



Dr Farah Naz

Nationality: Pakistani **Date of birth:** 27/02/1980 **Place of birth:**

Faisalabad, Pakistan **Gender:** Female **Phone:** 🏠 (+92) 331424084

(Home) ✉ **Email address:** farah.naz@cemb.edu.pk 🧑 **Research Gate :**

[Farah Naz](#) 🧑 **Google Scholar:** [Farah Naz](#) 📍 **Address:** Center of

Excellence in Molecular Biology (CEMB), Lahore, Lahore, Pakistan (Work)

EDUCATION & TRAINING

PhD in Molecular Biology

University of the Punjab Lahore CEMB

City: Lahore | **Country:** Pakistan

Thesis title: "EXPRESSION STUDIES OF CRY51 AND TMA12 GENES IN GOSSYPIUM HIRSUTUM L. AGAINST THRIPS AND WHITEFLY"

Master of Philosophy in Biochemistry

University of Agriculture Faisalabad

City: Faisalabad | **Country:** Pakistan

Master of Philosophy in Biochemistry experts in plant and bacterial protein identification and characterization

Master In Biochemistry

University of Agriculture Faisalabad

City: Faisalabad | **Country:** Pakistan

Research work on: "Characterization Of Medicinal Plant Extract Against Different Bacterial Strains"

Bsc

University of The Punjab Lahore

City: Lahore | **Country:** Pakistan

WORK EXPERIENCE

Nuclear Institute of Agriculture and Biotechnology (NIAB) - Pakistan, Faisalabad
Research Associate

[01/01/2004 - 04/05/2008]

·**IAEA Crop Development Project:** Worked on IAEA joint project for rice and wheat to develop novel crop varieties under Principal Investigator Dr. Shafqat Farooq (Director Tech V at PAEC).

·**Proteomic Profiling:** Performed comprehensive protein analysis at all developmental stages of wheat and rice.

·**Scientific Documentation:** Authored three comprehensive scientific research documents and reports.

Center of Excellence in Molecular Biology - Pakistan, Lahore

Research Officers (BPS-17)

[03/04/2008 - 31/12/2009]

Research Officers (BPS-17) in development Project

GC University, Lahore - Pakistan, Lahore

Visiting Teaching Faculty

[09/06/2012 - 08/11/2012]

·**Forensic Instruction:** Conducted practical laboratory classes for MS Forensics students.

·**DNA Isolation Techniques:** Trained students and university staff in DNA isolation from forensic blood samples.

Center of Excellence in Molecular Biology - Pakistan, lahore

Research Officer cum Lecturer

[01/01/2010 - 11/06/2025]

Research Officer cum Lecturer in the Center

·**Transgenic Cotton Research:** Working on controlling Thrips and Whitefly attacks on Pakistani cotton varieties using molecular and biotechnological approaches.

·**Pheromonal Insect Control:** Conducted theoretical and experimental work on synthesized genes for pheromonal control of pink bollworm in cotton varieties.

·**Corn Protein Characterization (2017–Present):** Worked on BT-resistant corn heat shock protein gene characterization.

·**Pathogenic Bacteria & Resistance (2015–2017):** Collaborated with Lahore General Hospital on community-acquired infections caused by pathogenic bacteria; sequenced resistant and structural genes in *Staphylococcus aureus* to track resistance mechanisms in the Virology Lab.

·**Instruction & Mentorship (2008–2020):** Trained newly enrolled MPhil and PhD students in molecular techniques across Virology, Genetic Diseases, and Molecular Medicine laboratories.

·**Lab Administration (2012):** Served as DNA Extraction Lab Incharge for the Deafness Research Group.

·**Antimicrobial Research (2008–2014):** Characterized novel triple-acting chimeric domain antimicrobials and tested their efficacy against known Pakistani mastitis pathogens.

Center of Excellence in Molecular Biology - Pakistan, Lahore

Assistanat Professor

[12/06/2026 - Current]

MPhil and PhD classes of different enrolled courses since 2024- to date

TEACHING EXPERIENCE

[03/03/2025 - 09/08/2025]

CEMB502: Cell Biology

Teach Cell Biology Mphil Level Students

[08/09/2025 - 10/01/2026]

CEMB501: Molecular Biology

Mphil level Students

[19/01/2026 - 22/05/2026]

CEMB502: Cell Biology

Mphil level Students

[04/09/2026 - Current]

CEMB512: Review Article / Research Proposal / Assignments

Taught Review Article writing to Mphil Students

RESEARCH EXPERIENCE

Conducted sequencing and analysis of antibiotic resistance and structural genes in *Staphylococcus aureus* to identify molecular mechanisms underlying antimicrobial resistance in community-acquired infections.

2008-2012

Collaborated with Lahore General Hospital on research related to community-acquired infections caused by pathogenic bacteria

2012-2016

Investigated the anti-HCV potential of Phatkarrii (traditional herbal formulation) using HCV genotype 3a replicon-bearing Huh-7 cells. Quantified viral inhibition by qRT-PCR (HCV RNA load), Western blot (NS5A protein), and MTT assay (cell viability). Demonstrated dose-dependent suppression of HCV replication with minimal cytotoxicity, suggesting hepatoprotective and antiviral properties of the extract.

2014-2015

Trained newly enrolled MPhil and PhD students in advanced molecular biology techniques across the Virology Laboratory, Genetic Disease Laboratory, and Molecular Medicine Laboratory at CEMB.

2008-2017

Provided hands-on guidance to enhance technical proficiency, experimental accuracy, and research skills.

2008-2012

SUPERVISED THESIS TITLE

RNAi-Mediated silencing of Arginine Kinase and JHBP in Pectinophora Gossypiella
Development of Nanoparticle-Based dsRNA for the Control of Whitefly and Thrips

COMMERCIAL SERVICES

NCVT testing

Testing of cotton varieties included in the National Coordinated Varietal Trials (NCVT) conducted under the auspices of the Pakistan Central Cotton Committee (PCCC) and facilitation in DUS (Distinctness, Uniformity and Stability) test by FSC&RD.

Fingerprinting

Performing DNA fingerprinting and molecular characterization of cotton, maize, and rice varieties using appropriate molecular marker-based techniques.

GMO Detection

Testing of transgenic cotton varieties developed by both the public and private sectors, containing cry1Ac, cry2A, and GTG genes, through PCR amplification, Dipstick assays, and ELISA-based detection.

SKILLS

Molecular Biology

RNA/DNA isolation, cDNA synthesis, PCR/RT-PCR/qPCR/dPCR, | RCA, cloning, Gibson/Golden Gate assembly, gene overexpression

Genome Editing

CRISPR-Cas9/Cas12a | RNAi (dsRNA/siRNA/shRNA) | prime editing | HDR/NHEJ, sgRNA design, off-target analysis | base editing

Cell Culture

Primary culture, Agrobacterium-mediated transformation, protoplast transfection, electroporation

Protein Work

Western blotting | Heterologous expression (E. coli, Pichia,) | affinity/SEC purification | SDS-PAGE

Advanced

RNA-Seq, WGS, scRNA-Seq | FACS | confocal microscopy | ChIP-Seq | CRISPR screening

Bioinformatics

NGS pipeline | Python/R data analysis | CRISPR | DESeq2

CERTIFICATIONS

[CEMB, University of the Punjab, Lahore, 29/12/2015]

International Symposium on Advances in Molecular Biology of Plants and Health Sciences Letter of Appreciation International Symposium on Advances in Molecular Biology of Plants and Health Sciences

[Department of Microbiology, Abbottabad University of Science & Technology, 20/12/2016]

Recent Trends in Molecular Biology Certificate of Poster Presentation Recent Trends in Molecular Biology

[CEMB, University of the Punjab, Lahore, 21/11/2017]

International Symposium on Advances in Molecular Biology of Plants and Health Sciences Letter of Appreciation: International Symposium on Advances in Molecular Biology of Plants and Health Sciences

[CEMB, University of the Punjab , 17/11/2022]

International Health Symposium Certificate of Participation

[Directorate of international linkages, GC University, Faisalabad, 02/05/2023]

Biobased Materials from Renewable resources Certificate of Participation

[CEMB, University of the Punjab , 23/01/2023]

Awareness Seminar on GM Soybean and potential of Soybean cultivation in Pakistan Certificate of Participation

[Department of Plant Pathology, FAS, University of The Punjab , 02/11/2023]

Training Workshop on Smart Agriculture Transformations Certificate of Participation

[University of the Punjab , 16/08/2023]

Development of Miraculous Cotton Varieties Certificate of Appreciation for marvelous contribution in development of miraculous cotton varieties for betterment of farming community in Pakistan

[ORIC, University of the Punjab , 18/12/2024]

Hands on Training on patent Claims drafting certificate of Participation, one day workshop

[ASPB, 13/02/2025]

Plant Physiology focus Issue Webinar: Plant Lipids: Signaling and metabolism Certificate of Attendance

[Lahore College for Women]

1st international conference on Sustainable development Goals Certificate of Appreciation for oral Presentation

[CEMB, University of the Punjab, Lahore]

Internatinal Symposium on Advances in Molecular Biology of Plants and Health Sciences Certificate of Appreciation for outstanding dedication and service as an organizer in 4th international Symposium

CONFERENCES & SEMINARS

[07/10/2005] University of Karachi, Pakistan

8th International Symposium Protein Structure Function Relationship Participant, International Centre for Chemical Sciences (H.E.J Research Institute of Chemistry)

[20/11/2005 - 23/11/2005] Lahore, Pakistan

Genomics and Proteomics in Health and Agriculture Participant, 18th FAOBMB Symposium (Abstract Published)

[07/03/2018 - 08/03/2018] ORIC University of The Punjab, Lahore

7th Invention to innovation Summit Participant, Innovation Summit 2018 to buy and sell Technology

[19/12/2018 - 21/12/2018] CEMB, Lahore

Advances in Molecular Biology of Plants and Health Sciences Organizer, 3rd International Symposium on Advances in Molecular Biology of Plants and Health Sciences, December 2018

[07/01/2012]

Young Researchers Skill Development Workshop & NAYS Emerging Ideas Conference Participant, Young Researchers Skill Development Workshop & NAYS Emerging Ideas Conference,

[20/12/2016 - 21/12/2016] University of The Punjab Lahore

1st National Conference on Recent Trends in Microbiology Participant, 1st National Conference on Recent Trends in Microbiology

[20/03/2019 - 20/03/2019] University of The Punjab Lahore

Web of Science Conference Attended Web of Science Conference, March 2019

[10/04/2019 - 10/04/2019] University of The Punjab Lahore

8th Invention to Innovation Summit Attended 8th Invention to Innovation Summit, April 2019 University of the Punjab

[03/10/2019] CEMB, University of The Punjab, Lahore

Brain, Neurogenetics and Regenerative Medicine Participant, Scientific symposium on Brain, Neurogenetics and Regenerative Medicine organized at CEMB

[06/11/2019 - 08/11/2019] University of the Punjab, Lahore

Recent Innovations in Molecular Sciences Participant, International Conference on Recent innovation in molecular sciences

[15/11/2019] CEMB, University of The Punjab, Lahore

Stem Cells and Regenerative Medicine Participant, International Symposium on Stem Cells

and Regenerative Medicine

[15/12/2020 - 15/12/2020] CEMB, University of the Punjab, Lahore

Development of CKC Technology Participant, One day international Symposium

[14/12/2022 - 15/12/2022] CEMB, University of the Punjab, Lahore

International Conference on Plant Molecular Biology (ICPMB) Participant, As a Member Organizing Committee

[22/03/2022 - 22/03/2022] CEMB, University of the Punjab, Lahore

CEMB Cotton Seminar Participant, as Member Organizing Committee

[01/03/2023 - 02/03/2023] CEMB, University of the Punjab, Lahore

Trends and challenges in Health Sciences Organizer, In international conference

[23/04/2025 - 24/04/2025] ORIC, University of the Punjab, Lahore

10th Invention to Innovation Summit 2025 Participated as Exhibitor/ Oral Presenter/Poster Presenter/Panelist in a two day Summit 2025

[07/10/2025 - 08/10/2025] CEMB, Lahore

International Cotton Conference ·Co chairs a session and organizer in an International Cotton Conference 2025

[16/10/2025 - 16/10/2025] University of The Punjab Lahore

From Lab to Market: Strategies for monetizing Intellectual Property One day Seminar Attended on From Lab to Market: Strategies for monetizing Intellectual Property, Organized by ORIC University of The Punjab Lahore October 2026

[26/11/2025] University of The Punjab Lahore

Practical steps in Patent Drafting and Filing Participated one day seminar on Practical steps in Patent Drafting and Filing, 26 November 2025, Organized by ORIC University of The Punjab Lahore.

[15/06/2026 - 15/06/2026] CEMB, Lahore

Global Research Influence Strengthening Pathways for National Innovation at CEMB by HEC Pakistan ·Organized an event of Celebrating Global Research Influence Strengthening Pathways for National Innovation at CEMB by HEC Pakistan.

TRAINING & WORKSHOPS

[01/12/1996 - 27/11/1997]

National Women Cadet Guards

One-Year Training, Government College Women University Faisalabad

[01/01/2001 - 30/04/2001]

Operating System (DOS, WINDOWS) Win word, excel, Foxpro

Training Courses held by Bakhtiar Memorial Computer Training Centre Registered with technical Board of Education, Government of Punjab

[17/10/2011 - 21/10/2011]

National Training Course on Molecular Diagnosis of Animal Pathogens

Successfully Completed the 5th National Training Course on Molecular Diagnosis of Animal Pathogens, NIBGE, PAEC, Faisalabad

[18/10/2016 - 21/10/2016]

National Hands-On Training Workshop on Clinical Diagnostics by Real-Time PCR, Western Blotting, and Cell Culture

Organizer / Trainer and excellent executer at 4 day National Workshop in CAMB and Institute of Biochemistry and Biotechnology, University of The Punjab, Lahore

[28/09/2018 - 30/09/2018]

Protein Structure Analysis and Computer-Aided Drug Design

Workshop on Protein Structure Analysis and Computer-Aided Drug Design

[09/10/2018 - 10/10/2018]

An Awareness cum workshop on Biological Waste Management

Training Workshop: Awareness and Biological Waste Management

[11/10/2018 - 12/10/2018]

Biological Waste Management and Emergency Response Procedures

Training on Biological Waste Management and Emergency Response Procedures

[12/11/2018 - 16/11/2018]

The 8th Training Course on Biochemical and Molecular Techniques in Plant Breeding

Successfully Completed the 8th Training Course on Biochemical and Molecular Techniques in Plant Breeding, NIAB, Faisalabad

[21/02/2019 - 22/02/2019]

Incineration and Other Waste Treatment Methods

Training on Incineration and Other Waste Treatment Methods

[23/02/2022 - 25/02/2022]

Hands on Training on Structural Bioinformatics Tools

Participant, in Hands on Training on Structural Bioinformatics Tools

[17/07/2025 - 19/07/2025]

CRISPR/CAS system in genome editing: A hands on training Workshop

Joined as an Organizer

PROJECTS

[02/06/2025 - 23/06/2026]

Molecular Cloning and Expression of Juvenile Hormone Binding Protein and Arginine

Kinase Genes in E. coli HT115 for dsRNA-Mediated Control of Pink Bollworm (Pectinophora gossypiella) in Cotton Projects Awarded as PI in University of the Punjab Lahore, Pakistan

PSF/NSLP/CP/P-UOP (1773) Production of Nanoparticle-Coated dsRNA Targeting Chitin Synthase for RNAi-Mediated Chitin Biosynthesis Suppression in Thrips and Whiteflies CP-2-2025-2710-4543 Project Awarded as PI in 2025

Resistance development against whitefly in cotton using the Tma12 gene. Project Awarded as PI in University of the Punjab Lahore, Pakistan (2024)

Novel approaches to combat whitefly for better cotton production Projects Submitted as PI in P-3-2025-2001-624N CRP 8th Call for Product Development through Indigenous Research and Innovation (Competitive Research Programme) PSF

Development of Transgenic Cotton Expressing Trichoderma virens Endochitinase Gene for Resistance Against Soil-Borne Fungal Pathogens. Project Submitted as PI: Industrial Solution Grants for Young Scientists [R&D Industry Programme] CP-4-2026-704-X5OQ PSF

Development of Climate-Smart Transgenic Cotton Expressing Endochitinase for Thrips Resilience Project submitted as PI: (CS0381 ALP Funding Agency) 2026

CRISPR/Cas9 Mediated Integration of Tma12 Gene for the Development of Thrips and Whiteflies Resistant Transgenic Cotton in Pakistan Project submitted as PI: (PARB Funding Agency) October 2025

Expression and Validation of Recombinant Tma12 Protein for Insecticidal Activity Against Thrips and Whiteflies in Gossypium hirsutum L. Project Submitted as PI: (PSF funding Agency) CP-2-2025-3010-S18I

Next-Generation Transgenic Cotton Expressing Whitefly-Resilient Through Endochitinase and Tma12 Gene Stacking for Sustainable Agriculture Project submitted as PI: CS0306 PSF

CRISPR-Cas9-Mediated Integration of Tma12 Gene for Development of Thrips and Whiteflies-Resistant Transgenic Cotton in Pakistan Project Submitted as PI: COMSTECH Research Grants Programme for Young Women Researcher for 17.31 million in 2024

Development of Extended Shelf-Life Tomatoes Through CRISPR/Cas-Mediated Editing Project Submitted as PI: PSF funding agency in collaboration with Sri Lanka June 30th, 2026.

CRISPR-Mediated Engineering of Plant Immune Receptors for Broad-Spectrum Crop Resilience Projects Submitted as co-PI/Members: Concept Proposal for collaboration with Riken Japan to be submitted from Agriculture Biotechnology section CEMB

Development of Zinc Biofortified Potato via Integrated Breeding Strategies. Projects Submitted as co-PI/Members: Concept Proposal submission as a team member for a Joint China-Pakistan Research Project, December 2025.

Genetic manipulation of nonconventional crop (Mung Bean) for cultivation on salt stressed lands of Punjab to Improve Agricultural Sustainability and Soil Reclamation Projects Submitted as co-PI/Members: PSF-NSLP-1 November 2025

PUBLICATIONS

[2025]

Development of whitefly-resistant cotton by transforming the Tma12 gene isolated from Tectaria macrodonta

Authors: Naz, F., Ali, A., Jahangir, G. Z., Arif, U., Ali, Q., Tariq, M., Farooq, A. M., & Nasir, I. A. |

Journal Name: Modern Phytomorphology | **Volume, Issue and Pages:** Vol.19, p.366–380. |

Publisher: Dr. Andrew V. Novikoff

Naz, F., Ali, A., Jahangir, G. Z., Arif, U., Ali, Q., Tariq, M., Farooq, A. M., & Nasir, I. A. (2025). Development of whitefly-resistant cotton by transforming the Tma12 gene isolated from Tectaria macrodonta. Modern Phytomorphology, 19, 366–380.

Molecular Integration of Cry51 in Gossypium hirsutum for Targeted Resistance Against Non-Lepidopteran Sap-Sucking (Thrips) Frankliniella fusca

Submitted but not Published

Authors: Farah Naz 1, Allah Bakhsh 1, Muhammad Tariq 1, Usman Arif 1, Abdul Munim Farooq, Idrees Ahmad Nasir

[2025]

Genetic Transformation of Tomato with Enhanced Resistance against Fusarium Wilt Using Mulberry Chitinase Gene.

Authors: Anjum, M, A., Ashfaq M., Arif U., Tariq M., Naz F., Ashraf R., Farooq, A, M., Ali M., Haider, M, S., & Ali Q. | **Journal Name:** Modern Phytomorphology | **Volume, Issue and Pages:** Volume 19, Issue 4 p380-390 | **Publisher:** Dr. Andrew V. Novikoff

Anjum, M, A., Ashfaq M., Arif U., Tariq M., Naz F., Ashraf R., Farooq, A, M., Ali M., Haider, M, S., & Ali Q. Genetic Transformation of Tomato with Enhanced Resistance against Fusarium Wilt Using Mulberry Chitinase Gene. Modern Phytomorphology,

[2019]

Trackable CEMB-Klean Cotton Transgenic Technology: Affordable Climate Neutral Agri-biotech Industrialization for Developing Countries

Authors: Zahida Qamar, Muhammad Tariq, Farah Naz Tahir Rehman, Usman Arif, and Idrees Ahmad Nasir | **Journal Name:** Advancement in Life Science | **Volume, Issue and Pages:** volume 6, issue 3: p131-138 | **Publisher:** The Running Line

Trackable CEMB-Klean Cotton Transgenic Technology: Affordable Climate Neutral Agri-biotech Industrialization for Developing Countries. Zahida Qamar, Muhammad Tariq, Farah Naz Tahir Rehman, Usman Arif, and Idrees Ahmad Nasir.

[2022]

Heterologous expression of cry1la12 insecticidal gene in cotton encodes resistance against pink bollworm, Pectinophora gossypiella (Lepidoptera: Gelechiidae); an alternate insecticidal gene for insect pest management.

Authors: Tariq, M., Tabassum, B., Bakhsh, A., Farooq, A. M., Qamar, Z., Akram, F., Naz, F., Rao, A. Q., Malik, K., & Nasir, I. A. | **Journal Name:** Molecular biology reports | **Volume, Issue and Pages:** 49(11), 10557–10564. | **Publisher:** Springer Nature

Tariq, M., Tabassum, B., Bakhsh, A., Farooq, A. M., Qamar, Z., Akram, F., Naz, F., Rao, A. Q., Malik, K., & Nasir, I. A. (2022). Heterologous expression of cry1la12 insecticidal gene in cotton encodes resistance against pink bollworm

[2024]

Anti-Dengue Potential of the Papain Protein of Carica Papaya: Innovative Food Products

Authors: Jahangir, GZ., Hussain, S., Manzoor, S., Shahzad, Naz, F. | **Journal Name:** Nutraceuticals and Functional Foods. | **Publisher:** Scientific Knowledge Publisher

Jahangir, GZ., Hussain, S., Manzoor, S., Shahzad, Naz, F. (2024). Anti-Dengue Potential of the Papain Protein of Carica Papaya: Innovative Food Products - Nutraceuticals and Functional Foods. Scientific Knowledge Publisher, USA.

[2024]

Depression, physical activity, and preeclampsia: Unraveling the Maternal Health Connection

Authors: Meraj, M., Pasham, M., Naz, F., Ali, S. M., Faisal, S., Ahmed, A., & Maraj, A. | **Journal Name:** Journal of Population Therapeutics & Clinical Pharmacology. | **Volume, Issue and Pages:** 31(3), 2030-2034

Meraj, M., Pasham, M., Naz, F., Ali, S. M., Faisal, S., Ahmed, A., & Maraj, A. Journal of Population Therapeutics & Clinical Pharmacology.

[2017]

Strain improvement of Aspergillus terreus for hyper production of lovastatin and immobilization of mutant atu-06 strain for repeated batch culture process.

Authors: SadiaJaved, AmairRaza, SaqibMahmood, MunazzahMeraj, Farah Naz, Sameera Hassan. | **Journal Name:** Acta poloniae pharmaceutica-drug research. | **Volume, Issue and Pages:** 74(5): 1485-1491

SadiaJaved, AmairRaza, SaqibMahmood, MunazzahMeraj, Farah Naz, Sameera Hassan. 2017. Strain improvement of Aspergillus terreus for hyper production of lovastatin and immobilization of mutant atu-06 strain for repeated batch culture process.

[2017]

Effect of visible range electromagnetic radiations on escherichia coli Afr. J. Tradit.

Authors: Samina T. Yousuf Azeemi, Saleem Farooq Shaukat, Khawaja Shamsuddin Azeemi, Idrees Khan, Khalid Mahmood, and Farah Naz. | **Journal Name:** Complement Altern. Med. | **Volume, Issue and Pages:** 14 (1): 24 – 31.

Samina T. Yousuf Azeemi, Saleem Farooq Shaukat, Khawaja Shamsuddin Azeemi, Idrees Khan, Khalid Mahmood, and Farah Naz. 2017. Effect of visible range electromagnetic radiations on escherichia coli Afr. J. Tradit. Complement Altern. Med.14 (1): 24 – 31

[2017]

Kinetic And Thermodynamic Properties of Purified Wild and Mutant Derived Urate Oxidase Currentscience.

Authors: Munazzah Meraj, Sadia Javed, Shams-Uddin shaikh, Shazia Abrar, Farah Naz and Saleh Khaskhili. | **Journal Name:** Current Science | **Volume, Issue and Pages:** vol. 113, no. 2, pp. 295-301

Munazzah Meraj, Sadia Javed, Shams-Uddin shaikh, Shazia Abrar, Farah Naz and Saleh Khaskhili. 2017. Kinetic And Thermodynamic Properties of Purified Wild and Mutant Derived Urate Oxidase Currentscience. ISSN: 0011-3891

[2017]

Biosynthesis of lovastatin using agro-industrial wastes as carrier substrates.

Authors: Sadia Javed, Munazzah Meraj, Saqib Mahmood, Arruje Hameed, Farah Naz, Sameera Hassan and Rao Irfan. | **Journal Name:** Tropical Journal of Pharmaceutical Research. | **Volume, Issue and Pages:** 16 (2): 263-269.

Sadia Javed, Munazzah Meraj, Saqib Mahmood, Arruje Hameed, Farah Naz, Sameera Hassan and Rao Irfan. 2017. Biosynthesis of lovastatin using agro-industrial wastes as carrier substrates. Tropical Journal of Pharmaceutical Research. 16 (2): 263-269.

[2016]

The myth of Oral hygiene using synthetic mouthwash products.

Authors: Ghulam Zahra Jahangir, Durre Shahwar Ashraf, Idrees Ahmad Nasir, Madiha Sadiq, Sobia Shahzad, Farah Naz, Muhammad Iqbal, And Afifa Saeed. | **Journal Name:** Springer Plus. | **Volume, Issue and Pages:** 5:1481.

Ghulam Zahra Jahangir, Durre Shahwar Ashraf, Idrees Ahmad Nasir, Madiha Sadiq, Sobia Shahzad, Farah Naz, Muhammad Iqbal, And Afifa Saeed. 2016. The myth of Oral hygiene using synthetic mouthwash products. Springer Plus. 5:1481.

[2012]

Antimicrobial activity of medicinal plants against microbes.

Authors: Farah Naz, Sadia Javed and Munazzah Meraj. | **Journal Name:** LAMBERT Academic Publishers.

Farah Naz, Sadia Javed and Munazzah Meraj. 2012. Antimicrobial activity of medicinal plants against microbes. LAMBERT Academic Publishers.

[2008]

Activity guided isolation of a Noval Protein from Croton tiglium with Antifungal and Antibacterial activities.

Authors: Muhammad shahid, Muhammad tayyab, Farah Naz, Amer Jamil, Muhammad Ashraf and Anwarul Hassan Gilani. | **Journal Name:** Phytother.Res. | **Volume, Issue and Pages:** 22,1646-1649(2008).

Muhammad shahid, Muhammad tayyab, Farah Naz, Amer Jamil, Muhammad Ashraf and Anwarul Hassan Gilani. 2008. Activity guided isolation of a Noval Protein from Croton tiglium with Antifungal and Antibacterial activities. Phytother.Res.22,1646-1649(2008).

Discriminating upland and lowland rice genotypes through proteomic approach.

Authors: Naz, Farah., S. Farooq, R. Arshad, M. Afzaal and M. Akram. | **Journal Name:** Pak. J. Bot., | **Volume, Issue and Pages:** 38(5): 1731-1738.

Naz, Farah., S. Farooq, R. Arshad, M. Afzaal and M. Akram. 2006. Discriminating upland and lowland rice genotypes through proteomic approach. Pak. J. Bot., 38(5): 1731-1738.

[2006]

Chlorophyll fluorescence in different wheat genotypes grown under salt stress.

Authors: Akram, M., S. Farooq, M. Afzaal, F. Naz and R. Arshad. | **Journal Name:** Pak. J. Bot., | **Volume, Issue and Pages:** 38(5): 1739-1743.

Akram, M., S. Farooq, M. Afzaal, F. Naz and R. Arshad. 2006. Chlorophyll fluorescence in different wheat genotypes grown under salt stress. Pak. J. Bot., 38(5): 1739-1743.

[2006]

Differences in agronomic and physiological performance of various wheat genotypes grown under saline conditions.

Authors: Afzaal, M., S. Farooq, M. Akram, F. Naz, R. Arshad and A. Bano. | **Journal Name:** Pak. J. Bot., | **Volume, Issue and Pages:** 38(5): 1745-1750.

Afzaal, M., S. Farooq, M. Akram, F. Naz, R. Arshad and A. Bano. 2006. Differences in agronomic and physiological performance of various wheat genotypes grown under saline conditions. Pak. J. Bot., 38(5): 1745-1750.

Random integration of eucalyptus GZJ-2018 DHN-10 Gene in potato genome to develop enhanced tolerance against salt stress.

Book Chapter

Random integration of eucalyptus GZJ-2018 DHN-10 Gene in potato genome to develop enhanced tolerance against salt stress. Book Chapter

Advances in Genomic Approaches in Dry Beans (Phaseolus vulgaris)

Book Chapter

Advances in Genomic Approaches in Dry Beans (Phaseolus vulgaris) Book Chapter

Genome Editing for Improving Field and Horticultural Crops

book chapter

Genome Editing for Improving Field and Horticultural Crops book chapter

Gene editing and challenges of genetic transformation in date palm

(Book Chapter)

Gene editing and challenges of genetic transformation in date palm (Book Chapter)

[2024]

Parlar Scientific Publications, Safety evaluation of genetically modified cotton expressing pectin methylesterase gene using Wistar rats as an animal model

Babar,Momal and Salisu,Ibrahim Bala and Bakhsh,Allah and Haq,H. M. Shifa Ul and Naz,Farah and Ali,Qasim and Rao,Abdul Qayyum and Shahid,Ahmad Ali, 20250547820, English, Journal article, Germany, 1018-4619, 33, (6/7), Freising, Fresenius Environmental

Bulletin, (43.4-444), Parlar Scientific Publications, Safety evaluation of genetically modified cotton expressing pectin methylesterase gene using Wistar rats as an animal model., (2024)

Authors: Babar,Momal and Salisu,Ibrahim Bala and Bakhsh,Allah and Haq,H. M. Shifa Ul and Naz,Farah and Ali,Qasim and Rao,Abdul Qayyum and Shahid,Ahmad Ali | **Journal Name:** Fresenius Environmental Bulletin | **Volume, Issue and Pages:** 1018-4619, 33

ACCESSION NUMBERS 2017

KU574128, KU764487, KU845699, KX022951, KX022952, KX022953, KX022954, KX000413, KX0004, KX000411, KX000410, KX022955, KX022956, KX024474, KX066882, KX077980, KX083534, KX096821, KX229765,KX234798

RECOMMENDATIONS

Name: Dr Muhammad Shahid | Professor

Department of Biochemistry
University of Agriculture Faisalabad

Phone: +92 03336629271

Name: Prof. Dr. Moaz Ur Rahman: | Director CEMB

Director CEMB
University of the Punjab
Lahore

Phone: +92 3217582800