

Curriculum Vitae

Dr. Muhammad Shafique



Faculty Position: Associate Professor (BPS-20) and Group Leader Forensic Research Lab, Centre of Excellence in Molecular Biology, University of the Punjab Lahore Pakistan.

Research Interest: Molecular Biology, forensic case work through DNA analysis of all types of criminal cases and parentage testing, population DNA databases, STR multiplex development, forensic DNA phenotyping, new emerging technologies for human identification. Next Generation Sequencing (NGS) of STRs, Age estimation through DNA methylation, SNP genotyping for suicidal behavior, Mitochondrial DNA whole genome sequencing

Postal Address: Centre of Excellence in Molecular Biology,
University of the Punjab, 87-West Canal Bank Road,
Thokar Niaz Baig, Lahore-53700, Pakistan.

Date of Birth: March 15, 1979

Marital Status: Married

Contacts: Tel: +92 333 6148635
E-mail: shafique@cemb.edu.pk
E-mail: mshaf86@hotmail.com

ORCID <https://orcid.org/0000-0001-8870-2936>



Education	Post Doctorate (2022-2023) Forensic Genetics Centre for Forensic Science, University of Technology Sydney (UTS) Australia.
	PhD (2015) Molecular Biology Centre of Excellence in Molecular Biology (CEMB), University of the Punjab Lahore
	M. Phil. (2004) Molecular Biology Centre of Excellence in Molecular Biology (CEMB), University of the Punjab Lahore

International/ National Trainings	1. A 6-month Training Course on DNA Short Tandem Repeat (STR) Analysis Using ABI310 Genetic Analyzer from May 15, 2006-Nov. 10, 2006 at Strand Analytical Laboratories, Indianapolis, Indiana, USA. 2. '06 Technology Tour sponsored by Promega Corporation June 15, 2006 Chicago, Illinois, USA. 3. A workshop on Advanced Topics in Statistics October9, 2006 sponsored by Promega Corporation at Nashville, Tennessee, USA. 4. Medical Transcription training through COMSATS Institute of Information and Technology launched by Government of Pakistan Ministry of Science and Technology, Information Technology and Telecommunication Division from October 2001- January 2002.
Teaching/Research Experience	Research Officer/Lecturer; Assistant Professor; Associate Professor 2004-2019 2019-2021 2021-so far.
Teaching Courses	M.Phil course -Biotechnology -Forensic applications PhD course-Advances in Forensic Sciences MS-course Forensic Science, Biological Evidence and Serology
Memberships	- Member, National Forensic Science Commission, Ministry of Science of Technology, Islamabad Pakistan. - Member, Faculty board, University of the Punjab Lahore Pakistan - Academic staff association, University of the Punjab Lahore Pakistan
Research Projects	1. NRPU Research project completed with approved amount of Rs 3.6 million entitled as “Development of 21 STR Loci DNA Database for Each Province of Pakistan” from 18/03/2019 to 18/03/2022. 2. PU Research project 2024-25 on genetic polymorphism of Insertion-deletion markers in Pakistani population (amount approved Rs.250000/-). 3. PU Research project 2025-26 on genetic association analysis of serotonin transporter genes based on single nucleotide polymorphism (SNPs) in individuals having suicidal behavior (amount approved Rs.300000/-). 4. PSF project approved with amount of 3.8 million on Genetic Etiology of Suicidal Behavior in Psychiatric Patients”. 5. A PCSIR, MOST grant for access to scientific instrumentation under a development program for capillary electrophoresis of 30 Indels markers in 333 samples (amount approved Rs.499500/-).
Research Theses Supervised	M.Phil. = 37 Ph.D = 8 Internships = 22
External Examiner	M.Phil/PhD (viva voice conducted) = 21

Reviewer of International Journals	• International Journal of Immunogenetics • Annals of Human Biology • Journal of Nucleic Acids • Biochemical Genetics • Forest Science and Technology
Technical Expertise	• Forensic DNA analysis to solve all types of criminal cases through DNA testing. Serological examination of forensic evidence material. Microscopic Examination. DNA isolation from different forensic biological specimens like saliva, semen, blood, hair, bones, teeth, tissues, vaginal secretions, trace evidence and personal belongings etc. Real Time PCR DNA quantitation. Slot Blot analysis for DNA quantification. Gel Electrophoresis. Spectrophotometer. PCR (Polymerase Chain Reaction) amplification. Genotyping on ABI310/ABI3130 Genetic Analyzer. Data analysis on GeneMapper ID v3.2. Statistical analysis for case work and population genetics. Interpretation of results and reporting. Primer designing, STR multiplex development, SNP genotyping. Next Generation Sequencing (NGS).
Forensic case work	• Forensic cases solved (including all types of criminal cases and parentage analysis) = ~1120 • Forensic cases reviewed= ~1000
Publications International	1. Arshad, F., Shahzad, M., Javed, F., Shehzadi, A., Baig, I. S., Shahid, A. A., & Shafique, M. (2026). Chronological age estimation using CpG methylation signatures in Pakistani population. <i>International Journal of Legal Medicine</i>, 1-12. DOI: https://doi.org/10.1007/s00414-026-03866-2. (IF= 2.3) 2. Tabassum, I., Shafique, M., and Akhtar, M. S. (2026). Uncovering the Molecular Signatures of Rare Genetic Diseases in the Punjabi Population. <i>International Journal of Molecular Sciences</i>, 27(1),206. DOI: https://doi.org/10.3390/ijms27010206. (IF= 5.6). 3. Shahid, I., Javed, F., Shehzadi, A., Munsif, J., Shahid, A.A., and Shafique, M. (2025). Phylogenetic analysis of the enigmatic Kalash population in Pakistan. <i>Nature-Scientific Reports</i>, 15: 18101. DOI: https://doi.org/10.1038/s41598-025-94986-z. (IF= 4.9). 4. Shahzad, M., De Maeyer, H., Salih, G.A., Nilsson, M., Haratourian, A., Shafique, M., Shahid, A.A. and Allen, M. (2024). Evaluation of Storage Conditions and the Effect on DNA from Forensic Evidence Objects Retrieved from Lake Water. <i>Genes</i>, 15(3), p.279. DOI: https://doi.org/10.3390/genes15030279. (IF= 2.8). 5. Shafique, M., Sajid, N., Aziz, Y., Afzal, M., Shahzad, M., Shehzadi, A., Bashir, S., Daud, S. and Shahid, A.A. (2022). Genetic data of 22 autosomal STR loci in Khyber-Pakhtunkhwa, Balochistan and Gilgit Baltistan population of Pakistan using PowerPlex® fusion system. <i>Legal Medicine</i>, 59 p.102129.

	DOI: https://doi.org/10.1016/j.legalmed.2022.102129. (IF= 1.5) 6. Javed, F., Shafique, M., McNevin, D., Javed, M. U., Shehzadi, A., & Shahid, A. A. (2022). Empirical Evidence on Enhanced Mutation Rates of 19 RM-YSTRs for Differentiating Paternal Lineages. <i>Genes</i>, 13(6), 946. DOI: https://doi.org/10.3390/genes13060946. (IF= 4.141). 7. Faqeeha, J., Muhammad, S., Noshaba, R., Aqsa, R., and Ali, S. A. (2022). Allele frequency data of 15 autosomal STRs in Arain population of Pakistan. <i>International Journal of Legal Medicine</i>, 136(2), 557-558. DOI: 10.1007/s00414-021-02639-3 (IF= 2.791). 8. Rubab, A., Shafique, M., Javed, F., Saleem, S., Zahra, F.T., McNevin, D. and Shahid, A.A. (2020). Population genetic portrait of Pakistani Lahore-Christians based on 32 STR loci. <i>Nature-Scientific Reports</i>.10:18960. DOI: https://doi.org/10.1038/s41598-020-76016-2. (IF= 4.379). 9. Zahra, F.T., Hussain, M., Khan, K. Aslam, M.A., Shafique, M., Rubab, A., Javeed, S. (2019). Genetic polymorphism of Y-chromosomal STRs in Gujjar population of Punjab. <i>International Journal of Legal Medicine</i>, DOI: https://doi.org/10.1007/s00414-019-02227-6. (IF= 2.222) 10. Sajid, A., Shafique, M., Shahzad, M., Shahid, A.A., (2019). Fingerprint patterns and ridge density variations in Pakistani population: A comparative Study. <i>Anthropologie: International Journal of Human Diversity and Evolution</i>. DOI: https://doi.org/10.26720/anthro.19.11.13.1. (IF= 0.2). 11. Aslam, M.A., Hussain, M., Khan, K. Zahra, F.T., Shafique, M., Javeed, S. (2019). Haplotype diversity of 17 Y-STRs in Sheikh population of Punjab. <i>International Journal of Legal Medicine</i>, DOI: https://doi.org/10.1007/s00414-019-02202-1. (IF= 2. 222). 12. Perveen, R., Shahid, A. A., Shafique, M., Shehzad, M., & Akram, M. (2019). Kashmiris phylogenetic depictions through uniparental and biparental genetic markers. <i>International Journal of Legal Medicine</i>, 1-2. DOI: https://doi.org/10.1007/s00414-019-02082-5. (IF= 2. 222) 13. Saleem, S., Shahid, A. A., Shafique, M., Rubab, A., Javed, F., & Husnain, T. (2019). Phylogenetic analysis and haplotype diversity in Christian residents of Lahore, Pakistan, using 17 Y-chromosomal STR loci. <i>International Journal of Legal Medicine</i>, 1-2. DOI: https://doi.org/10.1007/s00414-019-02030-3. (IF= 2. 222) 14. Shahzad, M., Hussain, M., Shafique, M., Perveen, R., Sheikh, N. (2019). Population genetic data of 30 insertion-deletion markers in Punjabi population of Pakistan. <i>International Journal of Legal Medicine</i>, 1-2. DOI: https://doi.org/10.1007/s00414-019-02029-w. (IF= 2. 222). 15. Javed, F., Sumbal, S., Shafique, M., Shahid, A.A., Shahzadi, A., Rani, N., Javid, H., Javed, M., Gillani, N. and Husnain, T., (2018). Male individualization using 12 rapidly mutating Y-STRs in Araein ethnic group and shared paternal lineage of Pakistani population. <i>International Journal of Legal Medicine</i>, 132(6), pp.1621-1624. DOI: https://doi.org/10.1007/s00414-018-1851-3 (IF= 2.094). 16. Perveen, R., Shahid, A. A., Shafique, M., Shahzad, M., & Husnain, T. (2017). Genetic variations of 15 autosomal and 17 Y-STR markers in Sindhi
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	population of Pakistan. <i>International Journal of Legal Medicine</i>, 131:1239–1240. DOI: https://doi.org/10.1007/s00414-017-1544-3. (IF= 2.382). 17. Shafique, M., Shahzad, M. S., Rahman, Z., Shan, M. A., Perveen, R., Shahzad, M., Hussain, M., Shahid, A.A., & Husnain, T. (2016). Development of new PCR multiplex system by the simultaneous detection of 10 miniSTRs, SE33, Penta E, Penta D, and four Y-STRs. <i>International Journal of Legal Medicine</i>, 130(6), 1409-1419. DOI: https://doi.org/10.1007/s00414-016-1372-x. (IF=2.382) 18. Shan, M.A., Hussain, M., Shafique, M., Shahzad, M., Perveen, R. and Idrees, M., (2016). Genetic distribution of 15 autosomal STR markers in the Punjabi population of Pakistan. <i>International Journal of Legal Medicine</i>, 130(6), pp.1487-1488. DOI: https://doi.org/10.1007/s00414-016-1351-2. (IF= 2.382) 19. Shafique, M., Hussain, M., Shan, M.A., Shahzad, M., Hussain, S., Hussain, N., Ehsan, F., Perveen, R. and Iqbal, M. (2015). Genetic diversity of 15 autosomal STR loci in the population of Southern Punjab Pakistan. <i>Forensic Science International: Genetics</i>, 19, pp. e1-e2. DOI: 10.1016/j.fsigen.2015.05.013. (IF = 4.988) 20. Shafique, M., Shahzad, M.S., Perveen, U., Parveen, R., Ali, A., Hussain, M., Rehman, Z., Shahid, A.A. and Husnain, T., (2015). Allele frequency distribution of 10 MiniSTRs in the Pashtun population of Pakistan. <i>International Journal of Legal Medicine</i>, 129(3), pp.467-468. DOI: https://doi.org/10.1007/s00414-015-1179-1. (IF= 2.862). 21. Shafique, M., Shahzad, M.S., Shan, M.A., Ali, A., Rahman, Z. and Husnain, T., (2015). Genetic polymorphism of ten MiniSTR loci in the population of Punjab Pakistan for forensic application. <i>International Journal of Legal Medicine</i>, 129(5), pp.937-942. DOI: https://doi.org/10.1007/s00414-014-1127-5. (IF= 2.862). 22. Perveen, R., Rahman, Z., Shahzad, M.S., Israr, M., Shafique, M., Shan, M.A., Zar, M.S., Iqbal, M. and Husnain, T. (2014). Y-STR haplotype diversity in Punjabi population of Pakistan. <i>Forensic Science International: Genetics</i>, 9, pp. e20-e21. DOI: https://doi.org/10.1016/j.fsigen.2013.12.004. (IF = 4.604) 23. Ilyas M., Shahzad M.S., Israr M., Jafri S.S., Shafeeq M., Zar M.S., Ali A1, Rahman Z. and Husnain T. (2012). Y-Chromosomal STR Haplotype Profiling in Yousafzai's living in Swat Valley Pakistan. <i>IALM conference proceedings</i>. 24. Malik, F., Kayani, M. A., Ansar, M., Ullah, O., Shafeeq, M., Chohan, S. et al. (2008). Development of 19-plex Y STR System and Polymorphism studies in Pakistani Population. <i>Academic Journal of Xi'an Jiaotong University</i>, 20(4), 267-273.
Publications National	1. Bashir, S., Shafique, M., Shahzad, M., Anjum, M. S., & Shahid, A. A. (2024). Exploring Phenotypic Diversity of Human Iris Features and Skin Color in Punjabi and Khyber Pakhtunkhwa Population of Pakistan. <i>Pakistan Journal of Zoology</i>, 56(2), 551. DOI: https://dx.doi.org/10.17582/journal.pjz/20211217091227. (IF= 0.6) 2. Shehzadi, A., Shafique, M., & Shahid, A. A. (2021). Haplotype Diversity of

	17 Y Chromosomal STRs in Jat Population of Pakistan. Pakistan Journal of Zoology, 54(4), 1981. DOI: https://dx.doi.org/10.17582/journal.pjz/20210805110806. (IF=0.687) 3. Piracha, B. J., Shafique, M., Shahid, A. A., Sajid, A., Javed, F., Shahzadi, A., Shahzad, M., (2020). Forensic Genetic Analysis of 11 Rapidly Mutating Y-STRs (RM-YSTRs) in Sindhi Population of Pakistan. <i>LGU Journal of Life Sciences</i>, 4(02), 96-122. 4. Bukhari, A., Ahmed, N., Khan, F., Shafique, M., & Sahi, A. S. (2020). Assessment of genetic diversity and genetic characterization of Nili Ravi buffalo breed utilizing microsatellite markers. <i>Advancements in Life Sciences</i>, 7(4), 277-280. 5. Sumbal, Javed, F., Rani, N., Javaid, H., Ali, Q., Shafique, M., Jillani, S.M.N., Sahibzada, K.I. (2017). An Insilco approach to analyze epidemiological association between all Asian strains of Crimean Congo hemorrhagic fever virus accentuating Pakistani strains through biostatistical approach to design vaccine. <i>Sci.Int.(Lahore)</i>,29(1),195-202. 6. Shahzad, M., Shafique, M., Hussain, M., Shan, M. A., Perveen, R., Rehman, Z., & Idrees, M. (2016). Successful DNA Profiling for Identification of burnt Families from their bones using AmpFℓSTR Identifiler® Plus Kit. <i>Advancements in Life Sciences</i>, 3(2), 59-62. 7. Shan, M.A., Tahira, F., Shafique, M., Hussain, M., Perveen, R., Shahzad, M., Ehsan, F., Shahzad, M.S., Rahman, Z., Ali, Q. and Iqbal, M., (2015). Estimation of different biochemical intensities in drinking water from eastern region of Lahore city. <i>Advancements in Life Sciences</i>, 2(3), pp.131-134. 8. Daud, S., Shahzad, S., Shafique, M., Bhinder, M.A., Niaz, M., Naeem, A., ur Rehman, Z. and Husnain, T., (2014). Optimization and validation of PCR protocol for three hypervariable regions (HVI, HVII and HVIII) in human mitochondrial DNA. <i>Advancements in Life Sciences</i>, 1(3), pp.165-170. 9. S. Yassir Abbas, Saqib Shahzad, Abdul Qayyum Rao, M. Hashim Raza, F. Arshad, M. Shafique, Ziaur Rahman, A. Ali Shahid, Zahoor Ahmed and S. Riazuddin (2003). Development of STR Multiplex System (D5S818, D7S820 and D18S51) for Forensic Casework. <i>Proceedings of Pakistan Journal of Zoology</i>. Vol. 23:167-174. 10. Salam, A., Ali, M., Shafique, M., Azeem, A. and Khan, B.A (2002). Studies on biodiversity in relation to seasonal variations in mixed water of River Ravi and Chenab at Bakarpur, Kabirwala, Punjab, Pakistan. <i>Biologia</i>. 48(1&2). PP123-130. 11. Ali, M., Salam, A., Azeem, A., Shafique, M. and Khan, B.A. (2000). Studies on the effect of seasonal variations on physical and chemical characteristics of mixed water from River Ravi and Chenab at union site in Pakistan. <i>Journal of Research Science</i>, 11 (1).11-17.
Abstracts	1. Muhammad Shafique, Namra Sajid, Yasir Aziz, Muhammad Afzal, Ruhma Arshad, Syeda Bariyyah Hasnain, Muhammad Sheryar, Abida Shehzadi, Muhammad Shahzad, Saliha Bashir, Faqeeha Javed, Ahmad Ali Shahid. (2024). Genetic polymorphism of 23 short tandem repeat (STR) loci in six Pakistani population groups using PowerPlex Fusion system. 6thInternational Conference on Advances in Biosciences at GC University Lahore, Pakistan,

	18-19 April, 2024, p9. 2. Faqeeha Javed, Muhammad Shafique, Abida Shehzadi, Tasawar Abbas, Samra Maqsood and Ahmad Ali Shahid. (2024). A novel multiplex system for rapidly mutating Y-STR with enhanced mutation rates to distinguish paternal lineage. 6th International Conference on Advances in Biosciences at GC University Lahore, Pakistan, 18-19 April, 2024, p44. 3. Muhammad Shafique, Yasir Aziz, Muhammad Shahzad, Ahmad Ali Shahid. (2021). Genetic Variation of 22 Autosomal STR Loci in Balochistan Population of Pakistan. 4th international symposium on advances in Molecular Biology of Plants and Health Sciences, December, 23-24, p159. 4. Muhammad Afzal, Muhammad Shafique, Ahmad Ali Shahid. (2021). Genetic Characterization of 22 Autosomal STRs in Gilgit Baltistan Population of Pakistan. 4th international symposium on advances in Molecular Biology of Plants and Health Sciences, December, 23-24, p142. 5. Muhammad Shafique, Namra Sajid, Muhammad Shahzad, Ahmad Ali Shahid. (2021). Genetic Diversity of 22 Autosomal STR Loci in Khyber Pakhtunkhwa Population of Pakistan. 4th international symposium on advances in Molecular Biology of Plants and Health Sciences, December, 23-24, p141. 6. Iqra Ilyas, Muhammad Shafique, Shahzad Akhtar, Ata ul Haq Shahzad, Yasir Aziz, Ahmed Ali Shahid. (2021). Detection of Trace Explosives Through Raman Spectroscopy and Touch DNA Profiling from Latent Fingerprints. 4th international symposium on advances in Molecular Biology of Plants and Health Sciences, December, 23-24, p55. 7. Abida Shehzadi, Muhammad Shafique, Faqeeha Javed and Ahmad Ali Shahid. (2021). Developmental Validation of New 21-Plex PCR Assay for Forensic Applications. 4th international symposium on advances in Molecular Biology of Plants and Health Sciences, December, 23-24, p42. 8. Ahmad Ali Shahid, Saliha Bashir, Muhammad Shafique. (2021). Phenotypic variations based on pigmented traits and iris features in Pakistani population. Presented to Scientific Conference "Science, Technology and Development of Innovative Technologies", dedicated to the 30th anniversary of independence of Turkmenistan. Dated June 12-13. P-476. 9. Muhammad Shafique, Abida Shehzadi, Ahmad Ali Shahid. (2021). Development of 21-plex for the simultaneous detection of autosomal, Y AND X-chromosomal STRs. Presented to Scientific Conference "Science, Technology and Development of Innovative Technologies", dedicated to the 30th anniversary of independence of Turkmenistan. Dated June 12-13. P-474. 10. Sajid, A. Shafique, M. Shahid, A.A. and Hasnain, T. (2019). Prediction of fingerprint patterns through DNA analysis in Pakistani population. Proceeding of International conference on Recent Innovations in Molecular Sciences held at University of the Punjab Lahore Pakistan 6-8 November, 2019. P-184. 11. Javed, F., Sumbal, S., Shafique, M., Shahid, A. A., Shahzadi, A., Rani, N., Javid, H., Javed, M., Gillani, N., Husnain, T. (2019). Male individualization using 12 rapidly mutating Y-STRs in Araeian ethnic group and shared paternal lineage of Pakistani population. Proceeding of International conference on Recent Innovations in Molecular Sciences held at University of the Punjab Lahore Pakistan 6-8 November, 2019. P-175. 12. Shafique, M. Rubab, A. Saleem, S. Shahid, A.A. and Hasnain, T. (2019). Genetic Characterization of 15 Autosomal and 17 Y-STRs in Christian Population of Pakistan. Proceeding of International conference on Recent Innovations in Molecular Sciences held at University of the Punjab Lahore Pakistan 6-8 November, 2019. P-111. 13. Noshaba Rani, Muhammad Shafique, Ahmad Ali Shahid, Faqeeha Javed, Sumbal and Tayyab Husnain (2018). Forensic evaluation of 10 CODIS miniSTR loci in Arain
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	Population of Pakistan. <i>Advancements in Life Sciences</i>. (Proceedings of international symposium on advances in Molecular Biology of Plants and Health Sciences, December, 19-21, p12). 14. Sumbal, Muhammad Shafique, Faqeeha Javed, AhmadAli Shahid and Tayyab Husnain (2017). Individualization of shared paternal lineages by using Twelve Rapidly Mutating Y-STRs. <i>Advancements in Life Sciences</i>. (Proceedings of international symposium on advances in Molecular Biology of Plants and Health Sciences, November, 21-23, p54). 15. Khadija Tahira, Faqeeha Javed, Madeeha Javed, Sidra Saleem, Muhammad Shafique and Shah Jahan (2017). Molecular detection of TEM and CTX-M genes in β-lactamase producing Gram negative rods isolated from clinical specimens of Pakistani population. <i>Advancements in Life Sciences</i>. (Proceedings of international symposium on advances in Molecular Biology of Plants and Health Sciences, November, 21-23, p24). 16. Rukhsana Perveen, Ahmad Ali Shahid, Muhammad Shafique, Muhammad Idrees, Tayyab Husnain. (2016).Genetic Signatures of Y chromosome STRs in Sindhi Population of Pakistan. YHRD-Haploid Markers 2016 update on DNA variation Berlin, May 20-21, p-A24. 17. M. Shafique, M. S. Shahzad, Z. Rahman, A.A. Shahid and T. Husnain (2015) Development of a MiniSTR system for the analysis of highly degraded DNA. <i>Advancements in Life Sciences</i>. (Proceedings of international symposium on advances in Molecular Biology of Plants and Health Sciences, December 29-31, p22). 18. H.A. Riaz, A.A. Shahid, M. Shafique, S.M.N. Jillani and T. Husnain (2015) Genetic association analysis of the MAOA-uVNTR and 5HTTLPR, candidate genes for aggression in maltreated individuals. <i>Advancements in Life Sciences</i>. (Proceedings of international symposium on advances in Molecular Biology of Plants and Health Sciences, December 29-31, p55).
Patents	1. A patent application No. 172/2015 filed dated 24th March, 2016 entitled “Development a Process of PCR Multiplex System for the Simultaneous Detection of Conventional STRs, MiniSTRs and Y-STRs. 2. A patent application No. 725/2020 filed dated 27/10/2020 entitled “Development of new 21-plex STR process for the simultaneous detection of autosomal, Y and X-chromosomal markers. 3. A patent application No. 819/2024 filed dated 19th November, 2024 entitled “Development of a process of PCR multiplex system for rapidly mutating Y chromosomal short tandem repeat loci”. 4. A patent application No. 868/2025 filed dated 14th November 2025 entitled “Method for simultaneous prediction of human eye and skin pigmentation using a defined SNP panel”.
International Conferences/ Seminars/ Workshops	1. A participation in live webinar on “Thalassemia Reports/writing the story of Thalassemia” held by MDPI on 08 May 2026. 2. Participation and oral presentation in 8th International Conference in Applied Zoology on 13-14 October 2025 at University of the Punjab Lahore. 3. Participation in International Cotton Conference 2025 on October 7-8, 2025, at CEMB, University of the Punjab Lahore. 4. A participation in seminar on “Together We Innovate Seminar: Advancing Science Through Collaboration” held by Thermo Fisher Scientific and WWS on 18 September 2025 at The Nishat Hotel, Emporium Mall, Johar Town, Lahore. 5. A participation in live webinar on “Human Identification Solutions” conference held by Thermo Fisher Scientific on 13 and 14 May 2025. 6. A participation in “Modern Trends in Forensic DNA analysis with physical demonstration of ANDE System” held at Marriott hotel Islamabad on 06 May 2025. 7. A webinar on “Improving Research Performance using Elsevier’s Scopus” attended on 10 April 2025.

	8. Participation as an invited speaker in two days' workshop on Molecular Biology in Forensic Science: from sampling to data processing at CABB, university of Faisalabad on October 01-02, 2024. 9. Participation as an invited speaker in International Conference on Emerging Trends in Forensic Science at University of Swat, Pakistan, 2-4 July 2024. 10. Participation as an oral presenter in 6th International Conference on Advances in Biosciences at GC University Lahore, Pakistan, 18-19 April 2024. 11. MERIT Healthcare Research & Innovation Landscape in Pakistan Webinar on September 16, 2023 (speaker_ Dr. Ashraf Tahir_PFSA). 12. ISFG Summer School Virtual Edition 2023 WORKSHOP 10.2 on Bioinformatics MPS: Advanced Jerry Hoogenboom & Jonathan King September 7, 2023. 13. ISFG Summer School Virtual Edition 2023 WORKSHOP 10.1 on Bioinformatics MPS: Basic Jerry Hoogenboom & Jonathan King September 6, 2023. 14. R203: Data Manipulation and Visualization in R. A 6-hour course delivered by Intersect Australia on Thursday, March 30 and Friday, March 31, 2023, at University of Technology, Sydney. 15. R101: Learn to Program: R. A 6-hour course delivered by Intersect Australia on Thursday, March 23 and Friday, March 24, 2023, at University of Technology, Sydney. 16. A webinar on 'Clinical Diagnostics & Research 2022' attended on 16 November 2022. 17. A webinar on 'The future of predictive genomics in Israel' attended on 22 June 2022. 18. A workshop on 'Empowering knowledge on ethical publishing: Mastering the art of identifying predatory, fake and cloned journals' at APAC Customer Success Hub, on 08 June 2022. 19. HID future trends in forensic DNA technology seminar series (virtual) by Thermo Fisher Scientific on June 16, 2022. 20. A webinar on 'Responding to SARS-CoV-2 Variants, such as Omicron: Detection and Surveillance' attended on 28 March 2022. 21. Two-day workshop attended on "Promoting Research Excellence in Academics across Pakistan" (1st and 2nd February 2022) at Higher Education Commission, Pakistan. 22. A webinar on 'virtual event Lab Compliance Connect' attended on 26 January 2022. 23. Participation as organizer in 4th international symposium on advances in Molecular Biology of Plants and Health Sciences, in December 23-24, 2021 held at Centre of Excellence in Molecular Biology, University of the Punjab Lahore. 24. Participation in virtual event IonWorld 2021 organized by Labroots on October 14, 2021. 25. A paper presented on iris features and participated online in international conference on Science, Technology and development of innovative technologies held by Academy of Sciences of Turkmenistan on June 12-13, 2021. 26. A paper presented on STR multiplex development and participated online in international conference on Science, Technology and development of innovative technologies held by Academy of Sciences of Turkmenistan on June 12-13, 2021. 27. A oneday international symposium on development of CKC technology in collaboration with ALEENAH SEED COMPANY Khartoum Sudan held at Centre of Excellence in Molecular Biology, University of the Punjab Lahore on December 15, 2020. 28. A webinar 'Microbiome and biology strain analysis of dairy starter cultures confirmation' on October 8, 2020. 29. A webinar 'Detection techniques and epidemiology studies for SARS-CoV-2 infection' on October 8, 2020. 30. A webinar 'ProQuest E-book central advanced training' on September 23, 2020. 31. A webinar 'Journal hosting in Scopus confirmation' on August 25, 2020. 32. A webinar 'Making labs effective with remote learning' on July 28, 2020. 33. A webinar on 'How to write a great research paper, and get it accepted by good journal' organized by Elsevier in collaboration with HEC on May20, 2020. 34. A seminar on Genomic applications of PCR, qPCR and NGSheld at PC hotel Lahore on December 12, 2019. 35. International symposium on 'STEM CELL AND REGENERATIVE MEDICINE' held at Centre of Centre of Excellence in Molecular Biology, University of the Punjab Lahore on
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	November 15, 2019. 36. Oral Presentation in International conference on Recent Innovations in Molecular Sciences held at University of the Punjab Lahore Pakistan 6-8 November, 2019. 37. Participation in Web of Science Conference was held on 11 March, 2019 at Centre of Excellence in Molecular Biology, University of the Punjab Lahore. 38. Participation as organizer in 3rd international symposium on advances in Molecular Biology of Plants and Health Sciences, during 19-21 December, 2018 held at Centre of Excellence in Molecular Biology, University of the Punjab Lahore. 39. Participation as organizer in 2nd international symposium on advances in Molecular Biology of Plants and Health Sciences, November 21-23 2017 held at Centre of Excellence in Molecular Biology, University of the Punjab Lahore. 40. Participation in workshop on PAK-CHINA Young Scientists Exchange Program held on April 21, 2017, at National Centre of Excellence in Molecular Biology, University of the Punjab Lahore. 41. Participation in seminar on advances in QX200 droplet digital PCR technology “Advances in PCR Technology” by Dr. Amro Kabbara (Saudi) on 5th April 2017 at Centre for Advanced Molecular Biology, University of the Punjab Lahore. 42. Participation in a seminar on FPLC with respect to protein purification by Mr. Nicolas Azar (Austrian National) on Friday 3rd June 2016 at Centre for Advanced Molecular Biology, University of the Punjab Lahore. 43. Participation in 1st International Symposium on Advances in Molecular Biology of Plants and Health Sciences was held on 29-31 December 2015 at National Centre of Excellence in Molecular Biology, University of the Punjab Lahore. 44. Participation in International Symposium on Molecular Forensic: Emerging Trends organized on May 29, 2014, at University of Health Sciences Lahore, Pakistan. 45. Participation in 17th International Symposium on Human Identification was held October 9-12, 2006, sponsored by Promega Corporation at Nashville, Tennessee, USA. 46. Participation in a seminar on Advancing Justice through DNA Technology National Missing Persons Program at Strand Analytical Laboratories, Indianapolis, Indiana, USA August 04, 2006. 47. Participation in a seminar on Population and Statistical Methodology used in the Field of Human Identification at Strand Analytical Laboratories, Indianapolis, Indiana, USA June 19, 2006.
National Conferences/ Seminars/ Workshops	1. A participation in a workshop on “AI Revolution in Healthcare: Transforming Diagnostics and Shaping Policy” organized by Centre for Public Policy and Governance (CPPG) on 16 September 2025 - 0900 - 1200 E-002 - E Building, Forman Christian College University Lahore. 2. Participation as a guest speaker online in “TechnoMolecules Conference 2025; Emerging Technologies in Molecular Biosciences” held at Emerson University Multan on 28-29 April 2025. 3. Participation as a panel member in interactive session at 10th Invention to Innovation Summit 23-24 April 2025 at University of the Punjab, Lahore. 4. Participation as an oral presenter in 10th Invention to Innovation Summit 23-24 April, 2025 at University of the Punjab, Lahore. 5. A webinar attended on “Improving research performance using Elsevier’s Scopus” through HEC by Elsevier on April 10, 2025. 6. Participation in a “WORKSHOP TO MARK AND CELEBRATE WORLD WATER DAY” at CEMB on March 26, 2025. 7. Participation in ‘Hands on training on patent claims drafting’ organized by ORIC, PU at ICET seminar hall, PU Lahore on December 18, 2024. 8. As a Focal Person in one day workshop on Mastering Forensic DNA data analysis with GeneMapper ID software at CEMB, PU, Lahore on December 05, 2024. 9. As a Chief Organizer in one day workshop on Mastering Forensic DNA data analysis with GeneMapper ID software at CEMB, PU, Lahore on December 05, 2024. 10. Participation as an oral presenter in 9th Invention to Innovation Summit 27-28 February, 2024

	at University of the Punjab, Lahore. 11. Participation in 'All Punjab universities Innovation Expo 2023' held by Punjab Higher Education Commission on 20 November, 2023. 12. A Cyber biosecurity training workshop organized by IOM, GCUF, health security partners (HSP), USA and IOM, UVAS Lahore held at UVAS dated October 25-26, 2023. 13. A webinar 'HEC ISF (innovator seed fund) Pre-Launch Event-Challenges and Innovation opportunities in the health care and Health Tech sectors' on September 3, 2021. 14. A webinar 'virtual Pak Pharma and Health care Expo, attended on August 25-28, 2020. 15. A mini-Symposium on Drug development from medicinal plants was held in Lecture Hall at CEMB on December 06, 2019. 16. Training on STRATEGIC TIME MANGEMENT was held in Lecture Hall at CEMB on October 18, 2019. 17. A scientific symposium on Brain, Neurogenetics and Regenerative Medicine was held at RIAZUDDIN AUDOTIORUIM CEMB jointly organized by CEMB and UHS on October 03, 2019. 18. A seminar from 'Bio-Pharmaceutical Group' was held in Lecture Hall at CEMB on August 01, 2019. 19. A seminar from 'Plant biotechnology Group' was held in Lecture Hall at CEMB on July 07, 2019. 20. Participation in 8th invention to innovation summit 2-3April, 2019 at University of the Punjab, Lahore. 21. A seminar on 'Stem cells skin' was held in Lecture Hall at CEMB on March 04, 2019. 22. A seminar on 'Genetic diseases' was held in Lecture Hall at CEMB on January 31, 2019. 23. A seminar on 'forensic DNA typing research was held in Lecture Hall at CEMB on November 15, 2018. 24. A seminar on 'stem cell research was held in Lecture Hall at CEMB on October 04, 2018. 25. A seminar on 'Genomics' was held in Lecture Hall at CEMB on August 30, 2018. 26. A seminar on 'Genetic diseases' was held in Riazuddin auditorium at CEMB on July 12, 2018. 27. A technical session on 'GMO / Mycotoxin Detection Technologies' conducted by Belvic Lee Regional Senior Sales Manager from Romer Labs, Regional Office, Singapore at Centre of Excellence in Molecular Biology University of the Punjab, Lahore on 24-04-2018. 28. One day workshop on 'Drought Stress, challenges for agriculture and mitigation strategies' at Centre of Excellence in Molecular Biology, University of the Punjab, Lahore on March 17, 2018. 29. Participation in 7th invention to innovation summit 7th – 8th March, 2018 at University of the Punjab, Lahore. 30. A National Forensic Science Conference held at Marriott Hotel Islamabad on 15-16 February 2018 arranged by National Forensic Science Agency Islamabad, attended and abstract orally presented. 31. A lecture seminar on 'Seven Habits of a Successful Person' delivered by Prof. Syed Qasim Ali Shah (Vice Principal Government Engineering Academy Punjab Lahore) at Centre of Excellence in Molecular Biology, University of the Punjab, Lahore on January 19, 2018. 32. A lecture on 'Stress Management and Success in Life' delivered by Dr. Saima Sandhu CEO, Neuro-Psychological Clinic, New Jersey USA at Centre of Excellence in Molecular Biology, University of the Punjab, Lahore on November 08, 2017. 33. A workshop on NRPUR research projects was attended at Al-Razi Hall, Centre for Undergraduate Studies University of the Punjab Lahore organized by ORIC on October 06, 2017, from 10:00am to 11:00am. 34. Participation in 2 days workshop in patent filing held at University of the Punjab Khorana auditorium-chemistry deptt, Lahore on 17-18 May 2017. 35. Participation in 6th invention to innovation summit 8-9 March 2017 at University of the Punjab, Lahore. 36. An awareness seminar on Lungs and Bronchial Diseases organized by CAMB, University of the Punjab, GULL'S and Pakistan Chest Society held on November 17, 2016, at Centre for Applied Molecular Biology (CAMB). 37. A lecture on Phen-Gen: combining phenotypes and genotypes to analyze rare disorders
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	delivered by Dr. Asif Javed, Research Scientist at Genome Institute of Singapore held on 02.11.2016 at National Centre of Excellence in Molecular Biology, University of the Punjab Lahore. 38. A Day with Biosafety held on October 25, 2016, at CEMB jointly organized by Gull's Associates, Congress of Molecular Biology and National Centre of Excellence in Molecular Biology, University of the Punjab Lahore. 39. A technical seminar on Biosafety was held on 25.03.16 by ESCO Ltd at National Centre of Excellence in Molecular Biology, University of the Punjab Lahore. 40. ICGEB COURSE ON 'BASIC BIOTECHNOLOGY TECHNIQUES' held on March 07-09, 2016, at National Centre of Excellence in Molecular Biology, University of the Punjab Lahore. 41. A cancer awareness seminar was held on February 26, 2016, at National Centre of Excellence in Molecular Biology, University of the Punjab Lahore. 42. Hand on training workshop on Next Generation Sequencing Data analysis held on October 14-16, 2015, at National Centre of Excellence in Molecular Biology, University of the Punjab Lahore. 43. Ist National Conference on Integrated Role of Forensic Sciences in Criminal Justice System held on September 25, 2014, at The University of Lahore, Lahore. 44. A seminar on New Technological Tools and Applications in Biological Research held on 27.09.2013 at Centre for Applied Molecular Biology (CAMB). 45. A seminar on Evolution in Molecular Diagnostics was held on 30.08.2013 at Centre for Applied Molecular Biology (CAMB). 46. A 10th Training Workshop on Modern Forensic Techniques for Crime Scene Search and Investigations, jointly organized by Strand Analytical Laboratories Indiana, USA and Center of Excellence in Molecular Biology, Lahore, Pakistan. (March 24-25, 2008). 47. A 9th Training Workshop on Modern Forensic Techniques for Crime Scene Search and Investigations, jointly organized by Center of Excellence in Molecular Biology, Lahore, Pakistan and CAMB, Lahore. (November 21-22, 2007). 48. A 8th Training Workshop on Modern Forensic Techniques for Crime Scene Search and Investigations, jointly organized by Strand Analytical Laboratories Indiana, USA and Center of Excellence in Molecular Biology, Lahore, Pakistan. (July 18-19, 2007). 49. A 7th Training Workshop on Modern Forensic Techniques for Crime Scene Search and Investigations, jointly organized by Strand Analytical Laboratories Indiana, USA and Center of Excellence in Molecular Biology, Lahore, Pakistan. (December 15-16, 2006). 50. A Fifth Training Workshop on Modern Forensic Techniques for Crime Scene Search and Investigations, jointly organized by Strand Analytical Laboratories Indiana, USA and Center of Excellence in Molecular Biology, Lahore, Pakistan. (January 06-07, 2006). 51. A Fourth Training Workshop on Modern Forensic Techniques for Crime Scene Search and Investigations, jointly organized by Forensic Laboratory, Indianapolis, Marion County. USA and Center of Excellence in Molecular Biology, Lahore, Pakistan. (January 10-11, 2005). 52. A Two-Day Training Workshop on Modern Forensic Techniques for Crime Scene Search and Investigations, jointly organized by Forensic Laboratory, Indianapolis, Marion County. USA and Center of Excellence in Molecular Biology, Lahore, Pakistan. (October 11-12, 2004). 53. A Three-Day Training Workshop on Modern Forensic Techniques for Crime Scene Search and Investigations, jointly organized by Forensic Laboratory, Indianapolis, Marion County. USA and Center of Excellence in Molecular Biology, Lahore, Pakistan. (March 8-10, 2004). 54. Stem cell workshop jointly organized by COMSTECH and Center of Excellence in Molecular Biology, Lahore, Pakistan. (2003). 55. A five-day Training Workshop on Crime Scene and Modern Forensic Techniques in Police Investigations" jointly organized by Forensic Laboratory, Indianapolis, Marion County. USA and Center of Excellence in Molecular Biology, Lahore, Pakistan. (January 12-17, 2003).
Honors and Awards	• A reviewer certificate award by the Journal of Nucleic Acids in 2024. • A best presenter award in Biological Sciences at 9th Invention to Innovation Summit 27-28 February, 2024 at University of the Punjab, Lahore. • HEC Post doctorate fellowship award 2022-2023. • Performance evaluation Award for the year of 2020.

	• Incentive Award for the year of 2020 on publications. • Performance evaluation Award for the year of 2019. • Incentive Award for the year of 2019 on publications. • A certificate of Appreciation awarded on successfully organizing 3rd international symposium on Advances in Molecular Biology of Plants and Health Sciences 19-21 December, 2018. • Incentive Award for the year of 2018 on publications. • A Performance Evaluation Award for the year of 2018. • Guest Speaker in National Forensic Science Conference held at Marriott Hotel Islamabad on 15-16 February, 2018 arranged by National Forensic Science Agency Islamabad. • Incentive Award for the year of 2017 on publications. • A Performance Evaluation Award for the year of 2017. • A Technology Award at 5th Invention to Innovation Summit 2016 held on March 02-03, 2016 University of the Punjab Lahore. • A Performance Evaluation Award for the year of 2016. • A Performance Evaluation Award for the year of 2015. • A letter of Appreciation as speaker in International Symposium on Advances in Molecular Biology of Plants and Health Sciences held on 29-31 December, 2015. • HEC Indigenous PhD scholarship award (2011-2014). • Court testimonies as a Forensic DNA expert- 05.
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