

Zarrin Basharat

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Total publications: 35, Total impact factor: ~80.1
Google scholar citations: 319, Hirsch index: 11, i10 index: 11
Scopus citations: 144, Hirsch index: 6

OBJECTIVE

Serve knowledge and facilitate my students to reach their utmost potential in all my capacity!

EXPERIENCE

- Apr 2021-todate** **Assistant Professor**, Jamil–ur–Rahman Center for Genome Research, Dr. Panjwani Center for Molecular Medicine and Drug Research, International Center for Chemical and Biological Sciences, University of Karachi, Karachi–75270, Pakistan.
- Jan 2018-Apr 2021** **Research officer**, Jamil–ur–Rahman Center for Genome Research, Dr. Panjwani Center for Molecular Medicine and Drug Research, International Center for Chemical and Biological Sciences, University of Karachi, Karachi–75270, Pakistan.
- Oct 2018- Aug 2019** **Post-doc Fellow**, Laboratoire Génomique, Bioinformatique et Chimie Moléculaire, Conservatoire National des Arts et Métiers, Paris–75003, France.
Topic: Genome wide association studies of AIDS
- Mar 2017- Sep 2017** **Visiting Graduate Researcher**, University of British Columbia, Vancouver, Canada

EDUCATION

- 2014- 2018** **Doctor of Philosophy (Environmental Sciences)**
Fatima Jinnah Women University, Rawalpindi, Pakistan
Thesis: Genomic and proteomic analysis of indigenous bacteria under the stress of selected micropollutants.
- 2012- 2014** **M.Phil. (Environmental Sciences)**
Fatima Jinnah Women University, Rawalpindi, Pakistan
Thesis: *In vitro* and *in silico* analysis of enzymes from indigenous bacteria for the remediation of azo dyes.
- 2007-2011** **BS (Hons) (Bioinformatics)**
International Islamic University, Islamabad, Pakistan
Thesis: Estimation of genetic diversity in major Pakistani wheat varieties using simple sequence repeat analysis.
- 2004-2006** **FSc (Pre-medical)**
FBISE Islamabad (1st Division)

COMPUTATIONAL SKILLS

Certifications

June 2010-Sep 2010 BioJAVA

Programming languages: C/C++, JAVA, Bash/Shell, R (Level of Expertise: medium)

Softwares (Research related): PLINK, PRSice, SNPtest, Meta, SNP2HLA, PrediXcan, MaxQuant, Perseus, MEGA, PHYLIP, I-TASSER, BLAST, Galaxy, Modeller, Cytoscape, NaviCell, WEKA, MINERVA, VMD, MOE, Discovery Studio, Pymol, WinCoot, CCP4, BioEdit, Jupyter notebook etc

Softwares (other): MS-Office, SPSS, Endnote, NVivo, Matlab, RefWorks, Mendeley, Zotero, Adobe Photoshop, Inkscape, Dreamweaver

Packages: Oracle 9.0i, J-Builder, Netbeans, Turbo C

Operating system: Windows, Linux (Ubuntu)

BIOTECHNICAL SKILLS

Wet Lab: Isolation and characterization of microbes, bioactive compound and peptide production, bacterial assisted bioremediation, DNA extraction, gel electrophoresis, PCR, library preparation, Illumina sequencing, SDS-PAGE, IR-spectroscopy, proteomics using LC-MS/MS, metabolite analysis through LC and GC-MS.

Dry Lab: Genome assembly, genome annotation, NGS data mining and analysis, big data analysis (genome wide association, transcriptome wide association), Imputation, RNA sequence analysis, proteome data analysis, bio/chem/medical-informatics toolkits.

RESEARCH PUBLICATIONS

Peer reviewed

* refers to corresponding

refers to equal contributing first author

1. Muhammad, I., Rahman, N., Gul-e-Nayab, Niaz, S., **Basharat, Z.**, Efferth, T., Khan, H. (2021). Screening of potent phytochemical inhibitors against SARS-CoV-2 protease and its two Asian mutants. *Computers in Biology and Medicine*. 104362. DOI: 10.1016/j.compbiomed.2021.104362 (**Impact factor: 3.4**)
2. Abdulrehman, Ramzan, F., **Basharat, Z.**, Shakeel, M., Ghani, Usman., Khan, I. A. (2021). Comprehensive comparative genomic and microsatellite analysis of SARS, MERS, BAT-SARS and COVID-19 coronaviruses. *Journal of Medical Virology*. DOI:10.1002/jmv.26974 (**Impact factor:2.1**)
3. Agah, S., Akbari, A., Sadeghi, E., Morvarizadeh, M., **Basharat, Z.**, Palmowski, A. and Heshmati, J. (2021). Resveratrol supplementation and acute pancreatitis: A comprehensive review. *Biomedicine & Pharmacotherapy*. 137: 111268. (**Impact factor: 4.5**)
4. **Basharat, Z.**, Jahanzaib, M., Yasmin, A., Khan, I. A. (2021). Pan-genomics, drug candidate mining and ADMET profiling of natural product inhibitors screened against *Yersinia pseudotuberculosis*. *Genomics*. 113(1): 238-244. (**Impact factor: 6.2**)
5. **Basharat, Z.**, Majeed, S., Saleem, H., Khan, I.A., Yasmin, A. (2020). An overview of approaches and associated algorithms for single cell RNA-Seq data imputation. *Current Genomics*. 21. (**Impact Factor: 2.3**)
6. Wu, W., Leja, M., Tsukanov, V. V., **Basharat, Z.**, Hua, D., Hong, W. (2020). Sex differences in relationship among alcohol, smoking and *Helicobacter pylori* infection in asymptomatic individuals. *Journal of International Medical Research*.48(5):1-9. (**Impact Factor: 1.4**)
7. Rahman, N., Ali, F., **Basharat, Z.**, Shehroz, M., Khan, M. K., Jeandet, P., Nepovimova, E., Kuca, K. Khan, H. (2020). Vaccine design from the ensemble of surface glycoprotein epitopes of SARS-CoV-2: An immunoinformatics approach. *Vaccines*, 8(3), 423. (**Impact factor: 4.1**)
8. Rahman, N., **Basharat, Z.**, Yousuf, M., Rastrelli, L., Castaldo, G., Khan, H. (2020). Virtual screening of natural products against TMPRSS2, the priming agent of coronavirus 2 (SARS-CoV-2). *Molecule*. 25(10):2271. (**Impact Factor: 3.06**)

9. Hong, W., Zimmer, V., **Basharat, Z.**, Zippi, M., Stock, S., Geng, W., Bao, X., Dong, J., Pan, J., Zhou, M. (2020). Association of total cholesterol with severe acute pancreatitis: A U-shaped relationship. *Clinical Nutrition*. 39(1):250-257. DOI: 10.1016/j.clnu.2019.01.022 **(Impact factor: 6.4)**
10. Messaoudi, A., Zoghalmi, M., **Basharat, Z.**, Sadfi-Zouaoui, N. (2019). Identification of a potential inhibitor targeting MurC ligase of the drug resistant *Pseudomonas aeruginosa* strain through structure based virtual screening approach and in vitro assay. *Current Pharmaceutical Biotechnology*. 20(14):1203-1212. DOI: 10.2174/1389201020666190719123133 **(Impact factor: 1.5)**
11. Hong W., Tang H. L., Dong X. L., Hu S. K., Yan Y., **Basharat Z.**, Zimmer V., Tzivian L., Leja M., Gao Z. H., Sharma A., Tsukanov V., Geng W. J. (2019). Prevalence of *Helicobacter pylori* infection in a third-tier Chinese city: relationship with gender, age, birth-year and survey years. *Microbiota in Health and Disease*. 1: e150. DOI: 10.26355/mhd_201911_150
12. Brown, P., RELISH Consortium (including **Basharat, Z.**), Zhou, Y. (2019). Large expert-curated database for benchmarking document similarity detection in biomedical literature search. *Journal of Biological Databases and Curation*. 2019; baz085. DOI: 10.1093/database/baz085 **(Impact factor: 3.7)**
13. **Basharat, Z.**, Yasmin, A., Masood, N. (2018). Cancer immunomics in the age of information: Role in diagnostics and beyond. *Current Pharmaceutical Design*, 24(32):3818-3828. DOI: 10.2174/1381612824666181106091903 **(Impact factor: 2.4)**
14. Geng, W., Jia, D., Wang, Y., Jin, S., Ren, Y., Liang, D, Zheng, A., Tang, H., **Basharat, Z.**, Zimmer, V., Stock, S., Zippi, M., Hong, W. (2018). A prediction model for hypoxemia during routine sedation for gastrointestinal endoscopy. *Clinics*. 73:E513. DOI: 10.60601/clinics/2018/e513 **(Impact factor: 1.2)**
15. Hong, W., Dong, L., Stock, S., **Basharat, Z.**, Zippi, M., Zhou, M. (2018). Prevalence and characteristics of colonic adenoma in mainland China. *Cancer Management and Research*, 2018(10): 2743-2755. DOI: 10.2147/CMAR.S166186 **(Impact factor: 2.2)**
16. **Basharat, Z.**, Tanveer, F., Yasmin, A., Shinwari, Z. K., He, T. and Tong, Y. (2018). Genome of *Serratia nematodiphila* MB307 offers unique insights into its diverse traits. *Genome*. 1-8. DOI: 10.1139/gen-2017-0250 **(Impact factor: 1.9)**
17. **Basharat, Z.**, Novo, L.A.B., Yasmin, A. (2018). Genome editing weds Crispr: what is in it for phytoremediation? *Plants*. 7(3):51. DOI:10.3390/plants7030051. **(Impact factor: 2.6)**
18. **Basharat, Z.**, Yasmin, A., He, T. and Tong, Y. (2018). Genome sequencing and analysis of *Alcaligenes faecalis* subsp. phenolicus MB207. *Scientific Reports*. 8(1):3616 DOI: 10.1038/s41598-018-21919-4. **(Impact factor: 4.0)**
19. Fateen, A., Ali, S. A., Baig, D. N., **Basharat, Z.** (2018). Profilin (pfn) isoform's transcriptional and bioinformatic exploration in *Mus musculus* brain tissues development. *Gene Reports*. 10: 177-183. DOI: 10.1016/j.genrep.2017.12.005.
20. Hong, W[#]., Geng, W[#]., Cheng, B[#]., **Basharat, Z[#].,** Wu, Q., Zimmer, V., Zhou, M. (2017). Predictors of acute pancreatitis with low elevation of serum amylase. *Therapeutics and Clinical Risk Management*. 13: 1577-1584. DOI: 10.2147/TCRM.S147594 **(Impact factor: 1.8)**
21. Hong, W., Lin, S., Zippi, M., Geng, W., Stock, S., **Basharat, Z.**, Cheng, B., Pan, J. and Zhou, M. (2017). Serum albumin is independently associated with persistent organ failure in acute pancreatitis. *Canadian Journal of Gastroenterology and Hepatology*. 5297143:1-10. DOI: 10.1155/2017/5297143. **(Impact factor: 1.7)**
22. Messaoudi, A., **Basharat, Z.**, Naqvi, A. (2017). High throughput screening and molecular docking of calmodulin with antagonists of trifluoperazine and phenothiazine chemical class. *Letters in Drug Design & Discovery*. 15(2): 136-142. DOI: 10.2174/1570180814666170602081412. **(Impact factor: 0.95)**
23. Masood, N., **Basharat, Z.**, Khan, T., Yasmin, A. (2017). Entangling Relation of microRNA-let7, miRNA-200 and miRNA-125 with Various Cancers. *Pathology & Oncology Research*. 2394):707-715. DOI: 10.1007/s12253-017-0235-1. **(Impact factor: 2.4)**
24. Lin, S., Hong, W., **Basharat, Z.**, Wang, Q., Pan, J. and Zhou, M. (2017). Blood urea nitrogen as a predictor of severe acute pancreatitis based on the revised Atlanta criteria: timing of measurement and cutoff points. *Canadian Journal of Gastroenterology and Hepatology*. 9592831: 1-7. DOI: 10.1155/2017/9592831. **(Impact factor: 1.7)**
25. **Basharat, Z^{*}.**, and Yasmin, A. (2017). Energy landscape of a GSTP1 polymorph linked with cytological function decay in response to chemical stressors. *Gene*. 609: 19-27. DOI: 10.1016/j.gene.2017.01.034. **(Impact factor: 2.3)**
26. **Basharat, Z^{*}.**, Zaib, S. and Yasmin, A. (2017). Computational study of some amoebicidal phytochemicals against heat shock protein of *Naegleria fowleri*. *Gene Rep*. 6: 158-162. DOI: 10.1016/j.genrep.2016.09.003.
27. **Basharat, Z^{*}.**, Qazi S. R., Yasmin, A., Ali, S. A. and Baig, D. N. (2017). Prediction of post translation

modifications at the contact site between *Anaplasma phagocytophilum* and human host during autophagosome induction using a bioinformatic approach. *Mol. Cell. Probes*. 31: 76-84. DOI: 10.1016/j.mcp.2016.09.002. **(Impact factor: 2.5)**

28. **Basharat, Z***, Messaoudi, A., Ruba, S. and Yasmin, A. (2016). NQO1 rs1800566 polymorph is more prone to NOx induced lung injury: Endorsing deleterious functionality through informatics approach. *Gene*, 591(1): 14-20. DOI: 10.1016/j.gene.2016.06.048. **(Impact factor: 2.6)**
29. Tariq, N., **Basharat, Z.**, Butt, S. and Baig, D. N. (2016). Distribution analysis of profilin isoforms at transcript resolution with mRNA-seq and secondary structure in various organs of *Rattus norvegicus*. *Gene*. 589: 49-55. DOI: 10.1016/j.gene.2016.05.023. **(Impact factor: 2.6)**
30. Hussein, N.R., Tunjel, I., **Basharat, Z.**, Taha, A. and Irwing, W. (2015). The treatment of HCV in patients with hemoglobinopathy in Kurdistan region, Iraq: A single centre experience. *Epidemiol. Infect.* 144: 1634-1640. DOI: 10.1017/S0950268815003064. **(Impact factor: 2.0)**
31. **Basharat, Z.** and Yasmin, A. (2015). Survey of compound microsatellites in multiple *Lactobacillus* genomes. *Canadian J. Microbiol.* 61(999):1-5. DOI: 10.1139/cjm-2015-0136 **(Impact factor: 1.6)**
32. **Basharat, Z***. and Yasmin, A. (2015). *In silico* assessment of phosphorylation and O- β -GlcNAcylation sites in human NPC1 protein critical for Ebola virus entry. *Infect. Genet. Evol.* 34:326-338. DOI:10.1016/j.meegid.2015.06.001. **(Impact factor: 2.6)**
33. **Basharat, Z***. (2015). Computational sequence analysis and *in silico* modeling of a stripe rust resistance protein encoded by wheat *TaHSC70* gene. *J. Comp. Bio. Bioinfo. Res.* 7(1):1-7. DOI:10.5897/jcbbr2013.0082.
34. Hussein, N.R., **Basharat, Z***., Ary, H. and Al-Dabbagh, S.A. (2015). Comparative evaluation of MRSA nasal colonization epidemiology in the urban and rural secondary school community of Kurdistan, Iraq. *Plos One*.10(5): e0124920. DOI: 10.1371/journal.pone.0124920. **(Impact factor: 2.8)**
35. **Basharat, Z***. (2014). Evaluating codon bias perspective in barbiturase gene using multivariate analysis. *African J. Biotechnol.* 13(2): 194:201. DOI: 10.5897/AJB2013.13230.

Posters/Presentations

1. **Basharat, Z.** (2021). Drug target identification, ADMET profiling and dynamics simulation of selected inhibitor against *Treponema pallidum* subsp. pertenuae. 18th International Bhurban Conference on Applied Sciences and Technology (IBCAST), 12-16 Jan, 2021.
2. **Basharat, Z.**, Coulonges, C. and Zagury, J. (2019). Exploring genomic association in HIV infected cohort and skin ageing. 7th International Symposium-cum-Training Course on Molecular Medicine and Drug Research at ICCBS, University of Karachi, Pakistan. November 4-7, 2019.
3. **Basharat, Z.** (2019). Genomic association in AIDS infected cohort and skin ageing phenotypes. Genopole Summer School 'Bioinformatics and biostatistical tools in medical genomics', Château Sur-Seine, France, June 25, 2019.
4. **Basharat, Z.** (2019). Therapeutic candidate mining in a pathogenic bacterium through subtractive genomics. Young Researchers in Life Sciences Conference at Institute Imagine, Paris, France. June 4-6, 2019.
5. **Basharat, Z.** (2019). Genomic and proteomic analysis of bacteria under chemical stress. From Bioinformatics to Therapeutics at Novotel, Fontainebleau, France, May 26, 2019.
6. **Basharat, Z.** and Yasmin, A. (2017). Application of bioinformatics as a tool for understanding the remediation of persistent organic pollutants. 37th International Symposium on Halogenated Persistent Organic Pollutants (POPs) - DIOXIN 2017, Sheraton Wall Centre, Vancouver, Canada. Aug 21-25, 2017.
7. **Basharat, Z.** and Yasmin, A. (2017). Application of bioinformatics as a tool for understanding the remediation of persistent organic pollutants. CBR Research Day, LSI, University of British Columbia, Vancouver, Canada. Aug 17, 2017.
8. **Basharat, Z.** and Yasmin, A. (2017). Deciphering bacterial mechanism of azo dye degradation through computational biology approach. Frontiers in Biophysics. University of British Columbia, Vancouver, Canada. June 16, 2017.
9. **Basharat, Z.** and Yasmin, A. (2017). Leveraging molecular docking to understand bacterial-mediated degradation of sulphonated azo dyes. Water & Environment Student Talks (WEST, 2017). University of British Columbia, Vancouver, Canada. June 11-13, 2017.
10. **Basharat, Z.** and Yasmin, A. (2017). Deciphering bacterial mechanism of azo dye degradation through computational biology approach. 15th Annual Genomics Forum "The Genome Engineering Revolution: CRISPR And SynBio". University of British Columbia, Vancouver, Canada. May 25, 2017.
11. **Basharat, Z***., Zaib, S., Yasmin, A. and Tong, Y. (2016). Mining therapeutic candidates and screening a library of phytochemicals against an important drug target in *Mycobacterium chelonae*. 1st National Conference on "Recent Trends in Microbiology". Abbottabad University of Science and Technology, Havelian. Dec 20-21, 2016.
12. **Basharat, Z***. and Yasmin, A. (2016). Bioinformatic analysis of human Gaq Q209 missense mutations associated with uveal melanoma. 13th International Bhurban Conference on Applied Sciences and Technology

- (IBCAST). National Centre for Physics, Quaid-e-Azam University, Islamabad. Jan 12-16, 2016.
13. **Basharat, Z***. and Yasmin, A. (2015). Systematic bioinformatics analysis of P187S mutation in a candidate for gene-environment interaction investigation: human NQO1 protein as a case study. 3rd International Conference on Emerging Trends in Bioinformatics and Biosciences. Muhammad Ali Jinnah University, Islamabad. Oct 3, 2015.
 14. **Basharat, Z***. and Saeed, A. (2015). Sequence analysis and comparison of metallothioneins from two daphnids. 4th International Molecular biology & Biotechnology Congress and Conference on Life Sciences Research. Isra University, Islamabad. September 4-6, 2015.
 15. **Basharat, Z***. and Yasmin, A. (2015). Computational identification of potential molecular determinants of PTM mediated Ebola virus entry and therapeutic implications. 3rd Annual Computational Science Conference. Institute of Space Technology, Islamabad. May 13-15, 2015.
 16. **Basharat, Z.** and Yasmin, A. (2015). *In vitro* and *in silico* analysis of redox co-factor and co-enzyme based sulphonated azo dye decolourization activity of *Bacillus* sp. MB403. 10th Biennial International Conference of Pakistan Society for Microbiology: Exploring Microbes for Future Endeavours. University of the Punjab, Lahore. March 25-27, 2015.
 17. **Basharat, Z.** and Yasmin, A. (2014). Sequence based prediction of novel domains in the cellulosome of *Clostridium thermocellum* ATCC 27405. 2nd International Conference on Biotechnology for Sustainable Development. Government College University, Lahore. 26-28 Nov, 2014.

Conference Proceeding

1. **Basharat, Z***. and Yasmin, A. (2016). Bioinformatic analysis of human Gqg Q209 missense mutations associated with *uveal melanoma*. IEEE. 13th International Bhurban Conference on Applied Sciences and Technology (IBCAST):106-111.

Book

1. **Basharat, Z***. and Yasmin, A. (2015). Bioinformatics assisted bioremediation. Lambert Academic publishing. ISBN: 978-3-659-78707-2

Chapter

1. **Basharat, Z***., Bibi, M., Yasmin, A. (2017). Implications of molecular docking assay for bioremediation. In 'Handbook of Research on Inventive Bioremediation Techniques'. J. N. Bhakta (Ed.), Hershey, PA: IGI Global. pp 24-45 (DOI:10.4018/978-1-5225-2325-3.ch002).
2. Yasmin, A., **Basharat, Z.**, Safdar, N. (2019). *In-silico* approach to target cancer cell DNA repair pathway. In Phytochemistry: An *in-silico* and *in-vitro* Update. Kumar S., Egbuna C (Ed.), Springer Nature Switzerland AG. pp 373-392 (DOI: 10.1007/978-981-13-6920-9_20)

TRAINING/ WORKSHOP PARTICIPATION

Scientific trainings

1. "Bioinformatics-Hands-on training on inherited metabolic disease genomics" at The Aga Khan University, Karachi- March 5, 2020.
2. "Genopole Summer School 2019-Bioinformatics and bio-statistical tools in medical genomics", by GIP Genopole and University of Evry at Châteaufort' Les Berges de Seine, France, June 24-29, 2019.
3. "Linking gene and function, comparative genomics tools for biologists", by C3BI at Institut Pasteur, Paris, France, June 17-21, 2019.
4. "From Bioinformatics to Therapeutics", discussion oriented peer-led workshop by Laboratoire Génomique, Bioinformatique et Chimie Moléculaire, Conservatoire National des Arts et Métiers at Novotel, Fontainebleau, France, May 26- 29, 2019.
5. "Interoperability of software tools, omics data sources and the Knowledge Commons", training cum hackathon by European Cooperation in Science and Technology Association at Aix-Marseille Université, Marseille, France, April 23-26, 2019.
6. "RNA sequence analysis using Galaxy" by ARTBio community at Sorbonne University, Paris, France, March 21, 2019.
7. "Transcribing Genome in 4D", Qlife Winter School by Université de Recherche Paris Sciences et Lettres at École Normale Supérieure, Paris, France, February 18-23, 2019.
8. "Basics of Microsoft Azure", By Jamil-ur-Rahman Center for Genome Research at ICCBS, UoK, August 15-16, 2018.
9. "Basic Cell Culture Training", by Dr. Panjwani Center for Molecular Medicine and Drug Research at ICCBS, UoK, Karachi- July 2-6, 2018.
10. "RNA-Seq data analysis", by Jamil-ur-Rahman Center for Genome Research at ICCBS, UoK, Karachi- Mar 22,

2018.

11. "Linux training course", by Jamil-ur-Rahman Center for Genome Research at Latif Ebrahim Jamal National Science Information Center, ICCBS, UoK, Karachi- Jan 29-Feb 2, 2018.
12. "Droplet digital PCR training", by BioRad at Michael Smith Laboratories, UBC, Vancouver, Canada- Sep 14, 2017.
13. "Dioxin, POPs and Emerging Contaminant Workshop: From Sample Prep to Data Analysis" by Thermo Fisher at Sheraton Wall Centre, Vancouver, Canada- Aug 20, 2017.
14. "WestGrid Research Computing Summer School", UBC, Vancouver, Canada- June 19-22, 2017.
15. "Introduction to Genomic Analysis Workshop", BC Children's Hospital Research Institute, Vancouver, Canada- June 5-14, 2017.
16. "Significance of Bioinformatics in Life Sciences", CUST, Islamabad, Pakistan- May 7, 2016.
17. "X-ray crystallography in Structural Biology", NIBGE, Faisalabad, Pakistan-Nov 12-14, 2015.
18. "Inferential Statistical Analysis", Institute of Space Technology, Islamabad- 6 June, 2015.
19. "ENSEMBL Database Mining and Whole Genome Sequencing Analyses", COMSTECH, Islamabad- Dec 16-18, 2014.
20. "Molecular Methods in Biotechnology", GCU, Faisalabad-Dec 8-12, 2014.
21. "Advances in Bioinformatics in Post-Genomic Era"-QAU, Islamabad-Nov 6, 2014.
22. "Applications of Biotechnology for Cotton and other Crops"- NIBGE, Faisalabad, Pakistan-Oct 13-17, 2014.
23. "Sustainable Energy and Membrane Systems for Desalination and Water Reuse", NUST, Islamabad, Pakistan-10 Dec, 2013.

Other trainings

1. "Genetic counselling: How to do it right?" at The Aga Khan University, Karachi- March 5, 2020.
2. "Awareness Workshop on Novel Coronavirus (nCoV): Fear vs Negligence and Emergency Response" at Dow University of Health Sciences, Karachi- February 4, 2020.
3. "Graphic Design and Science" workshop by Young Researchers in life Science Conference at Institut Imagine, Paris, France- June 5, 2019.
4. "Accident/Incident Investigation Training Course" UBC, Vancouver, Canada- July 17, 2017.
5. "New Worker Safety Orientation", UBC, Vancouver, Canada- July 14, 2017.
6. "Laboratory Biosafety Course for Biosafety Permit Holders", UBC, Vancouver, Canada-June 19, 2017.
7. "Biological Safety Training", UBC, Vancouver, Canada-May 3, 2017.
8. "Chemical Safety Course", UBC, Vancouver, Canada-April 21, 2017.
9. "Preventing and Addressing Workplace Bullying and Harassment Training", UBC, Vancouver, Canada-April 6, 2017.

TRAINING/ WORKSHOP IMPARTED

"Genome wide association analysis using PLINK and R", at Jamil-ur-Rahman Center for Genome Research, ICCBS, UoK. Oct 23, 2019

OTHER RESEARCH ENGAGEMENTS

1. Editorial Board membership of three journals
 2. Reviewer for several Journals
 3. Organizing conference/seminars and workshops with at ICCBS, UoK with other faculty members
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PROFESSIONAL/COMMUNITY MEMBERSHIPS

1. Organization for Women in Science for the Developing World
2. Australian Genomic Technologies Association
3. Pharmacogenomics Research Network
4. American Society for Microbiology
5. Pakistan Society for Microbiology
6. Pakistan Society of Computational Biology
7. Association of Environmentalists, Pakistan
8. Biochemical Society of Pakistan
9. Biological Safety Association of Pakistan
10. National Academy of Young Scientists

11. EcoToxicoMic Network
12. RELISH consortium
13. World Society for Virology

KEY INTERESTS

Big Data, Genomics, Proteomics, Reading, Science journalism.

REFERENCES

Dr. Azra Yasmin

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