Dr. BUSHRA TABASSUM

Associate Professor, Gold Medalist

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Academic Qualification	**B. Sc.**	**Botany, Chemistry, Zoology** Government Degree College for Women, Jhelum, Pakistan **1998-2000**
	M. Sc.	**Botany (**Genetics**)** Government College University, Lahore, Pakistan **2000-2002** Supervisor: **Dr. Muhammad Saleem** Thesis title: Degradation of Agrowaste by *Trichoderma viride* mutants.
	M.Phil	**Molecular Biology** (Seed Biotechnology) CEMB, University of the Punjab, Pakistan **2003-2005** Supervisor: **Prof. Dr. Idrees Ahmad Nasir** Thesis title: Genetic Variability of in vitro Produced Cucumber Synthetic Seeds through RAPD and AFLP analyses.
	Ph.D.	**Molecular Biology** (RNA Interference) CEMB University of the Punjab, Pakistan **2007-2012** Supervisor: **Prof. Dr. Idrees Ahmad Nasir** Co-supervisor:: **Prof. Dr. Tayyab Husnain** Thesis title: siRNA based gene silencing of potato virus Y.
Research Experience	**Research Officer (BPS-17)** **2005-2010** National Centre of Excellence in Molecular Biology, University of the Punjab Lahore Job responsibilities include: i)Tissue Culture of potato, chemotherapy and thermotherapy to produce disease free pre basic seed of potato, ii) Optimized screening tests of potato seed through ELISA and RT-PCR and make it available at commercial scale for various private seed companies, iii) AFLP analysis of maize inbred and hybrid lines. **Research Officer cum Lecturer (BPS-18)** **2010-2015** National Centre of Excellence in Molecular Biology, University of the Punjab Lahore Job responsibilities include: i) siRNA based silencing approaches to control potato viruses, Y, X and PLRV, ii) VIGS mediated control of sugarcane mosaic virus, iii) identification and characterization of different antifungal genes including chitinase from various sources. **Assistant Professor (BPS-19)** **2015-2020** National Centre of Excellence in Molecular Biology, University of the Punjab Lahore Job responsibilities include: i) Development of insect resistant sugarcane and maize by employing dsRNA approach and through incorporation of novel insecticidal genes, ii) generation of fungus tolerant transgenic potato and sugarcane lines through integration of antifungal genes, iii) Tissue culture and transformation of three economically important crop plants; potato, sugarcane and maize, iv) development of Bt inbred maize	

	lines and Bt F1 maize hybrid, v) Development of insect and herbicide resistant transgenic sugarcane. **Associate Professor (TTS)** **2020-todate** School of Biological Sciences, University of the Punjab Lahore Research Interests include*:* i) Use of RNAi in control of insect pests of economically important crop plants, ii) Plant protection strategies against biotic and abiotic stresses, iii) Gene pyramiding in transgenic plants for insect control, iv) Plant-pathogen interaction studies through disease pathogenesis.
Research Projects Awarded	1. **Team Scientist:** Genetic Improvement of Sugarcane for Herbicide and Borer Resistance awarded by *Punjab Agricultural Research Board* (PARB) at Rs.22.148 Million for 2011-16. (PARB 193). Successfully completed 2. **Team Scientist:** Development & commercialization of indigenous Bt and herbicide tolerant Maize hybrids awarded by *Punjab Agricultural Research Board* (PARB) at Rs. 22.829 million for 2011-16. (PARB 235). Successfully completed 3. **Co-Principal Investigator:** Genetic improvement of potato against cold induced sweetening through integration of anti-sweetening gene (s) awarded by *Higher Education Commission* at Rs.8.192 million, for 2017-2020. (HEC 4072). Successfully completed 4. **Co-Principal Investigator:** Transforming CEMB-PARB-Biotech maize prototype into viable commercial product for sustainable maize production awarded by *Higher Education Commission under establishment of technology development fund* (**TDF**) 2nd call 2017-2018 at Rs.14 million, for 2018-2020. (TDF02-169). Successfully completed 5. **Co-Principal Investigator:** Transformation of Sucrose Isomerase Genes in Sugarcane for Boosted Sugar Recovery." Awarded by HEC at total cost of Rs.3902997/ for 2018-2021 (# 7835). In progress 6. **Chief Investigator:** 'Localization of dsRNA against aphids through chloroplast transformation in potato' at cost of 10700 USD awarded by International Science Foundation (IFS) for year 2019-2021. Completed. 7. **Team Scientist:** 'Genetic improvement of maize lines for insect and gluphosinate herbicide tolerance'. Awarded by PARB at a total cost of Rs. 10.00 Million for a period of 40 months (year 2019-2022). (Project # 1075). Completed 8. **Principal Investigator:** Identification and validation of potential double-stranded Ribonucleic acid (dsRNA) as alternative control measure for Pink Bollworm (*Pectinophora gossypiella*) in Pakistan. Total cost 0.25 million Rupees awarded by University of the Punjab Lahore for a period of one year (2021-22). Successfully completed 9. **Principal Investigator:** Gene silencing of potential RNAi targets in Lepidopteron insect cell line (sf9) mediated by double stranded (ds)RNA. Total cost 0.25 million Rupees awarded by University of the Punjab Lahore for a period of one year (2022-23). Successfully completed

Publications

International Publications

Total Publications 81; Total Impact Factor: >150 (Average impact factor per article >1.89), Google Scholar Total citation: >1329 Google Scholar h-index: 19, i10-index: 34.

S. No	Publications
1.	Yousaf I, **Tabassum B*,** Jabbar B, Amjad MA, Qaisar U, Khan A, Khalid R, Adeyinka OS, and Nasir IA (2024). Efficacy of arginine kinase as a promising RNAi target in Aphis gossypii genome as revealed through aphid bioassay on field-grown transgenic cotton plants. Journal of Plant Protection Research. https://doi.org/10.24425/jppr.2024.151257
2.	Toufiq N, Adeyinka OS, Khan A, Shafique S, Jahan N, Bhatti MU, Khalid R, Naeem A, Abbas Q, Shafique S, **Tabassum B***. 2024. Multiple Transgenic Strategies Positively Regulate Cold-Induced Sweetening in Low Temperature Stored Potato Tubers. Potato Research. 13:1-20.
3.	Tabassum N, Shafiq M, Fatima S, Tahir S, **Tabassum B**, Ali Q, Javed MA. 2024. Genome-wide in-silico analysis of ethylene biosynthesis gene family in *Musa acuminata* L. and their response under nutrient stress. Scientific Reports 14, 558. https://doi.org/10.1038/s41598-023-51075-3
4.	Akram, J., Siddique, R., Shafiq, M. **Tabassum B**, Manzoor MT, Javed MA, Anwar S, Nisa B, Saleem MH, Javed B, Malik T, Mustafa AEZMA, Ali B. Genome-wide identification of CCO gene family in cucumber (*Cucumis sativus*) and its comparative analysis with A. thaliana. BMC Plant Biology 23, 640 (2023). https://doi.org/10.1186/s12870-023-04647-4
5.	Agha SI, Maghfoor Ullah, Khan A, Jahan N, Ullah SM, **Tabassum B**, Parveen S, Rehmat Z, Hussain A, Ahmed S, Hamdard MH. 2023. Biocontrol rhizobacteria enhances growth and yield of wheat (*Triticum aestivum*) under field conditions against *Fusarium oxysporum*. Bioengineering. 14:1, 2260923. DOI: 10.1080/21655979.2023.2260923
6.	Adeyinka OS, Nasir IA, **Tabassum B**. 2023. Host-induced silencing of CpCHI gene occasioned developmental abnormalities and mortality in Maize stem borer (*Chilo partellus*). Plos One. https://doi.org/10.1371/journal.pone.0280963.
7.	Bhatti MU, **Tabassum B***, Berry C, Khan A, Qaisar U, Ali E, Khalid R, Farooq AM, Tariq M, Ayaz H. 2023. Transgenic maize inbred lines expressing high levels of *Bacillus thuringenesis* vegetative insecticidal (Vip3A) toxin offer effective control of maize stem borer (*Chilo partellus*). Plant cell tissue & organ culture. DOI: 10.1007/s11240-023-02483-w.
8.	Adeyinka OS, **Tabassum B**, Koloko BL, Ifedayo Victor Ogungbe IV. 2023. Enhancing the Quality of Staple Food Crops through CRISPR/Cas-Mediated Site-Directed Mutagenesis. Planta. 257(4):78.doi: 10.1007/s00425-023-04110-6.
9.	Yousaf S, Rehman T, **Tabassum B**, Aftab F and Qaisar U. 2023. Genome scale analysis of 1- aminocyclopropane-1-carboxylate oxidase gene family in *G. barbadense* and its functions in cotton fiber development. Scientific Reports. 3:4004. https://doi.org/10.1038/s41598-023-30071-7
10.	Shafique S, Shafique S, Attia U, **Tabassum B**, Akhtar N, Naeem A, Abbas Q. 2023. Management of Mung Bean leaf spot disease caused by *Phoma herbarum* through *Penicillium janczewskii* metabolites mediated by MAPK signaling cascade. Scientific Reports. 13:3606. https://doi.org/10.1038/s41598-023-30709-6
11.	Parveen, S.; Khan, A.; Jahan, N.; Aaliya, K.; Muzaffar, A.; **Tabassum, B**.; Inayatullah, S.; Moeezullah, S.; Tariq, M.; Rehmat, Z.; Ali, N.; Hussain, A. 2023. Expression of Chitinase and shRNA Gene Exhibits Resistance to Fungi and Virus. Genes *14*, 1090. https://doi.org/10.3390/genes14051090
12.	Moeezullah S, Khan A, Jahan N, **Tabassum B**, Agha I, Parveen S, Tariq M,

	Rehmat Z, Kasi N. 2023. The development of cost effective 100 base pair prototype DNA ladder using polymerase chain reaction. Adv. life sci., vol. 10, no. 1, pp. 61-65
13.	Jahan N., Javed M.A., Khan A., **Tabassum B**., Agha S.I., Parveen S., Muzaffar N. 2022. Multiple interval mapping of QTLs and epistasis for Fe2+ toxicity tolerance in segregating population of Indica rice. Notulae Botanicae Horti Agrobotanici Cluj-Napoca. 50 (4): 12773.
14.	Tariq M, **Tabassum B**, Bakhsh A. et al. 2022. Heterologous expression of Cry1Ia12 insecticidal gene in cotton encodes resistance against pink bollworm, *Pectinophora gossypiella* (Lepidoptera: Gelechiidae); an alternate insecticidal gene for insect pest management. Molecular Biology Reports. Doi: https://doi.org/10.1007/s11033-022-07824-0
15.	Javed Z, Laraib F, Ahmed S, Ali A, **Tabassum B**, Farooq AM, Tariq* M, Asmatullah, Nasir IA. Potential effects of CEMB Bt corn on immunology and hormonal metabolism in Broiler chicken. 2022. International Journal of Agriculture and Biology. DOI: 10.17957/IJAB/15.1986.
16.	Rehman T, **Tabassum B**, Yousaf S, Sarwar G and Qaisar U. 2022. Consequences of drought stress encountered during seedling stage on physiology and yield of cultivated cotton. Frontiers in Plant Science. doi: 10.3389/fpls.2022.906444.
17.	Murtaza S, Tariq M, Yousaf I, Riaz S, Jabbar B, Nasir IA, **Tabassum B***. 2022. Silencing a *Myzus persicae* Macrophage inhibitory factor by plant-mediated RNAi induces enhanced aphid mortality coupled with boosted RNAi efficacy in transgenic potato lines. Molecular Biotechnology.https://doi.org/10.1007/s12033-022-00498-w
18.	Agha SI; Parveen S; Azeem S; **Tabassum B**; Jahan N; Ullah H; Ullah M; Agha SM; Raza AM; Khan A. 2022. Antifungal activity of *Bacillus velezensis* against *Fusarium oxyporum* on *Triticum aestivum* in green house condition. Notulae Botanicae Horti Agrobotanici Cluj-Napoca. 50(1):12590. DOI:10.15835/nbha50112590
19.	Javed M, Bilal M, **Tabassum B*,** Malik A, Adeyinka OS, Tariq M, Nasir IA. 2022. Purification and functional characterization of lectin from *Chenopodium album*. Journal of Proteins and Proteomics. https://doi.org/10.1007/s42485-022-00084-3
20.	Azeem, S., Agha, S.I., Jamil, N., **Tabassum, B**., Ahmed, S., Raheem, A., Jahan, N., Ali, N., Khan, A. 2022. Characterization and survival of broad spectrum bio control agents against phyto-pathogenic fungi. Revista Argentina de Microbiologia. https://doi.org/10.1016/j.ram.2021.10.005
21.	Jahan N, Arshad M, Khan A, Manam F, and **Tabassum B**. 2021. Genetic architecture of Al3+ toxicity tolerance in rice F2:3 populations determined through QTL mapping. Ecotoxicology. https://doi.org/10.1007/s10646-021-02413-6
22.	Khan A, Nosheen F, **Tabassum B***, Yousaf I, Adeyinka OS, Shehzad K, Khan AM and Nasir IA. 2021. Comparative silencing effect of different siRNA fragments on potato virus X coat protein in transient transfection assays. Pakistan Journal of Zoology. Pp: 1-7. http//:dx.doi.org/10.17582/journal.pjz/20190214060247
23.	Aaliya K, Nasir IA, Khan A, Toufiq N, Yousaf I, Adeyinka OS, Iftikhar S, Farooq AM, **Tabassum B*.** 2021. Expression of ice recrystallization inhibition protein in transgenic potato lines associated with reduced electrolyte leakage and efficient recovery post freezing injury. Journal of Biotechnology 327 (2021) 97–105.
24.	Adeyinka OS, **Tabassum B**, Riaz S, Toufiq N, Yousaf I, Anicet B, Nasir IA. 2020. Advances in exogenous RNAs delivery techniques for RNAi-Mediated Pest control. Molecular Biology Reports. https://doi.org/10.1007/s11033-020-05666-2.

25.	Bilal M, **Tabassum B**, Ali Q, Nasir IA. 2020. Down regulation of Potato Virus Y (PVY) Coat Protein (CP) expression by *Iberis gibraltarica* protein extract. Cytology & Genetics. 55(1): 80-86. DOI: 10.3103/S0095452721010102.
26.	Iqbal MS, **Tabassum B**, Awan MF, Tariq M, Ali Q and Nasir IA. 2020. Genetic variability of sugarcane genotypes for red rot disease. Genetics and Molecular Research 19 (1): gmr16039978.
27.	Sharif MN, Iqbal MS, Alam, R, **Tabassum B,** Awan MF, Ali Q and Nasir IA. 2020. Knock down of molt regulating gene for development control of *Helicoverpa armigera*. Genetics and Molecular Research 19 (2): gmr16039978.
28.	Bilal M, Nasir IA, **Tabassum B**, Akrem A, Ahmad A and Ali Q. 2020. Cytotoxicity and in-vitro antiviral activity of lectin from *Crocus vernus* L. against potato virus Y. Applied Ecology and Environmental Research. 18(1): pp-pp. DOI: 10.15666/aeer/1801_13011315.
29.	Bhatti MU, Riaz S, Toufiq N, Adeyinka OS, Khan A, Yousaf I, Tariq M, Murtaza S, Nasir IA and **Tabassum B***. 2020. The potential and efficacy of *Allium sativum* leaf lectin (ASAL) against sap-sucking insect pests of transgenic maize. Biologia. https://doi.org/10.2478/s11756-020-00533-8.
30.	Riaz S, Nasir IA, Bhatti MU, Adeyinka OS, Toufiq N, Yousaf I and **Tabassum B***.2020. Resistance to *Chilo infuscatellus* (Lepidoptera: Pyraloidea) in transgenic lines of sugarcane expressing *Bacillus thuringiensis* derived Vip3A protein. Molecular Biology Reports. https://doi.org/10.1007/s11033-020-05355-0
31.	Awan MF, Iqbal MS, Sharif MN, **Tabassum B**, Tariq M, Murtaza S, Ali S, Raza A, Bukhari SAR, Idrees Ahamd Nasir IA. 2019. Evaluation of genotypic and hormone mediated callus induction and regeneration in sugarcane (*Saccharum officinarum* L). International Journal of Botany Studies. 4 (6): 70-76.
32.	Adeyinka OS, **Tabassum B***, Nasir IA, Yousaf I, Sajid IA, Shehzad K, Bacho A and Husnain T. 2019. Identification and validation of potential reference gene for effective dsRNA knockdown analysis in *Chilo partellus*. Scientific Reports Nature. 9:13629. https://www.nature.com/articles/s41598-019-49810-w
33.	Sajid IA, **Tabassum B***, Yousaf I, Khan A, Adeyinka OS, Shahid N, Nasir IA and Husnain T. 2019. In vivo gene silencing of Potato Virus X by small interference RNAs in transgenic potato. Potato Research. 1-13. https://doi.org/10.1007/s11540-019-09433-0
34.	Yousaf I, **Tabassum B**, Khan A, Sajid IA, Adeyinka OS, Nasir IA and Asif M. 2019. Molecular cloning, structural analysis and expression in Escherichia coli of a chitinase gene from *Trichoderma harzianum*. Biocell. 43 (5-1): 286-295.
35.	Fatima N, **Tabassum B***, Yousaf I, Malik M, Khan A, Sajid IA, Tariq M, Toufiq N, Riaz S and Nasir IA. 2019. Potential of Endochitinase gene to control Fusarium wilt and Early Blight Disease in transgenic potato lines. Journal of Plant Protection Research. doi.org/10.24425/jppr.2019.129755.
36.	Khan A., **Tabassum B,** Aaliya K, Tariq M, Nasir IA, Hassan S, Ismail T, Ali N, Ponya Z. 2019. The effectiveness of recombinant chitinase obtained from barley (*Hordeum vulgare* L.) against potato p1athogens. Applied Ecology and Environmental Research. 17(2):4147-4157.
37.	Shakoor S, Rao AQ, Shahid N, Yaqoob A, Samiullah TR., Shakoor S, Latif A, **Tabassum B,** Shahid AA, and Husnain T. 2019. Role of Oral vaccine as an edible tool to prevent infectious diseases. Acta virologica. 63: 245 – 252.
38.	Samuel AO, **Tabassum B**, Sharif MN, Bhatti MU, Nasir IA and Husnain T. 2018. Lag in Advance Biotechnology Approach: a Reliable Control of Maize Stem Borer Insect in Africa. Journal of Plant Protection Research. 58 (1): 8–24.
39.	Aslam U, **Tabassum B***, Nasir IA, Khan A and Husnain T. 2018. A virus-derived short hairpin RNA confers resistance against sugarcane mosaic virus in transgenic sugarcane. Transgenic Research. 10.1007/s11248-018-0066-1.

40.	Tariq M, Anwar Khan A, **Tabassum B***, Toufiq N, Bhatti MU, Riaz S, Nasir IA and Husnain T. 2018. Antifungal activity of chitinase II against *Colletotrichum falcatum* Went. causing red rot disease in transgenic sugarcane. Turkish Journal of Biology, 42: 45-53
41.	**Tabassum B***, Khan A, Tariq M, Ramzan M, Khan MSI, Shahid N and Aaliya K. 2017. PGPR in Biocontrol and growth promotion; Bottlenecks in Commercialization and Future Prospects. Applied Soil Ecology. 121: 102–117.
42.	Toufiq N, **Tabassum B***, Bhatti MU, Khan A, Tariq M, Shahid N, Nasir IA and Husnain T. 2017. Improved antifungal activity of barley derived chitinase I gene that overexpress a 32kDa recombinant chitinase in E.coli host. Brazilian Journal of Microbiology. 8382(16): 31095-4.
43.	N. Shahid, A.Q. Rao, P.E. Kristen, M.A. Ali, **B. Tabassum**, S. Umar, S. Tahir, A. Latif, A. Ahad, A.A. Shahid and T. Husnain. 2017. A concise review of poultry vaccination and future implementation of plant-based vaccines. World's Poultry Science Journal, Vol. 73. doi:10.1017/S0043933917000484.
44.	Khan A, Nasir IA, **Tabassum B**, Aaliya K, Tariq M and Rao AQ. 2017. Expression studies of chitinase gene in transgenic potato against Alternaria solani. Plant cell, Tissue and Organ Culture. 128 (3): 563–576.
45.	Awais, M., Tariq, M., Ali, A., Ali, Q., Khan, A., **Tabassum, B**., Nasir, I.A. and Husnain, T. 2017. Isolation, characterization and inter-relationship of Phosphate Solubilizing Bacteria from the Rhizosphere of Sugarcane and Rice. Biocatalysis and Agricultural Biotechnology. http://dx.doi.org/10.1016/j.bcab.2017.07.018.
46.	Farooq AM, Nasir IA, Ali Q, **Tabassum B** and Husnain T. 2017. Identification and interrelationship of yield related traits through DNA Fingerprinting in Zea mays. International journal of Biology, Pharmacy and Allied Sciences. 6(6): 1276-1303.
47.	Iqbal MS, Hafeez MN, Wattoo JI, Ali A, Sharif MN, Rashid B, **Tabassum B**, Nasir IA. 2016. Prediction of Host-Derived miRNAs with the Potential to Target PVY in Potato Plants. Frontier in Genetics, doi.org/10.3389/fgene.2016.00159
48.	A. Hameed, I. A. Nasir, **B. Tabassum**, Z. Qamar, M. Zameer , M. Younus, A. Q. Rao, B. Rashid, M. Tariq, G. A. Khan, M. Ali, M. S. Anjum, S. Ahmed, J. A. Bhatti, T. R. Samiullah and T. Husnain. 2016. Biosafety assessment of locally developed transgenic sugarcane. The Journal of Animal & Plant Sciences. 26(4): 1124-1132.
49.	Zameer M, Zahid H, **Tabassum B**, Ali Q, Nasir IA, Saleem M, Butt SJ. 2016. PGPR Potentially Improve Growth of Tomato Plants in Salt-Stressed Environment. Turkish Journal of Agriculture - Food Science and Technology, 4(6): 455-463.
50.	**Tabassum B*,** Nasir IA, Khan A, Aslam U, Tariq M, Shahid N and Husnain T. 2016. Short hairpin RNA engineering: In planta gene silencing of potato virus Y. Crop protection. 86:1-8.
51.	Aslam S, Latif MS, Daud M, Rahman Z, **Tabassum B***, Riaz MS, Khan A, Tariq M and Husnain T. 2016. Crimean-Congo hemorrhagic fever: Risk factors and control measures for the infection abatement (Review). Biomedical Reports 4: 15-20.
52.	M. Ramzan, **B. Tabassum***, I.A. Nasir, A. Khan, M. Tariq, M.F. Awan, N. Shahid, A.Q. Rao, M. Bhatti, N. Toufiq, and T. Husnain. 2016. Identification and

	application of biocontrol agents against Cotton Leaf Curl Virus Disease in Gossypium hirsutum under greenhouse conditions. Biotechnology & Biotechnological Equipment. 30(3): 469-478.
53.	Shahid N, Tahir S, Rao AQ, Hassan S, Khan A, Latif A, Khan MA, **Tabassum B**, Shahid AA, Zafar AU & Husnain T. 2015. Escherichia coli expression of NDV fusion protein gene and determination of its antigenic epitopes. Biologia 70/12:1553-1564. DOI: 10.1515/biolog-2015-0191.
54.	Khan, A., **B. Tabassum**, I. A. Nasir, M. Bilal, M. Tariq and T. Husnain. 2015. Potato virus X from Pakistan: coat protein sequence analysis. The Journal of Animal & Plant Sciences, 25(4): 1016-1021.
55.	Bilal, M., Saeed, M., Nasir, I.A., **Tabassum, B***., Zameer, M., Khan, A., Tariq, M., Javed, M.A. and Husnain, T. 2015. Association mapping of cane weight and tillers per plant in Sugarcane. Biotechnology & Biotechnological equipment, 29(4): 617-623.
56.	M. F. Awan, M. A. Abbas, A. Muzaffar, A. Ali**, B. Tabassum**, A. Q. Rao, A. Nasir and T. Husnain. (2015). Transformation of Insect and Herbicide Resistance Genes in Cotton (Gossypium Hirsutum)". Journal of Agricultural Science and Technology, 17: 275-285.
57.	Qamar Z, Aaliya K, Nasir IA, Farooq AM, **Tabassum B**, Ali Q, Ali A, Awan MF, Tariq M and Husnain T. 2015. An overview of genetic transformation of glyphosate resistant gene in Zea mays. Nature and Science, 13(3):80-90.
58.	Zameer M, Munawar S, **Tabassum B**, Ali Q, Shahid N, Saadat HB and Sana S. 2015. Appraisal of various floral species biodiversity from Iskandarabad, Pakistan. Life Science Journal 2015;12(3s).
59.	Zameer M, **Tabassum B**, Ali Q, Tariq M, Zahid H, Nasir IA, Akram W and Baqir M. 2015. Role of PGPR to improve potential growth of tomato under saline condition: An overview. Life Science Journal 2015; 12(3s).
60.	Ali, S., Nasir, I.A., Ali, A., Aslam, U., Farooq, A.M., Tariq, M., **Tabassum, B**., Qamar, Z., Rao, A.Q. and Husnain, T. 2014. Genetic variability in coat protein gene of Sugarcane mosaic virus in Pakistan and its relationship to other strains. African Journal of Biotechnology. 12(39): 3950-3960.
61.	Qamar, Z., Hossain, Md.B., Nasir, I.A., **Tabassum, B**. and Husnain,T. 2014. In vitro development of Cauliflower synthetic seeds and development of plantlets in vivo. Plant Tissue Cult. & Biotech. 24(1): 27-36.
62.	Nasir, I.A., **Tabassum, B***., Qamar, Z., Javed, M.A., Tariq, M., Farooq, A.M., Butt, S.J., Qayyum, A. and Husnain, T. (2014). Herbicide-tolerant sugarcane (*Saccharum officinarum* L.) plants: An unconventional way of weed removal. Turkish journal of Biology. 38: 439-449.
63.	**Tabassum, B***. Sher, Z., Tariq, M., Khan, A., Shahid, N., Bilal, M., Ramzan, M., Iqbal, M.S., Nasir, I.A. and Husnain, T. (2013). Overview of Acquired Virus Resistance in Transgenic Plants. Experimental Agriculture & Horticulture. Vol. 2(2): 12-28.
64.	Nasir, I.A., Jamal, A., **Tabassum, B*** and Husnain, T. (2013). Regeneration response from old cell suspension cultures of gladiolus. Experimental Agriculture & Horticulture. Vol. 2(2): 1-11.
65.	Hossain, M.B., Nasir, I.A., **Tabassum, B**. and Husnain, T. (2013). Molecular characterization, cloning and sequencing of coat protein gene of a Pakistani potato leaf roll virus isolate and its phylogenetic analysis. African Journal of Biotechnology Vol. 12(11), pp. 1196-1202.
66.	Iftikhar, S., Shahid, A.A., Javed, S., Nasir, I.A., **Tabassum, B**. and Haider, M.S. (2013). Essential oils and latices as novel antiviral agent against potato leaf roll virus and analysis of their phytochemical constituents responsible for antiviral activity. Journal of Agricultural Science; Vol. 5(7): 167-188.

67.	Jamal, A., Nasir, I.A., **Tabassum, B**., Tariq, M., Farooq, A.M., Qamar, Z., Khan, M.A., Ahmad, N., Shafiq, M., Haider, M. S., M.J. and Husnain, T. (2012) Molecular characterization of capsid protein gene of potato virus X from Pakistan. African Journal of Biotechnology Vol. 11(74), pp. 13854-13857.
68.	Farooq, A.M., Nasir, I.A., **Tabassum, B**., Tariq, M., Qamar, Z., Khan, M.A., Ahmad, N., Shafiq, M., Haider, M.S., Javed, M.A. and Husnain,T. 2012. Development and comparative studies of double cross tomato hybrids. African Journal of Agricultural Research. 7(37): 5259-5264.
69.	**Bushra, T**., Nasir, I. A. and Husnain, T. (2011). Potato Virus Y mRNA Expression Knockdown Mediated by siRNAs in Cultured Mammalian Cell Line. Virologica Sinica. 26 (2):105-113.
70.	**Bushra, T**., Nasir, I. A. Farooq, A. M., Rahman, Z. and Husnain, T. (2010). Viability assessment of in-vitro produced synthetic seeds of cucumber. African Journal of Biotechnology. 9 (28):7026-7032.

* indicated role as corresponding author}

National Publications

SNo	Publications
1.	**Tabassum B**, Saleem M, Kausar T. (2003). Biodegradation of agrowaste by *trichoderma viride* mutants. Science International-Lahore. 15(1): 97-101
2.	Nasir, I. A., **Tabassum, B.,** Haider, M. S. and Javed, M. A. Husnain, T. (2010). Strategies to control Potato Virus Y under in vitro conditions. Pakistan J. Phytopath. 22 (1):63-70.
3.	Farooq, A. M., **Bushra, T**., Nasir, I. A. and Husnain, T. (2010). Androgenesis induction, Callogenesis, Regeneration and Cytogenetic studies of tomato haploid. Journal of Agri. Research. 48 (4):457-47
4.	Zameer M, Mahmood S, Mushtaq Z, **Tabassum B,** Ali Q, et al. (2015). Detection of bacterial load in drinking water samples by 16s rRNA ribotyping and RAPD analysis. Adv. Life Sci. 2(3). pp: 135-141.
5.	Ahmed, S., Nasir, I.A., Yaqub, T., Waseem, M., **Tabassum, B**., Masood, F., Khan, A., Butt, S.J. and Husnain, T. 2013. Molecular detection, phylogenetic analysis and designing of siRNA against Potato Virus X. Advancement in Life Sciences, 1(1): 37-44.
6.	Dar, A.I., Saleem, F., Ahmad, M., Tari, M., Khan, A., Ali, A., **Tabassum, B**., Ali, Q., Khan, G.A., Rashid, B., Nasir, I.A., Husnain, T. 2014. Characterization and efficiency assessment of PGPR for enhancement of rice (Oryza sativa L.) yield. Advancement in Life Sciences. 2(1): 38-45.
7.	Bhatti MU, Riaz HA, **Tabassum B***, Toufiq N, Khan A, Tariq M, Yousaf I, Sajid IA, Shahid M and Zameer M. 2018. Epigenetics: Quest for no-escape to HIV, a Persistent Pathogen. Pakistan Journal of Pharmaceutical Sciences. 31(5): 2011-2016.
8.	Z Qamar, M Tariq, T Rehman, MS Iqbal, MB Sarwar, MN Sharif, Z Hassan, **Tabassum B**, et al. 2019. Trackable CEMB-Klean Cotton Transgenic Technology: Affordable Climate Neutral Agri-biotech Industrialization for Developing Countries. Advancements in Life Sciences 6 (3): 131-138.
9.	Khan MSI, Khan A, Adeyinka OS, Yousaf I, Riaz S, Bashir B, Tariq M,

	Tabassum B*. 2020. Molecular cloning and expression of recombinant *Trichoderma harzianum* chitinase in *Pichia pastoris*. Adv. Life Sci. 7(3): 122-128.
10.	Adeyinka OS, Nasir IA , Riaz S , Yousaf I, Toufiq N , Okiki AP , and **Tabassum B**. 2021. A protective dsRNA is crucial for optimum RNAi gene silencing in *Chilo partellus*. International Journal of Agriculture and Biology. 25:1238–1248. DOI: 10.17957/IJAB/15.1785
11.	M Bilal, **B Tabassum**, AM Farooq, M Tariq, IA Nasir, T Hussnain. 2019. In-vitro Analysis of *Chenopodium murale* extract for resistance against potato virus Y. Pure and Applied Biology (PAB) 8 (2), 1172-1181.
12.	**Tabassum B***, Yousaf I, Adeyinka OS, Khalid R, Khan A. 2024. The concept of chloroplast transformation; its relevance towards food security. Advancement in Life Sciences, 11(1): 28-39.
13.	Ali E, Ahmed S, **Tabassum B**, Qaisar U, Nasir IA. 2024. Mutational analysis of Cadherin and v-ATPase genes in Pink Bollworm and resistance towards Bt cotton through in-vitro insect feeding assay. Pakistan Journal of Zoology. 1-6. DOI: https://dx.doi.org/10.17582/journal.pjz/20230822091117.

Book Chapters – International (All publishers recognized as per Sense Ranking of Academic Publishers)

1. **Tabassum B**, Nasir, I. A., Aslam, U. and Husnain, T. (2012). Biochemistry, Genetics and Molecular Biology » "Functional Genomics". Chapter 6 How RNA Interference Combat Viruses in Plants. P: 113-130. Germana Meroni and Francesca Petrera (Eds), ISBN 978-953-51-0727-9, Published: September 12, 2012 under CC BY 3.0 license InTech JanezaTrdine 9, 51000 Rijeka, Croatia. dx.doi.org/10.5772//51870.
2. **Tabassum B**, Nasir, I. A. and Husnain, T. (2017). Biotechnology to Enhance Sugarcane Productivity and Stress Tolerance'. Chapter 4 Bio Techniques: Quest for stress tolerant sugarcane, Kalpana Sengar (Ed). ISBN 9781498754651. Published: March, (2018) under CC BY Taylor & Francis.
3. **Tabassum B**., Samuel A.O., Bhatti M.U., Fatima N., Shahid N., Nasir I.A. (2019) Bottlenecks in Commercialization and Future Prospects of Beneficial Halotolerant Microorganisms for Saline Soils. P: 187-208 In: Kumar M., Etesami H., Kumar V. (eds) Saline Soil-based Agriculture by Halotolerant Microorganisms. Springer, Singapore. Online ISBN 978-981-13-8335-9.
4. Somroo SR, Soomro SN, Syed S, Hassan S, **Tabassum B** (2023) Cotton Stalks: Potential biofuel resources for sustainable environment. In: Biotechnology and Omics approaches for Bioenergy crops edited by Aasim M, Baloch FS, Nadeem MA, Habyarimana E, Ahmed S, Chung G. (eds). Springer, Singapore. https://doi.org/10.1007/978-981-99-4954-0

Patents

National Patents

S.No	Application No. and Date	Author/ Title	Patent No.

1.	157/2017	**Tabassum B**, Nasir IA and Husnain T (2017). Novel transgenic approach to decrease cost of potato production in Pakistan.	In process
2.	242/2017	Farooq AM, Nasir IA, **Tabassum B** and Husnain T (2017). Development of CEMB transgenic Maize inbred lines.	In process
3.	169/2018	Nasir IA, **Tabassum B** and Husnain T (2018). A novel technique to enhance sugar recovery in Pakistani Sugarcane.	In process
4.	59/2020	**Tabassum B**, Nasir IA and Husnain T (2019). Development of transgenic sugarcane for insect resistance.	In process

National Meetings

1. National Bio-Forum at Centre of Excellence in Molecular Biology, Lahore, (2006.)
2. National Bio-Forum BINASIA-Pakistan National Workshop" organized at Centre of Excellence in Molecular Biology, Lahore, (Mar, 11-12), 2008.
3. National Bio-Forum at Centre of Excellence in Molecular Biology, Lahore, (2008.)
4. International symposium on Biotechnology applications in new emerging fields, at Centre of Excellence in Molecular Biology, (Dec. 2010).
5. Attended Microarray for gene Function' workshop held at Centre of Excellence in Molecular Biology, Lahore, 2013.
6. Attended 3rd Invention to Innovation Summit 2014' held at University of the Punjab Lahore on March 19-20, 2014.
7. Attended two days training workshop on 'The Development and Testing of Transgenics for Cotton Leaf Curl Virus (CLCuV) Disease Resistance' held at CEMB in collaboration with Pak-US Cotton Productivity Enhancement Program of ICARDA on March, 18-19, 2014.
8. Attended ICGEB Course on "Basic Biotechnology Techniques" March 07-09, 2016.
9. Attended National Workshop on "CRISPR/Cas9 Genome Editing Technology", June 2, 2016. Held at CEMB in collaboration with NAYS. Lahore-Pakistan.
10. Attended International Conference on "Bioethics: Ethics in Challenging Times", March 20-21, 2017. Held at University of Health Sciences, Lahore-Pakistan.
11. Attended a 2 day workshop on 'Patent Filing and Introduction to Intellectual Property System of Pakistan' on May, 17—18 held at Punjab University Lahore by Office of Research Innovation & Commercialization (ORIC) in collaboration with IPO-Pakistan.
12. Training on 'Bahavioral Based Biosafety Culture', 23 August, 2017 held at CEMB by Gull's Foundation in collaboration with American Society for Microbiology and Health Security partners, Pakistan.
13. A three day workshop on 'Advances in Agricultural Biotechnology & Regulatory Affairs', September 25-27, 2017. Forman Christine College, Lahore-Pakistan.
14. Attended one day International Workshop on 'DNA Barcoding (Barcode of Life Data System)', December 20, 2017. A joint venture of Government College

	University Lahore and University of Guelph, ON, Canada. 15. Jury Member "Photo contest 2017 entitled "Science in Nature"." organized by Gull's Association at University of the Punjab, Lahore, (2017). 16. Jury Member for Assay Competition on "Emerging trends in Science and Technology organized by Gull's Association at University of the Punjab, Lahore, (2017). 17. Participated in workshop on 'Dual Use Research of Concern (DURC) Workshop' organized by Health Security Partners, USA and GULL'S Association at CEMB, University of the Punjab (2018). 18. Attended one day Seminar on 'Risk Assessment of Genetically Modified (GM) Crops', July 20, 2018. A joint venture of Gull's Association and American Society of Plant Biologists at CEMB, University of the Punjab. 19. Participated in a two day workshop on 'Protein structure analysis & Computer Aided Drug designing' organized by GULL'S Association at CEMB, University of the Punjab on September 28, 2018. 20. Participated in Invention to Innovation summit held at CEMB on November 6-8, 2019 21. Participated in a two-day workshop entitled 'Hands on Training Workshop on CRISPR/Cas Genome Editing Technology' held on 29-30, 2019 at CEMB, University of the Punjab. 22. Participated in National Dialogue on 'Ag-Biotech for Food Security & Capacity Building of Bio-safety Regulators' held at COMSTECH Islamabad on December 11-12, 2019. 23. Participated in the Workshop "Make your Research Life Easier with Mendeley Tool" on 06 September 2020 organized by Pakistan Scientific and Technological Information Centre (PASTIC), Quai-e-Azam University Campus Islamabad. 24. Participated in 1st International Conference on Bioinformatics & Computational Methods in Post Genomic Era 9-10th Nov, 2021 organized by Virtual University of Pakistan. November, 9-10, 2021. 25. Certificate of attendance webinar 'Dissecting the scholarly publishing process-A current overview on the steps to getting published. Organized by WILEY on 26th Jan, 2022.
International Meetings	1. 7th International Molecular Biology and Biotechnology Congress 25-27 April 2018. Konya-Turkey.
Approved Supervisor	Ph.D Supervisor Approved by the Higher Education Commission, Islamabad.
Invited Lectures	1. Three day workshop on 'Advances in Agricultural Biotechnology & Regulatory Affairs', September 25-27, 2017. Forman Christine College, Lahore-Pakistan. 2. Delivered a lecture on Basic Biotechnology Techniques in an ICGEB Course,

	March 07-09, 2016. 3. Delivered a lecture in a course, "Microarray for gene Function' workshop held at Centre of Excellence in Molecular Biology, Lahore, 2013).
Teaching Courses	Molecular Biology; Plant Virology and Plant Production & Protection, Functional genomics, Frontiers in Molecular Biology I, Cloning and Gene expression modules, Functional Genomics.
Chair	Chair 'Plant Molecular Biology session at 7th International Molecular Biology and Biotechnology Congress 25-27 April 2018. Konya-Turkey
Research Supervision of M. Phil Thesis	**Research Thesis Supervised** 1. Zunaira Sher (2012). Transformation and Expression Studies of Pathogen Derived and RNAi Based Constructs in Potato. 2. Nida Toufiq (2015). Isolation and expression of Chitinase gene 1a from Barley (*Hordeum vulgare)*. 3. Muhammad Umar Bhatti (2015). Characterization and expression studies of Argonaute gene (Ago I) from Barley (*Hordeum vulgare*). 4. Muhammad Saleem Iqbal Khan (2016). Cloning and expression of *Trichoderma harzianum* derived chitinase gene in *Pichia pastoris.* 5. Imtiaz Ahmad Sajid (2016). Post transcriptional gene silencing of Potato Virus X in *Solanum tuberosum*. 6. Neelam Fatima (2017). Cloning and transformation of fungal chitinase in *Solanum tuberosum*. 7. Momina Malik (2017). Generation of transgenic potato with anti-sweetening gene under influence of cold inducible promoter. 8. Fareeha Nosheen (2017). Silencing potential of shRNA in Potato Virus X gene knockdown in transient transfection assay. 9. Bisma Bashir (2018). Cloning and transformation of anti-sweetening gene in Potato (*Solanum tuberosum*). 10. Iqra Arif (2018). Molecular analysis of transgenic potato lines with delayed sweetening gene expressed under cold inducible promoter for reducing sugars. 11. Quratulain Kokab (2019). Expression analysis of double Bt genes in CEMB transgenic maize inbred lines. 12. Kanza Sadiq (2019). Molecular studies of transformed sugarcane lines for Sucrose Isomerase gene insertion and expression. 13. Hafiz Muhammad Umar (2019). Cloning and transformation of grape derived chitinase gene in potato. 14. Sibgha Malik. 2019. Expression Studies of Aminopeptidase Recombinant Protein in Prokaryotic Expression System.

15. Amna Mir. 2019. Expression Studies of *Chilo partellus* derived Acetylcholine Recombinant Protein in Prokaryotic Expression System.
16. Summaya Fatima. 2019. Cloning and expression of recombinant *Allium sativum Leaf Agglutinin* (ASAL) gene in *E.coli*.
17. Tayyaba Munir. (2020). Phylogenetic Analysis of Coat Protein gene of Potato Virus X from a Pakistani Isolate.
18. Ammara Ghous. (2020). Molecular screening of insect resistant transgenic sugarcane V2 progeny.
19. Shaheen Akhtar. (2020). Validation of potential reference gene for Cadherin synthase transcript expression analysis across developmental stages of Pink bollworm.
20. Kahkishan Khalid. (2020). Transformation and expression studies of chitinase gene in transgenic potato lines.
21. Amna Irshad. 2020. Transformation of triple gene binary construct in potato.
22. Hafiz Muhammad Mubeen (2021). Double stranded (ds)RNA based gene silencing in dusky cotton bug.
23. Rabia Mahmood (2021). Knockdown of Potential RNAi targets in DCB through dsRNA in In-vitro feeding assay.
24. Waqas Yousaf (2022). Identification of suitable reference gene in potato for RT-qPCR analyses during low temperature stress.
25. Hassan Ayaz (2022). Potential of Bacillus species to control Fusarium wilt and leaf spot diseases in spinach.
26. Muhammad Faiq Irfan (2022). Expression of defense related genes against post infection by the pathogenic fungi in spinach.
27. Shahbaz Ahmed (2023). Screening of dsRNA against functional genes in maize stem borer through transient transfection assays.
28. Muhammad Zubair Maqsood (2023). Impact assessment of plant growth promoting Rhizobacteria (Bacillus species) on growth and yield of Soybean (*Glycine max*).
29. Alina Qayyum (2024). Characterization and expression analysis of ELO gene in Soybean across developmental stages.

Research Supervision of Ph.D Thesis

Research Scholars Currently Enrolled

1. Adeyinka Olawale Samuel. TWAS fellow (2020). Investigation of potential double stranded Ribonucleic Acid (dsRNA) as alternate control measure for Maize stem borers (*Chilo partellus*).

	2. Muhammad Umar Bhatti (2020). Genetic Improvement of *Zea Mays* to Control Lepidopteran and Hemipteran Pests. 3. Saman Riaz (2021). Expression Studies of Modified Vip3A and ASAL Genes in Sugarcane. 4. Shahid Murtaza (2022). Multiple Transgenic Strategies to Control *Myzus persicae* transmitted Potato Leaf Roll Virus in Potato. 5. Nida Toufiq (2023). Integration of Ring Finger Anti-Sweetening Gene in Potato. 6. Ejaz Ali (2024). Pyramiding RNAi with Bt cotton to enhance resistance against Pink bollworm. 7. Iqra Yousaf. (2016-2023). Long dsRNA mediated Aphid Resistance in transgenic cotton. Thesis submitted. 8. Farhad Khan (2017-2023). Investigation of RXLR Effector Proteins in Transgenic Potato. Thesis submitted. 9. Rida Khalid. (2019-2024). Investigation of susceptibility genes in potato late blight disease pathogenesis through CRISPR/Cas9 genome editing. Synopsis approved
Novel Sequences	1. Bilal, M., **Tabassum, B**., Tariq,M., Saleem,M.Z. and Nasir,I.A. 2019. Isolation of Coat Protein gene from Potato Virus Y infected plant. GenBank accession # MK130988 2. Adeyinka, O.S., **Tabassum, B**., Nasir,I.A., Landry,K.B. and Rao,T.2019. Chilo partellus V-ATPase mRNA, partial cds. GenBank accession # MK560450 3. Adeyinka,O.S., **Tabassum,B.,** Nasir,I.A., Landry,K.B. and Rao,T. 2019. Chilo partellus Arginine kinase mRNA, complete cds. GenBank accession # MK560449.1 4. Adeyinka,O.S., **Tabassum,B**., Nasir,I.A., Landry,K.B. and Rao,T.2019. Chilo partellus chymotrypsin mRNA, partial cds. GenBank accession # MK560452 5. Adeyinka,O.S., **Tabassum,B**., Nasir,I.A., Landry,K.B. and Rao,T.2019. Chilo partellus acetylcholinesterase mRNA, partial cds. . GenBank accession # MK560447 6. Adeyinka OS, **Tabassum B** and Nasir IA. 2019. Chilo partellus isolate CPOL7 actin-like mRNA, partial sequence. GenBank accession # MH430679. 7. Adeyinka OS, **Tabassum B** and Nasir IA. 2019. Chilo partellus isolate CPOL6 elongation factor 1 alpha-like mRNA, partial sequence. GenBank accession # MH430678. 8. Adeyinka OS, **Tabassum B** and Nasir IA. 2019. Chilo partellus isolate CPOL5 heat shock protein 70-like mRNA, partial sequence. GenBank accession # MH430677. 9. Adeyinka OS, **Tabassum B** and Nasir IA. 2019. Chilo partellus isolate CPOL4 18S ribosomal RNA-like mRNA, partial sequence. GenBank accession # MH430676. 10. Adeyinka OS, **Tabassum B** and Nasir IA. 2019. Chilo partellus isolate CPOL3 V-type ATP synthase catalytic subunit-like mRNA, partial sequence. GenBank accession # MH430675. 11. Adeyinka OS, **Tabassum B** and Nasir IA. 2019. Chilo partellus isolate CPOL2 beta-tubulin-like mRNA, partial sequence. GenBank accession # MH430674.

12. Adeyinka OS, **Tabassum B** and Nasir IA. 2019. Chilo partellus isolate CPOL1 ribosomal protein L32-like mRNA, partial sequence. GenBank accession # MH430673.
13. Khan, A., **Tabassum, B**., Nasir, I. A., Yusuf, I., Khan, S. and Tariq, M. (2017). Trichoderma harzianum chitinase chiAK mRNA. GenBank Accession # KY290959.
14. Khan, A., Sabir, K., **Tabassum, B**., Tariq, M., Ramzan, M., Shahid, A.A., Nasir, I.A. and Husnain, T. (2013). First Pakistani Chitinase isolate from barley. GenBank Accession #KC899774.
15. Tariq, M., **Tabassum, B**., Nasir, I.A. and Husnain, T. (2013). Burkholderia sp. cemb15 16S ribosomal RNA gene, partial sequence. GenBank Accession # KF487546.
16. Khan, A., **Tabassum, B**., Farooq, M., Ali, A., Ali, S., Tariq, M. and Nasir, I.A. (2013). First report of Potato virus X complete CP gene from Pakistan. GenBank Accession # KC757709.
17. Khan, A., **Tabassum, B**., Nasir, I.A., Qamar, Z., Tariq, M. and Husnain, T. (2013). Potato virus X coat protein gene partial cds. GenBank Accession # KC569978.
18. Hossain, M.B., Nasir, I. A., **Tabassum, B**. and Ahmed, S. 2011. Potato leaf roll virus coat protein-like (CP) gene, partial sequence. Accession No. JN039286, NCBI Gene Bank Database.
19. Arshad, J., Nasir,I. A., Shafiq, M., **Tabassum, B**., Haider, M. S.,Javed, M. A. and Husnain, T. Potato virus X CP gene for coat protien, isolate from Pakistan, genomic RNA. GenBank Accession # HE577130.1.
20. Ramzan, M., Nasir,I.A., Tariq,M., Khan,A., Shahid,S.A., **Tabassum, B**., Qamar,Z., Farooq,A.M. and Husnain,T. Bacillus sp. cemb02 16S ribosomal RNA gene, partial sequence. Accession no. KC928325
21. Khan, A., Tariq, M., **Tabassum, B**. and Nasir,I.A. Klebsiella pneumoniae strain cemb3 16S ribosomal RNA gene, partial. Accession no. KC876640
22. Ramzan, M., Nasir, I. A., Tariq, M., Khan,A., Shahid,S.A., **Tabassum, B**., Qamar, Z., Farooq, A. M. and Husnain,T. Bacterium cemb06 16S ribosomal RNA gene, partial sequence. Accession no. KC928326
23. Ramzan, M., Nasir,I.A., Tariq,M., Khan,A., Shahid,S.A., **Tabassum,B**., Qamar,Z., Farooq,A.M. and Husnain,T. Burkholderia sp. cemb08 16S ribosomal RNA gene, partial sequence. Accession no. KC928327
24. Tariq, M., **Tabassum,B**., Nasir,I.A. and Husnain,T. Klebsiella sp. cemb10 16S ribosomal RNA gene, partial sequence. Accession no. KF487545
25. Tariq,M., **Tabassum,B**., Nasir,I.A. and Husnain,T. Burkholderia sp. cemb15 16S ribosomal RNA gene, partial sequence. Accession no. KF487546
26. Tariq,M., **Tabassum,B**., Nasir,I.A. and Husnain,T. Burkholderia sp. cemb19 16S ribosomal RNA gene, partial sequence. Accession no. KF487547
27. Tariq,M., **Tabassum,B**., Nasir,I.A. and Husnain,T. Klebsiella sp. cemb21 16S ribosomal RNA gene, partial sequence. Accession no. KF487548
28. Tariq,M., **Tabassum,B**., Nasir,I.A. and Husnain,T. Burkholderia sp. cemb24 16S ribosomal RNA gene, partial sequence. Accession no. KF487549
29. Tariq,M., **Tabassum,B**., Nasir,I.A. and Husnain,T. Lactobacillus sp. cemb29 16S ribosomal RNA gene, partial sequence. Accession no. KF487550
30. Tariq,M., **Tabassum,B**., Nasir,I.A. and Husnain,T. Bacillus sp. cemb31 16S ribosomal RNA gene, partial sequence. Accession no. KF487551
31. Ramzan, M., Nasir,I.A., Tariq,M., Khan,A., Shahid,S.A., **Tabassum,B**., Qamar,Z.,

	Farooq,A.M. and Husnain,T. Bacterium cemb32 16S ribosomal RNA gene, partial sequence. Accession no. KC928323 32. Tariq,M., **Tabassum,B**., Nasir,I.A. and Husnain,T. Paenibacillus sp. cemb34 16S ribosomal RNA gene, partial sequence. Accession no. KF487552 33. Ramzan,M., Nasir,I.A. Tariq,M., Khan,A., Shahid,S.A., **Tabassum,B**., Qamar,Z., Farooq,A.M. and Husnain,T. Bacterium cemb35 16S ribosomal RNA gene, partial sequence. Accession no. KC928324 34. Shahid,S.A., Nasir,I.A., Rao,T., Khan,A., **Tabassum,B**. and Qamar,Z. Klebsiella variicola 16S ribosomal RNA gene, partial sequence. Accession no. KC880196 35. Shahid,S.A., Nasir,I.A., Rao,T., Khan,A., Tabassum,B. and Qamar,Z. Klebsiella sp. C18 16S ribosomal RNA gene, partial sequence. Accession no. KC880195 36. Shahid,S.A., Nasir,I.A., Rao,T., Khan,A., **Tabassum,B**. and Qamar,Z. Klebsiella sp. C07 16S ribosomal RNA gene, partial sequence. Accession no. KC880194 37. Shahid,S.A., Nasir,I.A., Rao,T., Khan,A., **Tabassum,B**. and Qamar,Z. Klebsiella sp. C03 16S ribosomal RNA gene, partial sequence. Accession no. KC880193 38. Shahid,S.A., Nasir,I.A., Rao,T., Khan,A., **Tabassum,B**. and Qamar,Z. Burkholderia cepacia 16S ribosomal RNA gene, partial sequence. Accession no. KC880192 39. Shahid,S.A., Nasir,I.A., Rao,T., Khan,A., **Tabassum,B**. and Qamar,Z. Burkholderia sp. C25 16S ribosomal RNA gene, partial sequence. Accession no. KC880191 40. Shahid,S.A., Nasir,I.A., Rao,T., Khan,A., **Tabassum,B**. and Qamar,Z. Burkholderia sp. C24 16S ribosomal RNA gene, partial sequence. Accession no. KC880190 41. Shahid, S.A., Nasir,I.A., Rao,T., Khan,A., **Tabassum,B**. and Qamar,Z. Acinetobacter sp. C17 16S ribosomal RNA gene, partial sequence. Accession no. KC880189
Proceedings	1. Ayaz H, Khalid R, Ahmed S, Haque F and **Tabassum B***. Molecular and biochemical basis of Bacillus velezensis triggered bio-control efficacy to cope Fusarium wilt and Leaf spot diseases in Spinach) published in proceedings of International Conference on Advances in Biological Sciences-ICABS-2023. Organized by School of Biological Sciences, University of the Punjab Lahore-Pakistan. March 6-8, 2023. 2. Awan MF, Sadiq K, Nasir IA, **Tabassum B***, Farooq AM, Qamar Z, Tariq M, Ali E. Transformation of modified sucrose isomerase gene in local Sugarcane genotype for enhanced sugar recovery. International Conference 'Climate Change: Impacts & Solutions' organized by Institute of soil & environmental sciences, University of Agriculture, Faisalabad, November 07-09, 2022. 3. Agha SI, Azeem S, Maghfoor ullah, Khan A, **Tabbasum B** and Jahan N. Biocontrol rhizobacteria enhances growth and yield of wheat (Triticum aestivum) under field conditions against Fusarium oxysporum. 3rd International Conference on Applied Biosciences (ICAB-2022) December 28-29, 2022 organized by Department of Biosciences, Mohammad Ali Jinnah University, Karachi, Pakistan 4. Agha SI, Azeem S, Maghfoor ullah, Khan A, **Tabbasum B** and Jahan N. Efficacy of Biocontrol agents against Phytopathogenic Fungi in Green House Condition. 2nd International Conference on Applied Biosciences (ICAB-2021) December 30-31, 2021 organized by Department of Biosciences, Mohammad Ali Jinnah University, Karachi, Pakistan. 5. Agha SI, Azeem S, Maghfoor ullah, Khan A, **Tabbasum B** and Jahan N. Plant growth and biocontrol efficacy of Bacillus velezensis against Fusarium oxysporum in Triticum aestivum). 3rd International Conference on Emerging Trend in Earth & Environmental Sciences, Nov. 16-18, 2021 organized by College of Earth and Environmental Sciences, University of the Punjab Lahore 6. Adeyinka OS, **Tabassum B**, Yousaf I, Riaz S, Toufiq N, Bhatti MU, Farooq AM,

Qamar Z, Tariq M, Naz F and Nasir IA. Validation of reference genes for RT-qPCR expression analysis in *Chilo partellus*. First International Conference on "Innovations in Molecular Sciences" held at Punjab University, November, 6-8, 2019.

7. Riaz S, **Tabassum B**, Bhatti MU, Adeyinka OS, Toufiq N, Yousaf I, Qamar Z, Farooq AM, Naz F, Tariq M, Nasir IA. Cloning and extracellular expression of *Allium sativum* leaf agglutinin recombinant protein in *E. coli*. First International Conference on "Innovations in Molecular Sciences" held at Punjab University, November, 6-8, 2019.
8. Murtaza S, Qamar Z, Naz F, Farooq AM, Tariq M, Ghous A, Akhtar S, Ahmad S, **Tabassum B** and Nasir IA. Expression Profiling of Endotoxin Cry proteins in CEMB-66 Bt transgenic variety at different locations in Punjab-Pakistan. First International Conference on "Innovations in Molecular Sciences" held at Punjab University, November, 6-8, 2019.
9. Adeyinka OS, **Tabassum B**, Nasir IA. 3rd international symposium on Advances in Molecular Biology of plants and health sciences, 19-21 December 2018. CEMB Lahore-Pakistan.
10. Ahmad S, Ali A, Tariq M, **Tabassum B**, Zahra A, Nasir IA. Transforming genetic pool of two local cotton cultivars to control chewing pests. 3rd international symposium on Advances in Molecular Biology of plants and health sciences, 19-21 December 2018. CEMB Lahore-Pakistan.
11. **Tabassum B**, Khan A, Yousaf I, Tariq M, Shahid N, Nasir IA and Husnain T. 2018. Revealing the potential of plant- and fungus derived chitinase for enhanced fungal resistance in Transgenic Potato lines. 7th International Molecular Biology and Biotechnology Congress 25-27 April 2018. Konya-Turkey.
12. Sajid IA, **Tabassum B**, Yousaf I, Nasir IA, Bashir B, Arif I and Nosheen F. 2017. Post transcriptional gene silencing of potato virus X in *Solanum tuberosum*. 2nd international symposium on Advances in Molecular Biology of plants and health sciences, 21-23 November 2017. CEMB Lahore-Pakistan.
13. Yousaf I, Nasir IA and **Tabassum B**. 2017. Revealing antifungal potential of Trichoderma harzianum derived chitinase gene. 2nd international symposium on Advances in Molecular Biology of plants and health sciences, 21-23 November 2017. CEMB Lahore-Pakistan.
14. Toufiq N, **Tabassum B** and Bhatti U. 2017. Over-expression of chitinase I gene in E.coli enhances resistance against fungal phyto pathogens. 2nd international symposium on Advances in Molecular Biology of plants and health sciences, 21-23 November 2017. CEMB Lahore-Pakistan.
15. **Tabassum B**, Yousaf I, Fatima N, Nasir IA and Husnain T. 2017. Overexpression of Trichoderma derived Chininase gene rendered resistance against fungal pathogens. A three day workshop on 'Advances in Agricultural Biotechnology & Regulatory Affairs', September 25-27, 2017. FCC Lahore-Pakistan.
16. Shahid N, Tahir S, Shakoor S, Samiullah TR, Latif A, Azam S, Rao AQ, Shahid AA, **Tabassum B** and Husnain T. 2017. *E.coli* expression of fusion and hemagglugluttinin neuraminidase protein gene for production of edible vaccine against new castle disease virus. 14th international Bhurban Conference on Applied Sciences and technology Islamabad-Pakistan, January10-14, 2017.
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