



## JOB EXPERIENCE

- December 2023 – Present      **ASSOCIATE PROFESSOR**  
Department of Forensic Sciences  
*University of Swat, Swat*
- February 2023 – Present      **LIAISON MANAGER,**  
Office of Research Innovation & Commercialization  
*University of Swat, Swat*

## QUALIFICATIONS

- 2013      **Ph. D. in Molecular Biology**  
Centre of Excellence in Molecular Biology (CEMB)  
*University of the Punjab, Lahore*  
Thesis: **Genetic Characterization of ChrX miniSTRs in Pakistani Population**

## RESEARCH EXPERIENCE

- 2022      Screening of School-going Children for SARS-CoV-2 Antibodies
- 2022      DNA-based Prediction of Eye and Hair Colour of Pakhtun Population  
Living in Malakand Division of Pakistan
- 2019      Degraded DNA Study through non-CODIS STRs
- 2019      Taxonomic and DNA bar-coding of Vespidae of KPK

## STUDENTS SUPERVISED

HEC Approved PhD Supervisor

Supervised: 72 undergraduate students and 4 in progress at the University of Swat

Co-supervised: 01 PhD, 05 M. Phil completed, 01 PhD and 03 M. Phil students in progress

## SELECTED PUBLICATIONS

1. Rahat, M. A., F. Akbar, A. Rasool, M. Ilyas, A. Rakha, S. Shams, M. Jelani, F. Bibi, B. H. Shirah, A. A. Abdulkareem, M. I. Naseer and **M. Israr**. Phenotypic Classification of Eye Colour and Developmental Validation of the Irisplex System on Population Living in Malakand Division, Pakistan. *Biomedicine* 11(2023) (4): 1228.
2. Murad Ali Rahat, **Muhammad Israr**, Hakim Khan, Ishtiaq Hassan, Mohammad Islam<sup>1</sup> and Muzafar Shah, Eye Color Frequency and IrisPlex

- Validation in Pakhtun Population Living in Shangla Valley, Pakistan, *Pakistan Journal of Zoology*, 55 (2023) 323-332.
3. S. Uddin, N.U. Khan, M.A. Rahat, A. Ahmad, F. Akbar, N. Ullah, M. Shah, A. Rasool, **M. Israr**, Sibling and non-sibling fingerprints comparison of Pakhtun population of Swat district, KP, Pakistan, *Advancements in Life Sciences*. 9 (2022) 85–91.
  4. M.A. Rahat, **M. Israr**, I. Hussan, M.I. Khan, A. Ahmad, N. Ullah, M. Haris, M. Ayub, R. Ali, M. Nasar, Gender Identification by Amelogenin Gene using PCR and Prediction of Blue, Brown and Intermediate Eye Colour from Human DNA, *Annals of the Romanian Society for Cell Biology*. 25 (2021) 1022–1035.
  5. M.A. Rahat, **M. Israr**, I. Hassan, M. Islam, A. Ali, M.I. Khan, M.S. Iqbal, H. Jabeen, A. Rasool, F. Akbar, Episode of Hepatitis C viral infection in the people of Swat, Pakistan, *Brazilian Journal of Biology*. 82 (2021).
  6. A. Ahmad, M.A. Rahat, A. Wahab, M. Shah, A. Rasool, **M. Israr**, PCR-based Sex Determination in Cattle using Gene Specific Markers, *Pakistan Journal of Biochemistry and Biotechnology*. 2 (2021) 134–139.
  7. M.A. Rahat, H. Khan, I. Hassan, M. Haris, **M. Israr**, DNA-based Eye Color Prediction of Pakhtun Population Living in District Swat KP Pakistan, *Advancements in Life Sciences*. 7 (2020) 157–163.
  8. M.A. Rahat, A.S. Khan, R. Bibi, M. Haris, F. Akbar, M. Shah, A. Rasool, **M. Israr**, Monozygotic and Dizygotic Twins Differences in Fingerprint Patterns of Swat District, *Advancements in Life Sciences*. 7 (2020) 232–236.
  9. M.A. Rahat, M. Haris, Z. Ullah, S.G. Ayaz, M. Nouman, A. Rasool, **M. Israr**, Domestic animals' identification using PCR-RFLP analysis of cytochrome b gene, *Advancements in Life Sciences*. 7 (2020) 113–116.
  10. M.S. Zar, A.A. Shahid, M.S. Shahzad, K.-J. Shin, H.Y. Lee, S.-S. Lee, **M. Israr**, P. Wiegand, G. Kulstein, Forensic SNP Genotyping with SN aPshot: Development of a Novel In-house SBE Multiplex SNP Assay, *Journal of Forensic Sciences*. 63 (2018) 1824–1829.
  11. S. Tabassum, M. Ilyas, I. Ullah, **M. Israr**, H. Ahmad, A comprehensive Y-STR portrait of Yousafzai's population, *International Journal of Legal Medicine*. 131 (2017) 1241–1242.
  12. A. Rakha, M.-S. Peng, R. Bi, J.-J. Song, Z. Salahudin, A. Adan, **M. Israr**, Y.-G. Yao, EMPOP-quality mtDNA control region sequences from Kashmiri of Azad Jammu & Kashmir, Pakistan, *Forensic Science International: Genetics*. 25 (2016) 125–131.
  13. **M. Israr**, A.A. Shahid, A. Rakha, M.S. Zar, M.S. Shahzad, Z. Rahman, T. Husnain, Baluchi and Pakhtun population data of 9 X-chromosomal short tandem repeat loci, *Journal of Forensic and Legal Medicine*. 37 (2016) 45–49.
  14. M. Sahib Zar, A. Ali Shahid, M. Saqib Shahzad, K.-J. Shin, H. Young Lee, **M. Israr**, T. Husnain, Comparative study of STR loci for typing old skeletal remains with modified protocols of AmpFISTR Identifiler and AmpFISTR MiniFiler STR Kits, *Australian Journal of Forensic Sciences*. 47 (2015) 200–

- 223.
15. R. Perveen, Z. Rahman, M.S. Shahzad, **M. Israr**, M. Shafique, M.A. Shan, M.S. Zar, M. Iqbal, T. Husnain, Y-STR haplotype diversity in Punjabi population of Pakistan, *Forensic Science International: Genetics*. 9 (2014) e20–e21.
  16. **M. Israr**, A.A. Shahid, Z. Rahman, M.S. Zar, M.S. Shahzad, T. Husnain, C. Pfeifer, P. Wiegand, Development and characterization of a new 12-plex ChrX miniSTR system, *International Journal of Legal Medicine*. 128 (2014) 595–598.
  17. **M. Israr**, S. Rafiq, A.A. Shahid, H. Hussain, A. Rakha, Scope of X-Chromosomal MiniSTRs: Current Developments, *Journal of Forensic Research*. 5 (2014).
  18. **M. Israr**, M. Ilyas, Z. Rahman, Copy Number Variation in Forensic Science, *Advancements in Life Sciences*. 1 (2014) 71–72.
  19. M.S. Zar, A.A. Shahid, M.S. Shahzad, K.-J. Shin, H.Y. Lee, **M. Israr**, E.H. Kim, Z.U. Rahman, T. Husnain, Forensic DNA typing of old skeletal remains using AmpFISTR® Identifiler® PCR amplification kit, *J Forensic Res*. 5 (2013) 211–6.
  20. **M. Israr**, A.A. Shahid, Z. Rahman, M.S. Shahzad, O. Ullah, T. Husnain, Punjabi population data for seven X-chromosome short tandem repeat (X-STR) loci using a new miniplex system, *African Journal of Biotechnology*. 11 (2012) 10513–10516.
  21. N.M. Achakzai, Z. Rahman, M.S. Shahzad, S. Daud, M.S. Zar, **M. Israr**, T. Husnain, S. Willuweit, L. Roewer, Y-chromosomal STR analysis in the Pashtun population of Southern Afghanistan, *Forensic Science International: Genetics*. 6 (2012) e103–e105.

## SELECTED BOOK CHAPTER

1. M.A. Rahat, S. Saif, M. Shah, A. Rasool, F. Akbar, S. Ali, **M. Israr**, *Forensic DNA Phenotyping*, (2022).

## SELECTED INVITED TALKS

1. **Muhammad Israr**. SPSS for Data Analysis, 3-Day National Workshop on “Utilization of Modern Techniques for Research and Librarianship”, *Upper Swat College of Nursing and Health Sciences, Swat*, July 21 – 23, 2023.
2. **Muhammad Israr**. How to search for relevant scholarships, 1<sup>st</sup> Two-days Career Development Workshop, *University of Swat*, May 04, 2023.
3. **Muhammad Israr**. Lecture on Drug Abuse, “Awareness Seminar and Walk Against Drug Abuse”. The University of Swat. April 14, 2023.
4. **Muhammad Israr**. Say no to drugs: Till the last addict., “One-Day Symposium: National Consortium for Drug-Free Community”. University of Health Sciences (UHS) Lahore. July 19, 2022.

5. **Muhammad Israr**. Forensics of Drugs, “One-Day Seminar on Narcotics Free Society”. Government Afzal Khan Lala Postgraduate College Matta. March 22, 2022
6. **Muhammad Israr**. Biological Safety. One-Day Seminar on Biosafety and Biosecurity, *University of Buner*, October 23, 2018
7. **Muhammad Israr**. Microbial Forensics. One-Day Seminar on Molecular Forensics, Abbottabad University of Science and Technology, Abbottabad, October 19, 2017.
8. **Muhammad Israr**. Rule of Law. One-Day Workshop on Leadership, Motivation and Rule of Law, University of Swat, October 21, 2016.
9. **Muhammad Israr**. Role of DNA in forensic sciences. International DNA Day, University of Malakand (Chakdara), April 25, 2016.

## CONFERENCE PRESENTATIONS

1. Murad Ali Rahat, Sumaia Saif, Akhtar Rasool, Fazal Akbar, **Muhammad Israr**. DNA-based eye colour prediction using IrisPlex model misclassifies intermediate phenotypes of Pakhtun Population living in Malakand Division, The Sixth International Conference of the Arab Society for Forensic Sciences and Forensic Medicine, ASFSFM 2023, *Naif Arab University of Security Studies, Riyadh, Saudi Arabia*, December 5 – 7, 2023.
2. Mian Hazrat Yousaf, Zeeshan Khan, Murad Ali Rahat, Muzafar Shah, Sumaia Saif, **Muhammad Israr**. Measurement of aggressive behaviour and MAOA gene polymorphism in adolescent population of U.C Baidara, Tehsil Matta Swat, BIOCON2023 – National Conference on Recent Trends in Biosciences, *University of Swat*, June 21 – 23, 2023.
3. Sumaia Saif, Sultan Muhammad, Ikramullah, Gul Lakhta, Murad Ali Rahat, **Muhammad Israr**. Morphological Identification of Four Domestic Animals (Buffalo, Cow, Goat, Sheep) In District Swat. BIOCON2023 – National Conference on Recent Trends in Biosciences, *University of Swat*, June 21 – 23, 2023.
4. Sumaia Saif, Murad Ali Rahat, Abdullah, Akhtar Rasool, **Muhammad Israr**. An Analysis of Medico-Legal Cases in the Casualty of Saidu Groups of Teaching Hospital of District Swat, KP. BIOCON2023 – National Conference on Recent Trends in Biosciences, *University of Swat*, June 21 – 23, 2023.
5. Marya Khan, Ifat Iram, Nida Malik, Sumaia Saif, Murad Ali Rahat Akhtar Rasool, **Muhammad Israr**. Measurement of Aggressive Behavior and MAOA Gene Polymorphism in Male and Female Population Living in

Khawza Khela Tehsil District Swat, BIOCON2023 – National Conference on Recent Trends in Biosciences, *University of Swat*, June 21 – 23, 2023.

6. Sana Khan, Nilma Gul, Reshma Dawood, Sumaia Saif, Murad Ali Rahat, **Muhammad Israr**. Phenotypic Classification of Hair Color in Pakhtun Population of District Swat, BIOCON2023 – National Conference on Recent Trends in Biosciences, *University of Swat*, June 21 – 23, 2023.
7. Sumaia Saif, Manzoor Hussain, **Muhammad Israr**. DNA-Based Prediction of Hair Pigmentation Phenotypes in Pakhtun Population of Khyber Pakhtunkhwa (KP), Pakistan, BIOCON2023 – National Conference on Recent Trends in Biosciences, *University of Swat*, June 21 – 23, 2023.
8. Naveed Khan, Akhtar Rasool, Sumaia Saif, **Muhammad Israr**. Palm Prints Comparison between farmers and students in local population, 5<sup>th</sup> International Conference – Advances in Biosciences: Bridging the Gap Between Research and Sustainable Development Goals, *University of Swat*, May 24 – 26, 2022.
9. Shah Faisal, Jamal Wahab, Naseer Ullah, Sumaia Saif, **Muhammad Israr**. Phenotypic Ration of Hair Colour in District Lower Dir, 5<sup>th</sup> International Conference – Advances in Biosciences: Bridging the Gap Between Research and Sustainable Development Goals, *University of Swat*, May 24 – 26, 2022.
10. Subhanuddin, Rehman Mahmood, **Muhammad Israr**. Identification of gender and species of meat, MiniCon entitled “One-Day Students’ Seminar and Poster Exhibition”, *University of Swat*, February 18, 2021.
11. **Muhammad Israr**, Allah Rakha. DNA typing as a technology of choice for microbial forensic. National Conference on Forensic Medicine, Punjab Medical College (Faisalabad), February 27-28, 2015.
12. Allah Rakha, **Muhammad Israr**. DNA – A competent witness. First International Conference on Forensic Science and Justice. Government College University Lahore (Lahore), October 22-24, 2014.
13. Allah Rakha, **Muhammad Israr**. Scope of DNA intelligence information from populations of Pakistan. National Conference on Integrated Role of Forensic Science in Criminal Justice System. University of Lahore (Lahore), 25/09/2014.

#### **NEWSPAPER, MAGAZINE ARTICLES AND BLOG**

1. **Born Identity: DNA Testing**. Neda-e-Swat, Annual Student Magazine, University of Swat. August 2020

2. **“Har kala rasha”: Hujra, a fading Pakhtun tradition.** Daily Express Tribune Blogs. May 30, 2014.
3. **When you eat at an expensive restaurant, do you think of the poor?** Daily Express Tribune Blogs. December 20, 2013.
4. **Thanks, but No Thanks.** Saach TV Blogs. November 19, 2013
5. **A short guide to help you with the NTS-GAT exam for Pakistani universities.** Daily Express Tribune Blogs. October 18, 2013.
6. **When a Mother has a Son like You.** Daily Express Tribune Blogs. June 22, 2013.
7. **CEMB – Exploring Research on Molecular Biology.** Weekly Technology Times. June 17, 2013.
8. **Criminal Genes and the Human Genome.** Weekly Technology Times. 14/08/ 2011.
9. **Hollywood and Biotechnology.** Newsletter of NAYS. Issue No.9. April 2011.

## JOURNAL REVIEWER

I am currently a reviewer for different journals including:

- Advancements in Life Sciences
- Annals of Human Genetics
- BMC Virology
- Brazilian Journal of Biology
- Electronic Journal of Biotechnology
- International Journal of Genetics and Molecular Biology
- Journal of Food Sciences
- Molecular Genetics & Genomic Medicine
- Oncotarget
- Pakistan Journal of Zoology
- Vaccine X

## CONVENER/MEMBER/SECRETARY OF COMMITTEES/BOARDS

2023 – Member, Board of Studies, Centre for Biotechnology and  
Present Microbiology, *University of Swat*

2023	Focal Person, QEC Programme Team for BS in Forensic Science, <i>University of Swat</i>
2023 – Present	Member, Board of Studies, Institute of Criminology, <i>University of Peshawar</i>
2023 – Present	Member, Graduate Studies Committee, Centre for Biotechnology and Microbiology, <i>University of Swat</i>
2021 – Present	Member, Board of Studies, Centre for Animal Sciences and Fisheries, <i>University of Swat</i>
2019 – Present	Chief Editor, Neda-e-Swat, Annual Magazine, <i>University of Swat</i>
2019 – Present	Organizer, Suvastu Literary Society, <i>University of Swat</i>
2019 – Present	Focal Person, National Grassroots ICT Research Initiative 2019, Ministry of Information Technology and Telecom, Pakistan
2018 – Present	Focal Person, HEC's Electric Wheelchair Scheme for University Students, Higher Education Commission, Islamabad

#### **CONFERENCES/SEMINARS/WORKSHOPS/SYMPOSIA ORGANIZED**

2023	Organizer, BIOCON2023 – National Conference on Recent Trends in Biosciences, <i>University of Swat</i> , June 21 – 23, 2023
2023	Organizer, One-Day Symposium on International DNA Day: 20 <sup>th</sup> Anniversary, <i>University of Swat</i> , May 23, 2023
2023	Member of Organizing Committee, National Academic Expo 2023, University of Swat, 8 <sup>th</sup> – 9 <sup>th</sup> March 2023
2023	Organizer, One-Day Symposium on Animal Infections in Pakistan, in Collaboration with ASAB-NUST Islamabad, <i>University of Swat</i> , January 26, 2023
2022	Organizer, Pre-Hackathon Innovation Event in collaboration with Precision Medicine Lab (PML) Peshawar, <i>University of Swat</i> , 19 <sup>th</sup> May 2022.

- 2021 Organizer, Two-day Collaborative Workshops and Debates on Rule of Law, Diversity, Tolerance, and Leadership & Motivation in collaboration with Centre for Research and Security Studies (CRSS) Islamabad, *University of Swat*, 11<sup>th</sup> – 12<sup>th</sup> August 2021.
- 2021 Organizer, Mini-Con entitled “One-day Students’ Seminar and Poster Exhibition”, *University of Swat*, 18<sup>th</sup> February 2021.
- 2019 Member of Organizing Committee, One-day International Seminar on Amphibians and Reptiles, *University of Swat*, 19/09/2019.
- 2019 Organizer, Two-day Workshop on Ulasi Taroon (National Cohesion) in collaboration with Centre for Research and Security Studies (CRSS) Islamabad, *University of Swat*, 21<sup>st</sup> – 22<sup>nd</sup> June 2019.
- 2016 Organizer, One-day Workshop Entitled “Leadership, Motivation and Rule of Law”, *University of Swat*, 21<sup>st</sup> October 2016.
- 2014 Member of Organizing Committee for International Symposium in Molecular Forensic: Emerging Trends, *University of Health Sciences, Lahore*, 29th May 2014.