to study and implement molecular technologies for safe and healthy crops and environment.

Biotechnology modernized various fields including agriculture. The workshop theme encompasses the use of biotechnology genomics and molecular technology to develop solutions for managing insect pests, reducing reliance on chemical pesticides and promoting eco-friendly agriculture practices. We welcome all participants, who will have the valuable opportunity to experience and gain immersive learning on different comprehensive explorations of Genetic Engineering, DNA Barcoding, Sequencing, PCR, RNA Interference (RNAi), Gene Editing, Genome Editing, CRISPER-Cas9, Molecular Markers and Synthetic or Organic Biology through lectures to leverage the power of biotechnology for consistent pest management.

## Biotechnologies and Green Stewardship:

## Essential Partners for Reliable Insect Pest Management



### Organizing Committee

Dr. Nasir A. Saeed, Director NIBGE  
Dr. Muhammad Arif, Head ABD  
Dr. Muzammil Sattar, Organizer

### CONTACT

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Faculty Registration Fee: 2000/-

Student Registration Fee: 1000/-

NBP AARI Bank ACC No. 3247734839

Entitled: "Modern Techniques in Biotech"

Branch Code No. 0560

IBAN: PK25NBPA0560003247734839

Online Registration Link :

<https://forms.gle/JRn4Nd8A9XHZl6gb9>

**National Institute for Biotechnology &  
Genetic Engineering (NIBGE), Faisalabad  
Pakistan**

# Speakers

Dr. Nasir A. Saeed,  
Chief Scientist,  
Director NIBGE



Dr. Muzammil Sattar ( NIBGE)  
Molecular Mechanisms:  
Innovative Biotechnological  
pathways for future directions



Dr. WenHui Zhu (China)  
Mitogenomics provide insights  
into the Tribe-level systematic  
and historical phylogeography  
of band-winged grsshoppers



Dr. Nasser Al Abri (Oman)  
Sterile strategy:  
Mutations for controlling  
insect pests



Prof. Dr. Jam Nazeer Ahmad (UAF)  
RNA Interference strategies for  
managing insecticides resistance  
and pests: Targeting Detoxification  
Enzymes in major pests.

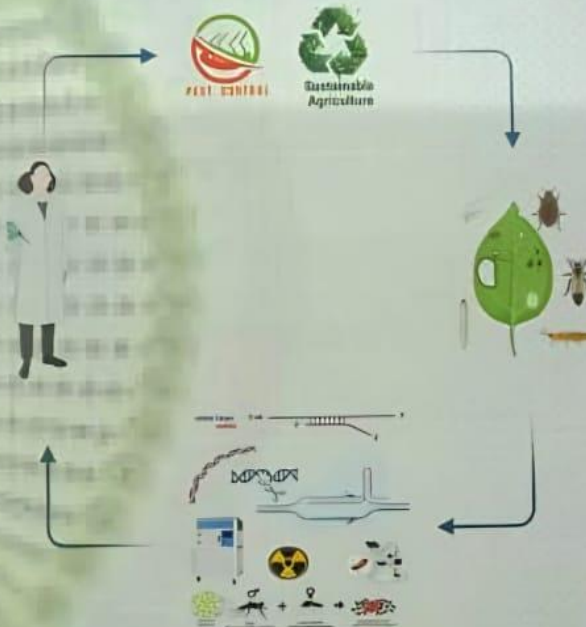


Dr. Muhammad Asif (NIBGE)  
From Bt to Genome Editing :  
Multi\_Mechanistic Strategies  
for Insect Resistance\_Applied  
Research at NIBGE.



## Objectives

- Use of environment friendly technologies
- Address challenging issues with Biotechnology
- Enlighten the advancement in Insect Molecular Biology



## Key Theme

- Biotechnology and omics
- Recent advances and future directions
- Current trends and applications



## 2nd One-Day International Workshop

on

## Molecular Approaches for Sustainable Insect Pest Management

11th June, 2026

at

National Institute for  
Biotechnology & Genetic  
Engineering (NIBGE)  
Faisalabad, Pakistan