

# Syed Zaheer ud-Din

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## Education

### University of the Punjab, Faculty of Science.

M.Phil. Molecular Biology and Genetics GPA: 3.66/4

Lahore, Pk  
May 2013-2015

### Punjab University, Faculty of Science

M.Sc. Zoology 1<sup>st</sup> Division

Lahore, Pk  
Jun, 2010-2012

## Research Experience

### Research Fellow | University of Göttingen

Göttingen, Germany

- Identified Key Developmental stages via intensive Dissections and Imaging Technique (cLSM)
- Phenotyping with 2d and 3d landmarks and multivariate analysis with R
- Next Generation Sequencing and differential gene Expression analysis
- Cloning, Invitro-Transcription, dsRNA preparation and injecting Larvae
- Supervised Students for RNAi

Jan 2020-2021

### M.Phil. Researcher | University of the Punjab

Lahore, PK

- I found CRB1 Gene linkage to retinitis pigmentosa in the Punjab population
- I identified 12 families of Cataract and 8 families of Retinitis pigmentosa
- Retinography and funduscopy Tests for patients came from different hospitals in Lahore
- Extracted DNA, PCR, and prepared samples for advanced study at Johns Hopkins USA
- Defended thesis to a jury of 3 professors and a department of ~30 researchers

2014-2015

### MSc Researcher | Department of Zoology, Punjab University

2011-2012

- Worked voluntarily as an Entomologist with Dr. Nasreen in the inst. of Zoology during the Dengue epidemic in Lahore. I collected many larvae and adult mosquitos from different localities and identified them in the lab.

## Job Experience

### Lab. Technician | Microbiology and Molecular Genetics, Punjab University

2009-to date

- I performed the duty of preparing a Medium for culturing Microorganisms.
- Green Nanoparticle synthesis, Characterization XRD, FTR. Antimicrobial assay
- Lab demonstration for students to measure Optical Density, pH adjustment, and inoculation of E. coli
- Maintenance of Records invoices for chemicals used in the lab (Developed Personal Spreadsheets for managing multiple Tasks)

### Biology Teacher | Model Scholar Academy, Model Town, Lahore

Feb, 2015-sep-2015

- Taught Biology to Classes 10<sup>th</sup> and 12<sup>th</sup>
- In addition to teaching, I loved to inspire young students about science and its methodology.
- Regular report of each student to the office and communicating with parents individually

## Skills and Interest

**Research:** Linux, Python, R, HPC (MPI), ImageJ, Histology, DNA, RNA Extraction, PCR, Next Generation Sequencing, Differential gene expression analysis, Linkage analysis, Gene Silencing (RNAi), Geometric morphometric analysis

**Language:** Urdu (native), English (education)

**Interest:** Reading books (Philosophy, History, Data analysis), Traveling, Phenotyping, genotyping.

## Distinctions

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- Ph.D. scholarship EVO-DEVO in Auburn University, United States of America (Visa-trump problem No joining) (2024)
- Research fellowship from Dept. Evolutionary Developmental Biology, University of Gottingen, Germany
- Research Fellowship from the Higher Education Commission of Pakistan
- I humbly received the award of a laptop from the Chief Minister of Punjab as proof of my educational abilities.
- Have meritorious position and scholarship award in M.Sc. And M.Phil.
- 1<sup>st</sup> position Award, 3 shields from Shaheen Foundation Pakistan Air Force (PAF). Base Faisal Karachi.

## Conferences/ Seminars

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- Hand-on training in 2D 3D Cell Culturing in Microbiology and Molecular Genetics, University of the Punjab.
- Attended the Annual 33rd Pakistan Congress of Zoology at Pakistan Museum of Natural History, Islamabad.
- Agricultural Nanotechnology Conference, Department of Plant Pathology, University of the Punjab, Lahore.
- Seminar Series Evolutionary Developmental Genetics, University of Gottingen, Germany (attached documents).

## Publications

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- 1) Syed Zaheer ud-Din, Laura Schöck, Schikora, Nico Posnien. Developmental and molecular mechanisms underlying the formation of head horns in the broad horned beetle *Gnathocerus cornutus*: life cycle analysis. 2023 - 115th Meeting of the German Zoological Society 4:8 Kassel
- 2) Szu din, Mo fazal, A ishtiaque, A ullah. 2023. Antimicrobial activity of *Lantana camara* against *Pseudomonas aeruginosa*, *Serratia marcescens* and *Staphylococcus aureus* to develop ointment-based therapy. Bulletin of Biological and Allied Sciences Research, (1), 33.
- 3) Muhammad Danish Ali, Ammara Aslam, Malik Asim Haider, Zill e Huma Aftab, Usama Fakhar, Syed Zaheer ud-Din, Safa Ezzine, Iamia ben farhat, H.H. Sornali. 2022. I-V, dielectric, antibacterial, and robust EMI shielding effectiveness properties of graphene/Fe<sub>3</sub>O<sub>4</sub>. Inorganic Chemistry Communication, 146: 110039
- 4) Talat Zeeshan, Salma Waseem, Waqia Tahir, Muhammad Danish Ali, Zohra Kayani, Zill-e-Huma Aftab, Syed Zaheer ud din. 2022. Impact of Silver Substitution on Structural, Magnetic, Optical and Antibacterial Properties of Cobalt Ferrite. SSRN: <https://ssrn.com/abstract=4167650>
- 5) Ammara Aslam, Muhammad Danish Ali, Zill e Huma Aftab, Usama Fakhar, Syed Zaheer ud-Din, Ali Ahmad, Umar Khalid, Mongi Amami, A. Dahshan. Electrical, dielectric, I-V and antimicrobial behavior of cobalt incapacitated Prussian blue graphene ferrites composite. Inorganic Chemistry Communication, 141: 109548.
- 6) Syed Zaheer ud-Din, Nico Posnien. 2024. Comparative RNA-expression meta-analysis of antennae and leg appendages in insects and the impact of distal-less (Dll) gene knockdown on appendages in (broad-horned flour beetle) *Gnathocerus cornutus*. Under review, in Comparative Biochemistry and Physiology - Part D: Genomics and Proteomics.