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| Name | Shahjahan Shabbir Ahmed Rana | | | | |
| Designation | Professor / Deputy Director China Study Center (CPEC) | | | | |
| Department | Department of Biotechnology (FLS&I) | | | | |
| Research Profile | ORCID ID: | | 0000-0001-6838-5929 https://orcid.org/my-orcid?orcid=0000-0001-6838-5929 | | |
| | Research Gate ID: | | Shahjahan Shabbir Ahmed Rana https://www.researchgate.net/profile/Shahjahan-Shabbir-Ahmed-Rana-2 | | |
| | Google Scholar Profile ID: | | Prof. Shahjahan Shabbir Ahmed Rana https://scholar.google.com.tw/citations?hl=en&user=7vXeZS8AAAAJ | | |
| | Scopus ID: | | Shahjahan Rana https://www.scopus.com/sources.uri?zone=TopNavBar&origin= | | |
| | Web of Science ID: | | AFT-6286-2022 https://www.webofscience.com/wos/author/search | | |
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| | Residential | +92-81-2501112, +92-81-2844448 | | | |
| Date of Birth | 18 th of September, 1980 | | | | |
| Qualification | | | | | |
| Year | Degree/Certificate | Name of the Institute / University | | Field of study | |
| 2012 | PhD | Northwest A&F University, Yangling, Shaanxi, P.R. China. | | Horticulture / Plant Biotechnology | |
| 2005 | M.Sc. (Hons) | University of Agriculture, Faisalabad, Pakistan. | | Horticulture / Olericulture | |
| 2003 | B.Sc. (Hons) | PMAS-University of Arid Agriculture, Rawalpindi, Pakistan. | | Horticulture / Olericulture | |
| 1998 | Intermediate | Tameer -i- Nau Public College, Quetta, Pakistan. | | Medical / Additional Math | |
| 1996 | Matriculation | Tameer -i- Nau Public School, Quetta, Pakistan. | | Science | |
| Publications in HEC Recognized journals | | | | | |
| No. | Title of Paper | | Name of Journal | National/ International | Publication date |
| 1 | Chen, R.G., Yang, R.P., Gong, Z.H., Li, D.W., SS Ahmed (2010). Cloning and Sequence | | Acta Botanica Boreal- | International | 2010 |

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| | Analysis of the Polygalacturonase Gene <i>CaPG</i> in Pepper. Acta Botanica Boreal-Occidentalia Sinica. 30: 1941-1945. | Occidentalia Sinica. | | |
| 2 | Ahmed SS , Z.H. Gong., M.A. Khan., Y.X. Yin, W.L. Guo, J. Imran (2011). Activity and Expression of Polygalacturonase vary at different Fruit Ripening Stages of Sweet Pepper Cultivars. Genet. Mol. Res. 10 (4): 3275 – 3290. | Genet. Mol. Res. | International | 2011 |
| 3 | Ahmed SS , Z.H. Gong, J.J. Ji, YX. Yin, H.J. Xiao, M.A. Khan, A. Rehman and I. Ahmed (2011). Construction of an intermediate vector pVBG2307 by incorporating some vital elements of expression vectors pBI121 and pBI221. Genet. Mol. Res. 11 (3): 3091-3104. | Genet. Mol. Res. | International | 2012 |
| 4 | Khan, M.A., Z.H. Cheng, X.M. Xioa, A.R. Khan, Ahmed SS (2011). Ultrastructural studies of the Inhibition effect against <i>Phytophthora capsici</i> of root exudates collected from two garlic cultivars along with their qualitative analysis. Crop Protection, 30: 1149-1155. | Crop Protection (Elsevier) | International | 2011 |
| 5 | Guo, W.L., Chen R.G., Ahmed SS , Yin, Y.Y., Lu, M.H., Huang, W., Li, D.W., Z.H., Gong (2012). Exogenous abscisic acid on both the ascorbate–glutathione cycle and the activity of antioxidant enzymes in pepper leaves during chilling stress. Genet. Mol. Res. 11 (4): 4063-4080. | Genet. Mol. Res. | International | 2012 |
| 6 | Zhao, H.F., Huang, W., Ahmed SS , Gong, Z.H., L.M., Zhao (2012). The pollen walls and tapetum are altered in cytoplasmic male sterile line RC ₇ of Chinese cabbage (<i>Brassica campestris</i> L. ssp. <i>pekinensis</i>). Genet. Mol. Res. 11 (4): 4145-4156. | Genet. Mol. Res. | International | 2012 |
| 7 | Ma, Y., Huang, W., Ji, J.J, Gong, Z.H, Yin, C.C, Ahmed SS , and Zhao, Z.L, (2013). Maintaining and restoring cytoplasmic-genic male sterility systems in pepper (<i>Capsicum annuum</i> L.). GMR, 12(3): 2320-2331. | Genet. Mol. Res. | International | 2013 |
| 8 | Ahmed SS , Khan M. A., Sani I. A., Sharif M., Naeem M., Sarwat A., Ahmed N. (2013). Impact of Phosphorus Levels on Vegetative Growth and seed yield of leuttuce (<i>Lactuca sativa</i> L.) cultivars. ÇOMÜ Ziraat Fakültesi | Journal of Agriculture Faculty | International | 2013 |

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| | Dergisi (COMU Journal of Agriculture Faculty) 1 (1): 95–100. | | | |
| 9 | Imran AS, Ahmed SS , Ahmed N, Shahwani MN, Yousafzai A, Afridi S, Mehmood Z, and Khan AG (2013). <i>In vitro</i> Hybridization of Tomato (<i>Solanum lycopersicum</i> L.). <i>J. App. Em. Sc.</i> 4(2): 94- 98. | Journal of Applied and Emerging Sciences | National | 2013 |
| 10 | Ahmed SS , Ahmed N., Sani I A., Naeem M., Saeed M., and Khan M. A., (2013). Construction of expression vector pVBG2307 by adding transcription initiation and termination elements. <i>J Applied and Emerging Sciences, BUIITEMS.</i> 4(1): 1-9. | Journal of Applied and Emerging Sciences | National | 2013 |
| 11 | Mohammad S., Shahwani M.N., Ahmed SS , Ahmed N., Shaheen G., and Raza A.M., (2013.) Somatic embryogenesis and organogenesis from embryonic explants of <i>Pinus gerardiana</i> . Wall. Ex lamb. <i>J Applied and Emerging Sciences, BUIITEMS.</i> 4(1): 33-36. | Journal of Applied and Emerging Sciences | National | 2013 |
| 12 | Ahmed F., Baloch D.M., Sadiq S.A., Ahmed SS , Hanan A., Taran S.A., Ahmed N. and Hassan M.J. (2014). Plant Growth Regulators Induced Drought Tolerance in Sunflower (<i>Helianthus annuus</i> L.) Hybrids. <i>Journal of Animal and Plant Sciences, Volume: 24(3):</i> 886-890. | Journal of Animal and Plant Sciences (JAPS) | National | 2014 |
| 13 | Sarwar A, Sajjid I, Riaz R, Rehman F, Ahmed SS , Shahwani N, Naseem M, Ahmad N and Mushtaq M (2014). Bacterial Community Profiles in Rhizosphere of Paddy Rice based on 16S rRNA Sequence Analysis. <i>Int. J. Biol. Biotech.</i> 12(1): 11-19. | International Journal of Biology and Biotechnology | International | 2014 |
| 14 | Khan AR, Cheng ZH, Ghazanfar B, Khan MA, Ahmad SS and Ahmad I (2015). Acetyl salicylic acid and 24-epibrassinolide attenuate decline in photosynthesis, chlorophyll contents and membrane thermo stability in tomato (<i>Lycopersicon esculentum</i>) under heat stress. <i>Pak. J. Bot.</i> 47 (1): 63-70. | Pakistan Journal of Botany | International | 2015 |
| 15 | Agha SA, Shafique A, Muhammad A, Sara N, Ahmed SS , Habib YM and Muhammad S (2014). <i>In vitro</i> antimicrobial activity of <i>Rose marium officinalis</i> | Journal of Applied and Emerging Sciences | National | 2014 |

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| | essential oil cultivated in Balochistan. Pakistan. J. App. Em. Sc. 5:(1):66-69. | | | |
| 16 | Ahmed SS , HU Ahmed, IA Sani, N Ahmed, AG Khan, S Aziz, AR Reki, and A Rehman. (2016). Detection and amplification of E8 promoter in tomato plant and sequencing of the E8 gene. 6(1): 14-17. | Journal of Applied and Emerging Sciences | National | 2016 |
| 17 | Batool BT, Tareen A, Ahmed SS , Ijaz H, Kakar MA, Rehman SA, Saeed M, Ahmad Z, Tariq MM, Awan MA, and MN Shahwani (2017). Prevalence of Zoonotic Tuberculosis and Brucellosis in Animals of Quetta and Pishin Districts, Balochistan. 49(1):387-389. | Pakistan Journal of Zoology (PJZ) | International | 2017 |
| 18 | Ahmed N, Ahmed SS , F Rehman, M Naeem, M Saeed, I Ali (2016). Comparative Microarray Data Analysis of Arabidopsis Genome during Interaction with Mutualistic and Pathogenic Bacteria. Int. J. Biosci. 9(4), 281-291, October 2016. | International Journal of Biosciences | International | 2016 |
| 19 | Furqan AK, N Ahmed, A Mateen, R Abdullah, Ahmed SS , S Muhammad, N Ahmed, NS Muhammad (2016). Effect of various concentrations of Indolebutyric acid and plantation techniques on rooting performance of grapes germplasm. Int. J. Biosci. 9(6), 393-403, December 2016. | International Journal of Biosciences | International | 2016 |
| 20 | Irfan S, Rani S, Sani IA, Irfan H, Ahmed SS , Ahmed N, Shahwani MN, Yousafzai A, Ahmed U, Aziz S, Irshad MN and Fazal S (2016). Leaves and Flowers Insecticidal Activity Investigation of <i>Salvia officinalis</i> L. against <i>Sitophilus oryzae</i> L. ÇOMÜ Ziraat Fakültesi Dergisi J. Agric. Fac. 4(2): 105-108. | COMU Journal of Agriculture Faculty | International | 2016 |
| 21 | Sani IA, Ahmed SS , Zafar M, Ahmed N, Shahwani MN, Yousafzai A, Irfan S, Ahmed U, Aziz S, Khan AG, Irshad MN, Jhon D and Ibrar R (2016). Biological Control of Insect Pests Using <i>Trichogramma minutum</i> as Biological Control Agent in the Vicinity of (BUIEMS). COMU J. Agric. Fac. 4(2): 95-103. | COMU Journal of Agriculture Faculty | International | 2016 |

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|----|---|---|---------------|------|
| 22 | Muhammad HK, Muhammad S, Muhammad NS, Ahmed SS , G Shaheen, A Yousafzai (2017). Seed and cone biometry of <i>Juniperus excelsa</i> from three Provenances in Balochistan. Int. J. Biosci. 10(1), 345-355. | International Journal of Biosciences | International | 2017 |
| 23 | Tahir F, Ahmed SS , Ahmed N, Sani IA, Shahwani MN, Saeed M, Rashid M, Ahmed U (2017). Copper Resistant Bacteria at Coal Mines Sorrange Balochistan. Int. J. Biosci. 10(3), 288-296. | International Journal of Biosciences | International | 2017 |
| 24 | Mushtaq A, Nelofer J, Musarrat R, Louis H, Nazeer A, Ahmed SS , Shahwani MN and Malghani MN (2017). Synthesis of Silica Nanoparticles and their effect on priming of wheat (<i>Triticum aestivum</i> L.) under salinity stress. Biological Forum (Int. J). 9(1), 1-8. | Biological Forum-An International Journal | International | 2017 |
| 25 | Ahmed U, Khalid M, Zohra K, Ahmed SS , Imran AS, Nazeer A, Ashif S, Zahid M and Mohammad A (2017). Physiochemical Characteristics and Fatty Acid Composition of <i>Amygdalus spinosissima</i> Seed Oil from Balochistan. Indo Am. J. P. Sci: 9(4) 2255-2261. | IAJPS | International | 2017 |
| 26 | Shahjahan SAR , Ihsan U, Irfan S and Ahmed N (2017). Examining H ₂ O ₂ Production in Arabidopsis Leaves Upon Challenge by Cytokinin. Springer Protocols. 159-163. | Springer Protocols (Methods in Molecular Biology) | International | 2017 |
| 27 | Malik A, Khan A, Asrar M, Ahmed SS , Ismail T, Ponya Z, Rahman S, Khan AK, Sarangzai AT (2018). Households wastewater effects on medicinal plant (<i>Achillea santolina</i> L.) and its soil characteristics. Int. J. Bio: 13(05) 389-401. | International Journal of Biosciences | International | 2018 |
| 28 | Aziz S, Imran AS, Yue JL, Ahmed SS , Nazeer A, Nisar A, Dawood S & Sajid N (2019). Biological control of Insect Pests using <i>Trichogramma minutum</i> as Biological control agent against Thrips on Roses. IAJPB, 10(06): 12728-12734. | Indo American Journal of Pharmaceutical Sciences | International | 2019 |

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| 29 | Kakar A, Saeed URK, Saad UKL, Mazoor IK & SS Ahmed Rana (2019). Study on Rangelands Issues and Their Improving Strategies in Muslim Bagh, Killa Saifullah Balochistan, Pakistan. IJB, 15(4): 318- 329. | International Journal of Biosciences | International | 2019 |
| 30 | Bilal AKK, Kakar SR, SS Ahmed Rana , Leghari SK, Tareen MU and Shams Ullah (2020). Effect of salt stress on the vegetative and reproductive growth of two genotypes of tomato (<i>Solanum lycopersicon</i> L.) plants in climatic condition of district Quetta, Balochistan. PAB, 9(1):576- 586. | Pure and Applied Biology | National | 2020 |
| 31 | Abdullah R, SS Ahmed Rana , IA Baloch, N Ahmed, IA Sani, S Khan, D Shahid And S Leghari (2020). Molecular Characterization of <i>Amygdalus spinosissima</i> collected from The Juniper Ecosystem of Balochistan. FUUAST J.BIOL., 10(2): 109-115. | FUUAST Journal of Biology | National | 2020 |
| 32 | Din M, Khan MB, Dawood S, Ghulam S, Saleem K, Hummaira S, SS Ahmed Rana , Faiza LA, Muhammad Y, Nazeer A (2021). Dissemination of NDM-1 in <i>Pseudomonas aeruginosa</i> and <i>Klebsiella pneumoniae</i> isolated from Pus Samples in Tertiary Care Hospitals of Quetta, Pakistan. https://www.jpma.org.pk/article-details/10384 . 71(1):228-232. | Journal of the Pakistan Medical Association (IF: 0.642) | National | 2021 |
| 33 | Irfan S, Nazeer A, SS Ahmed Rana (2021). Characterization of the complete chloroplast genome sequence of <i>Juniperus polycarpus</i> K.Koch (Cupressaceae), from Ziarat, Pakistan. IJST-2021-151-R1. 14(36): 2806-2814. | Indian Journal of Science & Technology | International | 2021 |
| 34 | Shahid D, Nazeer A, SS Ahmed , Imran AS, Muhammad FS, Asif A, Shazia I, Sadullah L and Asif R (2021). Molecular Identification of Parasitic Mistletoe (<i>Arceuthobium oxycedri</i>) of Juniper Ecosystem From District Ziarat, | FUUAST Journal of Biology | National | 2021 |

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| | Balochistan, PAKISTAN. FUUAST J. BIOL., 11(1): 9-16. | | | |
| 35 | Baloch AA, Raza AM, SS Ahmed Rana , Saadullah, S Khan, Zaib N, H Zahid, GK Malghani and K Kakar (2021). <i>BrCNGC</i> gene family in field mustard: genome-wide identification, characterization, comparative syntenic, evolution and expression profiling. | Scientific Reports Nature (IF: 4.379) | International | 2021 |
| 36 | Iftekhar AB, Ahmed N, SS Ahmed Rana and <i>et al.</i> (2023). Bioinformatic Prediction and Experimental Validation of miRNAs in Two Species of Taraxacum. <i>Submitted in Plos One</i> . | | International | Submission ID: PONE-D-23-13839 |
| 37 | Tabassum E, SS Ahmed Rana , and <i>et al.</i> (2023). Comparison of Amplification Ability of Mat-K and RbcL DNA Barcodes in the Identification of Wild Grasses of the Quetta Ecosystem. Pak. J. Biochem. & Mol. Biol. 55(3), 169–178. http://www.pjmb.com/index.php/pjmb | | National | |
| 38 | Talpur FN, Z Ali, HI Afridi, A Patahan, NA Brohi, H Abbasi & SS Ahmed Rana (2023). Investigation the physicochemical parameters and mineral contents of water, soil, and characteristics of Dwarf Palm a globally scarce fruity variety in Balochistan, Pakistan region. <i>In process of publication</i> . | Environmental Monitoring and Assessment | International | |

Papers Presented

| No. | Title of Paper | Name of Conference | National/ International | Date |
|-----|--|---|-------------------------|-------------------|
| 1 | SS Ahmed , Z.H. Gong., M.A. Khan., Y.X. Yin, W.L. Guo, J. Imran (2011) Activity and Expression of Polygalacturonase varies at different Fruit Ripening Stages of Sweet Pepper Cultivars. Genet. Mol. Res. 10 (4): 3275 – 3290. | Yangling High-tech Exhibition and Conference 2011 | International | 11 November, 2011 |
| 2 | SS Ahmed , Z.H. Gong, J.J. Ji, YX. Yin, H.J. Xiao, M.A. Khan, A. Rehman and I. Ahmed (2011) Construction of an intermediate vector pVBG2307 by incorporating some vital elements of expression vectors pBI121 and pBI221. Genet. Mol. Res. 11 (3): 3091-3104. | Horticultural Conference at Northwest A&F University, Yangling, Shaanxi, China. | International | 10 December, 2011 |

Books Authored / Edited

| No. | Name of book | Publisher | ISBN |
|-----|--------------|-----------|------|
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| 1 | Gene Cloning and Construction of Expression Vector | Scholar Press, Germany | 9783639703870 | |
| 2 | Biodiversity of beetles Coleoptera-Adaphaga In Agro Forest area | Lambert Academic Publishing (LAP), Germany | | |
| 3 | How to Know Insect and Their Orders? | LAP, Germany | | |
| 4 | Auxins and Cytokinins in Plant Biology Methods and Protocols Editors: Dandekar, Thomas, Naseem, Muhammad (Eds.) | Springer Protocols, Humana Press, NY, USA | 978-1-4939-6831-2 | |
| Work Experience | | | | |
| No. | From (year) | To (year) | Name of the Institution/ Organization | Position held |
| 1 | 2003 | 2005 | UAF, Faisalabad, Pakistan | MPhil Scholar |
| 2 | 2005 | 2006 | (LUAWMS), Uthal, Balochistan | Lecturer (BPS-17) |
| 3 | 2006 | 2012 | Agriculture Extension, Balochistan | Agriculture Officer (BPS-17) |
| 4 | 2012 | 2014 | (BUIITEMS), Quetta, Balochistan | Assistant Professor (BPS-19) |
| 5 | 2015 | 2021 | (BUIITEMS), Quetta, Balochistan | Associate Professor (BPS-20) |
| 6 | 2021 | To date | (BUIITEMS), Quetta, Balochistan | Professor (BPS-21) |
| Administrative Experience | | | | |
| 1 | 2018 | 2023 | (BUIITEMS), Quetta, Balochistan | Chairman of the Biotechnology Department |
| 2 | 2023 | To date | (BUIITEMS), Quetta, Balochistan | Deputy Director, China Study Center (CPEC) |
| Area of specialization | | | Horticulture / Plant Biotechnology / Omics / rDNA Technology | |
| Research Interest | | | Gene Cloning, Gene Transformation, Gene Expression & Data Analysis & Biostatistics | |
| Future Research Plans | | | Role of Biotechnology in Precision Agriculture & Cropping Style | |
| HEC Approved supervisor | | | Yes | |
| If Yes, provide HEC URL | | | https://eportal.hec.gov.pk/hec-portal-web/portal/index.jsf?process=ASA2 | |
| Research grants / Projects / Role in the Projects | | | <ul style="list-style-type: none"> 05 projects under ORIC of BUIITEMS with more than 1 million rupees have been completed successfully. 01 project is completed as a Co-PI with more than 3.5 Million rupees with PSF, Pakistan. | |

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| | <ul style="list-style-type: none"> • 01 project is accepted as a Co-PI worth > than 4 Million rupees with PSF, Pakistan. • Focal Person of Balochistan Chapter worth > 1 Million Chinese RMB with Chinese Government and PMAS-Arid University, Rawalpindi on Precision Agriculture and use of AI techniques to enhance crops / fruits yield. • Regional Focal Person (Balochistan Chapter) worth > 10 Million Canadian dollars with Project Life Plan, University of Guelph, Canada. • 02 projects are submitted as a Co-PI worth > 15 Million rupees to PSF, NRPU and ALP, Pakistan. • Regional Focal Person of Pak-Bol Consortium of Pakistan (Balochistan Chapter). |
| Projects Presented | <ul style="list-style-type: none"> • DICE AFS & MEGA EVENT (2021) at MNS University of Agriculture, Multan. December (26-28). • Screening and Simulation of Highly Specific Antiviral Agents in Natural Plants existing in the Northern Ecosystem of Balochistan: Implication to Curb COVID-19. |
| Consultancy Services | <ul style="list-style-type: none"> • As Consultant / Team Lead to successfully completed the task entitled “Establish / ope-rationalize the tissue culture lab at ARI, Sariab, Quetta” in (2019-20) worth about 2.4 Million Rs. |
| As a Master Trainer | <ul style="list-style-type: none"> • Conducted more than 10 Farmer’s Field School (FFS) trainings and trained more than 500 farmers on various topics related to pre & post-harvest handling and management of deciduous fruits of Ziarat, Quetta, Loralai, Killa Saifullah and Pishin districts of Balochistan during the year 2018-2020 as a CO-PI of the project funded by “PSF, Pakistan”. • Conducted trainings to Agriculture Officers & (FFS) under the umbrella of Agriculture Extension, Balochistan, Quetta during 2021-2022. |
| NCRC (HEC), Membership | <ul style="list-style-type: none"> • NCRC (HEC) member of Horticulture Curriculum. • NCRC (HEC) member of Crop Physiology Curriculum. |

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| <p>Membership in various Statutory Bodies of Balochistan University of Information Technology, Engineering and Management Sciences (BUITEMS), Quetta, Pakistan.</p> | <ul style="list-style-type: none"> • Member of ASRB (Advance Studies and Research Board). • Chairman of BOS (Board of Studies) of Biotechnology. • Member of BOS (Board of Studies) of Biotechnology. • Member of BOF (Board of Faculty) of Life Sciences & Informatics (FLS&I). • Member of BOF (Board of Faculty) of Basic Sciences (FBS). • Member of the Assessment Team in the Directorate of Quality & Enhancement. • Chairperson of Examination Committee, Biotechnology. • Chairperson of Departmental Graduate Research Committee (DGRC). • Member of Departmental Tenured Track Review Committee (DTRC). • Member of Disciplinary Committee, Biotechnology. • Member of Proctorial Staff. • Member of Admission Sub-Committee of (BUITEMS)-(ADSC). |
| <p>Course-Ra Skills / Courses Completed (Digital Learning by HEC) under DLSEI-Phase-2a</p> | <ol style="list-style-type: none"> 1. <i>“Transformation of the Global Food System”</i> on 10th March, 2023 by the University of Copenhagen, Denmark. 2. <i>“Chinese for Beginners”</i> on 15th March 2023 by Peking University, P.R. China. 3. <i>“Edible Insects”</i> on 1st June 2023 by National Taiwan University, P.R. China. 4. <i>“Chinese Garden Literature-2”</i> on 22nd August 2023 by National Taiwan University, P.R. China. |
| <p>Courses Taught at University level</p> | <ul style="list-style-type: none"> • Developments in Recombinant DNA Technology • Functional Genomics • Research Methodology • Chinese Language (up to HSK-3 level) • Easy Chinese • Introductory Chinese • Chinese as a Foreign Language • Coastal Agriculture • Ecology and Evolution • Introduction of Horticulture • Evolution and Biodiversity • Fundamentals of Ecology • Applied Ecology |

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| | <ul style="list-style-type: none"> • Advanced Biostatistics • Experimental Design and Statistics • Biostatistics and Experimental Mathematics |
| Workshops/Trainings/Seminars/Conferences/Webinars/Symposia | <ul style="list-style-type: none"> • Value and Cold Chain of Apple and Grapes (2017-18) “As Expert” at Agriculture College, Quetta, Pakistan. • “Guest Speaker” in Hands on training for Scientific Writing at ARI, Quetta, Pakistan. (26-25 September, 2020) • Member of “Advisory Committee” in the International Conference on Dynamic Trends in Plant Sciences, organized by SBK University (2016). |
| Honors/Awards/Distinction | <ul style="list-style-type: none"> • Won Foreign Exchange Scholarship between Pakistan and P. R. China for PhD Studies in August, (2008). • Best Faculty Teacher (2014) • Best Faculty Teacher (2021) • Won the Best Department Award for Biotechnology in the year (2021). |
| Sports | <ul style="list-style-type: none"> • Won runners up trophy in the Intra University Table Tennis Competition (2014). • Remained Captain of the Departmental Cricket team of the Biotechnology during (2013-2021). • Zealous at Cricket both playing & watching • Good at Table Tennis |
| Languages at various levels of Communication | <ul style="list-style-type: none"> • Punjabi (Advanced) • Urdu (Advanced) • English (Proficient) • Chinese (Progressive) • Arabic (Beginner) • Pashto (Beginner) • Sindhi (Beginner) • Saraiki (Beginner) |
| Summary about Research Interest | |
| <p>After graduating in Horticulture, I worked as Lecturer (BPS-17) at LUAWMS, district Lasbela, Uthal, Balochistan and Agriculture Officer (BPS-17) at Agriculture Extension Wing in, Quetta. I earned PhD in 2012 from the College of Horticulture, North West A&F University, Yangling, Shaanxi, P.R. China and the dissertation title was "<i>Enumerating the role of polygalacturonase (CaPG) gene in the members of nightshade family</i>". During the doctoral research cellulose and pectin degradation enzymes like <i>polygalacturonases</i> have been investigated rigorously with their role in growing fruits from different developmental stages. Members of the nightshade family (Solanaceae) like capsicum and tomato were</p> | |

primarily chosen for studying the efforts on better post-harvest handling. I deciphered molecular techniques like polymerase chain reaction (PCR), real-time (RT-PCR), Gel Electrophoresis, Photo-spectrometer for DNA quantification, Use of Transmission Electron Microscope (TEM), Development of competent cells, Construction of expression vectors, Enzymes assay, *In-vitro* plant propagation for gene transformation, Southern blotting, Reverse Transcriptase PCR for gene validation in transgenic organisms, high performance liquid chromatography (HPLC), *etc.*

Quest about gene cloning and expression analysis in various model organisms were continued even after joining BUITEMS in 2012 as an Assistant Professor (BPS-19) in the department of Biotechnology and Informatics. Professor Dr. Shahjahan Shabbir Ahmed Rana has published many high-profile original research articles on various aspects of plant biotechnology including gene identification, isolation, cloning, construction of vectors, aspects of post-harvest involvement, ultra-structure studies, and in the area of plant physiology.

Currently, his research interests include investigating the role of DNA markers assigning as biomarkers for the identifications of species among Junipers and Juniper ecosystem of Pakistan. DNA barcoding and meta-sequencing are exercised in the collected flora of mentioned forests and its applicability and feasibility have been deciphered. Dr. SS Ahmed Rana teaches a range of topics in recombinant DNA sciences including molecular significance DNA for the betterment of quality drawn for human beings and statistical analysis in life sciences. He is author of thirty-five peer-reviewed scientific articles and one chapter in the book of Nature. He has refereed manuscripts for a variety of journals in the area of Horticulture and Plant Biotechnology.

Post-harvest management in the horticultural commodities especially of Balochistan remains a daunting task. In view of such challenge different projects like use of edible waxing in combination of molecular masking of hydrolytic enzymes were undertaken in the recent past and quite promising results were drawn. Data of various experiments are in the process of publication and reporting to the concern authorities and other stake holders of the region.