

# **SHORT CV**

## **Prof. Dr. Zain Ul Abdin**

*Ph.D. (Italy), Fulbright Postdoctoral Fellow (FIU-USA)*

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(Fellow of Royal Entomological Society, U.K., Member of Entomological Society, USA)

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<https://web.uaf.edu.pk/FacultyProfile/Profile/216>

**Note. A full text CV can be provided upon demand**

## **SHORT BIO**

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Dr. Zain Ul Abdin is an accomplished entomologist with extensive academic and research experience. Currently serving as a Professor in the Department of Entomology at the University of Agriculture Faisalabad, Pakistan, he has dedicated over 20 years to teaching and research in his professional field. Dr. Zain holds a Ph.D. in Entomology, specializing in Insect Molecular Biology, from the University of Basilicata, Italy. He earned both a master's and a bachelor's degree in Entomology from the University of Agriculture, Faisalabad, Pakistan. In 2020, he completed his Fulbright Postdoctoral program at Florida International University, Miami, USA. His primary research focuses on developing innovative tools and strategies for sustainable insect pest management. His research areas encompass insect functional genomics, proteomics, gene regulation, and the study of bioactive genes and peptides with potential insecticidal properties with an integrated approach to insect pest management (IPM). Dr. Zain has a prolific research record, with 59 refereed articles published in peer-reviewed journals and numerous abstracts featured in prestigious conference proceedings. As the principal investigator, he has secured five competitive research grants, supervised the successful completion of four Ph.D. students, and mentored 88 Master's and M.Phil. students. In the academic realm, Dr. Zain has taught various entomology courses at both undergraduate and postgraduate levels. His extensive expertise encompasses multiple aspects of insect biology, ecology, physiology, molecular biochemistry, and toxicology. Furthermore, Dr. Zain has presented his research and development work at several esteemed international conferences in different countries, including the USA, UK, Canada, Poland, and Italy. His contributions to the field of entomology have made a significant impact both locally and on a global scale. He is a Fellow of the Royal Entomological Society, U.K., and a member of the Entomological Society, USA.

## EDUCATION/ACADEMIC QUALIFICATION

<b>Postdoc</b>	Fulbright Postdoc, Sponsored by the Department of State, USA Department of Biological Sciences & International Forensic Research Institute, Florida International University (FIU) Miami, <b>USA.</b>	2019-2020
<b>Ph.D.</b>	University of Basilicata, Potenza, <b>Italy</b>	2005-2009
<b>M.S. (Hons)</b>	<b>Master of Science (Hons.) Entomology</b> Department of Entomology, University of Agriculture, Faisalabad, Pakistan	2000-2002
<b>B.S. (Hons)</b>	<b>Bachelor of Science (Hons.) Entomology</b> Department of Entomology, University of Agriculture, Faisalabad, Pakistan	1995-2000

## CAREER PATH/PROFESSIONAL RECORD

October 11, 2024	Professor	Department of Entomology, University of Agriculture, Faisalabad, Pakistan
2019-2024	Associate Professor	Department of Entomology, University of Agriculture, Faisalabad, Pakistan
2009- 2019	Assistant Professor	Department of Entomology, University of Agriculture, Faisalabad, Pakistan
2003-2009	Lecturer	Department of Entomology, University of Agriculture, Faisalabad, Pakistan

## RESEARCH SUPPORT

Completed Grants/Research Projects

### As Lead Principal Investigator (PI): 04

S.No.	Project Title	Funding Agency	Worth	Duration
1.	Grant for upgrading labs under the institutional strengthening program of HEC (ISULL)	HEC*	Rs.2.65 M	2018-2019
2.	Novel non-venom insecticidal genes and peptides of Parasitic origin for sustainable insect control applications	HEC*	Rs.5.02 M	2014-2017
3.	Parasitoid wasps as a source of novel insecticidal molecules	PSF**	Rs.1.9 M	2011-2014
4.	Development of environmentally benign novel natural bio-insecticides for effective insect control derived from the naturally occurring toxic genes in the female secretions of insect parasitoids	IFS***	\$11,750	2012-2014
5.	Development of natural substitutes of synthetic chemical insecticides for insect control derived from the toxic peptides coded by naturally occurring virulent genes in parasitic Hymenopteran	HEC*	Rs.3.099 M	2010-2013

### As Co-Principal Investigator (Co-PI): 01

1.	Genetic diversity among sap-feeding insects against gene encoding sheath protein	HEC*	Rs.0.49 M	2014-2015
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\*HEC (Higher Education Commission, Govt. of Pakistan)

\*\*PSF (Pakistan Science Foundation)

\*\*\* IFS (International Foundation of Science) SWEDEN

### List of selected Research Publications in Peer-reviewed Journals:

1. Arzoo Ashraf, Muhammad Sohail Sajid, Hafiz Muhammad Rizwan, Kashif Hussain, Muhammad Asif Mahmood, Muhammad Imran Arshad, **Zain ul Abdin**, Shumaila Ashraf, Malcolm K. Jones, Dalia Fouad, and Farid S. Ataya. **2025**. Participatory epidemiological approaches for risk assessment of bed bug (Insecta:Hemiptera: Cimicidae) infestation in public hospitals in the city of Faisalabad, Punjab, Pakistan. *BMC Public Health*. 25:414, <https://doi.org/10.1186/s12889-025-21661-3>

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2. Arif MJ, Nawaz A, Sufyan M, Gogi MD, **UIAbdin Z**, Tayyib M, Ali A, Majeed W, Ali MB, Hedfi A. **2024**. Impacts of abiotic factors and pesticide on the development, phenology, and reproductive biology of pink bollworm, *Pectinophora gossypiella* (Saunders) (Lepidoptera: Gelechiidae). *PeerJ* 12:e18399 DOI 10.7717/peerj.18399

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3. Akram Waseem, Muhammad Tayyib, Shahab-Ud-Din, Ali Abid, **Zain UI Abdin**, Sun Ran Cho and Hee Il Lee. **2024**. Laboratory and Field Performances of WHO Approved Insecticides Used in Dengue Control Program. *Pak. J. Agri. Sci.*, Vol. 61(x), xxx-xxx; 2024. DOI:10.21162/PAKJAS/24.136, 10.21162/PAKJAS/24.136 - 2024-06-26. IF.0.7, HJRS.X, 0552-9034 (print), 2076-0906 (online), DOI(Prefix): 10.21162/PAKJAS

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4. Muhammad Tayyib, **Zain-ul Abdin**, Waseem Akram, Muhammad Mukhtar, Muhammad Jawwad. 2024. Yousuf and Muhammad Akbar. **2024**. Whitefly (Aleyrodidae: Homoptera) Species Infesting Citrus Plants in Punjab, Pakistan. *Pak. J. Agri. Sci.*, Vol. 61(2), 555-563. DOI:10.21162/PAKJAS/24.129 IF.0.7, HJRS: X

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5. Naveed Akhtar, Hafiz Muhammad Tahir, Azizullah, Aamir Ali, Muhammad Mohsin Ahsan, **Zain UI Abdin**, **2024**. Assessment of biodiversity and seasonal dynamics of spiders in maize crops of Punjab, Pakistan. Assessment of biodiversity and seasonal dynamics of spiders in maize crops of Punjab, Pakistan. *Journal of Asia-Pacific Biodiversity*, <https://doi.org/10.1016/j.japb.2024.04.004> **IF. 0.6, HJRS: X**

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6. Muhammad Mohsin Ahsan , Zoya Gulzar , Hafiz Muhammad Tahir , Aamir Ali , Muhammad Ismail , Muhammad Khalid Mukhtar , **Zain UI Abdin**, **2024**. Scorpion sting in Hafizabad, Pakistan: Facility based epidemiological study. *Toxicon*, **238**: 107567. Print ISSN: 0041-0101 Online ISSN: 1879-3150 <https://doi.org/10.1016/j.toxicon.2023.107567> IF: 2.6 HJRS: W

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7. Syed Asad Ali BUKHARI, Zain UL ABDIN, Urooj Afzal CHUGHTAI, Hammad Ahmad KHAN, , Waseem AKRAM, Muhammad ARSHAD, Hasooba HIRA, Shanza NAWAZ, Syeda Eisha Tu RAZIA, **2024**. In vitro studies on the effects of plant-based bioinsecticide azadirachtin on the hemocyte-mediated immunity and various life history traits of *Plutella xylostella*. *Bulletin of Insectology*. 77 (1): 39-43, 2024 ISSN 1721-8861 eISSN 2283-0332 77 (1): IF.1.3, HJRS: X. <http://www.bulletinofinsectology.org/pdfarticles/vol77-2024-039-043bukhari.pdf>

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8. Jeffrey D. Wellsa,\*, Amber E. MacInnis, Maurell A. Dsouza, **Zain UI Abdin\***, Sara Al Mughawid, Mohammad Al Khloofid, Mariam Sajwanid, Maryam Al Maidood, Ashwaq Saeedd, Hamdan Ahlid, Rawdha Al Shamsid, Reem Al Mheirid. **2021**. Forensic entomology when the evidence is “No insect.” Best carrion fly species for predicting maximum postmortem interval in the United Arab Emirates. *Forensic Science International*, 328 (2021) 110999. Online ISSN: 1872-6283, Print ISSN: 0379-0738, <https://doi.org/10.1016/j.forsciint.2021.110999> (IF.2.676). HJRS: W

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9. Saqi Kosar Abbas, **Zain ul Abdin\***, Muhammad Arshad, Fiaz Hussain, Amer Jamil. **2021**. *In Vitro* Studies for the Evaluation of Insecticidal Potential of the Venom of Endoparasitic Wasp *Aenasius arizonensis* (Girault) (Hymenoptera, Encyrtidae). *International Journal of Peptide Research and Therapeutics*. 27:47–54 <https://doi.org/10.1007/s10989-020-10062-2>, Electronic ISSN: 1573-3904. (IF.2.5) HJRS: X

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10. Rostislav Zemek, Jana Konopická and **Zain UI Abdin**, **2020**. Low Efficacy of *Isaria fumosorosea* against Box Tree Moth *Cydalima perspectalis*: Are Host Plant Phytochemicals Involved in Herbivore Defence Against Fungal Pathogens? *J. Fungi* **2020**, 6 (4), 342-352; <https://doi.org/10.3390/jof6040342>, (IF.4.621)

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11. Muhammad Rizwan Tufail, Luqman Amaro, **Zain ul Abdin**, Muhammad Naveed, and Amjad Abbas, **2020**. Identification and Phylogeny Determination of Pathogen-Associated with Leaf Blight of Cotton. *Intl. J. Agric. Biol.*, 24: 29-34. DOI: 10.17957/IJAB/15.1404. [http://www.fspublishers.org/published\\_papers/29065\\_doi%2015.1404%20IJAB-19-1892%20\(6\)%2019.02.2020%20W.pdf](http://www.fspublishers.org/published_papers/29065_doi%2015.1404%20IJAB-19-1892%20(6)%2019.02.2020%20W.pdf)

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12. ShengyunLi, Fiaz Hussain, Gopalan C. Unnithan, Shuanglin Dong, **Zain UIAbdin**, Shaohua Gu, Lolita G.Mathew, Jeffrey A.Fabrick, Xinzhin, Yves Carrière, Bruce E.Tabashnik, Xianchun Li, **2019**. A long non-

coding RNA regulates cadherin transcription and susceptibility to *Bt* toxin Cry 1Ac in pink bollworm. *Pesticide Biochemistry and Physiology*, **158**: 54-60 <https://doi.org/10.1016/j.pestbp.2019.04.007>

13. Tahir Shafeeq, **Zain UlAbdin**, Kyeong-Yeoll Lee, 2017. Induction of stress- and immune-associated genes in the Indian meal moth *Plodia interpunctella* against envenomation by the ectoparasitoid *Bracon hebetor*. **Archives of Insect Biochemistry and Physiology**. <https://doi.org/10.1002/arch.21405>, <https://onlinelibrary.wiley.com/doi/abs/10.1002/arch.21405>
14. Atif Manzoor, **Zain Ul Abdin**, Hoor Shaina, Bruce A. Webb, and Amer Jamil, **2017**. Functional analysis of *Bracon hebetor* venom on Target and non-target insect cell lines. *Acta Entomologica*. <https://zenodo.org/record/1064667#.Xqoie2hKg2w>
15. Atif Manzoor, **Zain UlAbdin\***, Bruce A. Webb, Muhammad Jalal Arif, Amer Jamil, **2016**. *De novo* sequencing and transcriptome analysis of female venom glands of ectoparasitoid *Bracon hebetor* (Say.) (Hymenoptera: Braconidae). *COMP BIOCHEM PHYS D*. 20:101-110. <https://www.sciencedirect.com/science/article/pii/S1744117X16300697?via%3Dihub>
16. Hoor Shaina, **Zain UlAbdin \***, Bruce A. Webb, Muhammad Jalal Arif, Amer Jamil, **2016**. *De novo* sequencing and transcriptome analysis of venom glands of endoparasitoid *Aenasius arizonensis* (Girault) (= *Aenasius bambawalei* Hayat) (Hymenoptera, Encyrtidae). *Toxicon*, 121:134-144 <http://dx.doi.org/10.1016/j.toxicon.2016.08.022>
17. Muhammad Javid Iqbal, Yasir Maqsood, Zain **Ul Abdin**, Atif Manzoor, Muhammad Hassan, Amer Jamil, **2015**. SSR Markers Associated with Proline in Drought Tolerant Wheat Germplasm. *Applied Biochemistry and Biotechnology*. 178:1042-1052. <http://link.springer.com/article/10.1007%2Fs12010-015-1927-1>, DOI: 10.1007/s12010-015-1927-1
18. Raheela Jabeen, Ghulam Mustafa, **Zain ul Abdin**, M. Javid Iqbal, and Amer Jamil, **2014**. Expression Profiling of Bioactive Genes from *Moringa oleifera*. *Applied Biochemistry and Biotechnology*, 174 (2):657-666. DOI: 10.1007/s12010-014-1122-9. <http://link.springer.com/article/10.1007%2Fs12010-014-1122-9>
19. Saqi Kosar Abbas, **Zain UlAbdin \***, Muhammad Jalal Arif1, and Amer Jamil, **2014**. Functional analysis of the venom of mealybug parasitoid *Aenasius bambawalei* (Hymenoptera: Encyrtidae), *Biologia*. 69(8):1046–1050. DOI: 10.2478/s11756-014-0402-8 <https://link.springer.com/article/10.2478/s11756-014-0402-8>
20. M. A. Khan, M.D.Gogi, M.H.Bashir, M. Hussain, **Zain ul Abdin** and M.A. Rashid, **2014**. Assessment of density-dependent feeding damage by the cotton dusky bug, *Oxycarenus laetus* Kirby (Hemiptera: Lygaeidae) in cotton. *Turk J Agric For*. 38: 198-206. Doi:10.3906/tar-1303-21 <http://journals.tubitak.gov.tr/agriculture/issues/tar-14-38-2/tar-38-2-5-1303-21.pdf>

#### Abstracts published in the proceedings of International Conferences/symposia

26. **Zain ul Abdin1\***Hafiz Muhammad Tahir, Fiaz Hussain, Hoor Shaina, Shahbaz Ahmad, and Saqi Kosar Abbas.**2019**. Some laboratory studies for the evaluation of the insecticidal potential of the venom of an endoparasitic wasp *Aenasius arizonensis* (Girault) (= *Aenasius bambawalei* Hayat) (Hymenoptera, Encyrtidae)"at Entomology 2019.November 17 - 20, 2019. **St. Louis, Missouri, USA**
25. **Zain Ul Abdin\***, Faisal Munir, Sohail Ahmed, Shahbaz Ahmad, Sana Rashid, Fiaz Hussain, Rao Sohail Ahmad Khan, **2018**. Use of multi-gene sequence approach for the identification of forensically important insect species from district Faisalabad, Pakistan. PP.124. ESA, ESC, and ESBC Joint Annual Meeting (Entomology 2018) November 11-14 Vancouver, British Columbia, **Canada**
24. **Zain Ul Abdin**, Muhammad Rashid, Sohail Ahmed, Fiaz Hussain, and Rao Sohail Amad Khan, **2017**. Some molecular studies for the detection of Parasitism by ectoparasitoid *Tamaraxia radiata* (Waterson) (Hymenoptera: Eulophidae) from the citrus field-collected population of its host *Diaphorina citri* Kuwayama (Hemiptera: Psyllidae) in Faisalabad, Pakistan. Entomology 2017, ESA's 65th Annual meeting, November 5 - 8, 2017, **Denver, Colorado, USA**
23. **2Zain ul Abdin \***, Hoor Shaina, Saqi Kosar Abbas, and Atif Manzoor, 2016. Molecular and physiological studies of the host regulation factor of endoparasitoid *Aenasius bambawalei* Hayat (Hymenoptera: Encyrtidae) Oral Presentation). PP.321 International Congress of Entomology (ICE 2016 XXV) September 25-30, 2016.**Orlando, Florida, USA**.
22. Atif Manzoor, **Zain ul Abdin**, Bruce A. Webb, Hoor Shaina. 2016. Transcriptomic analysis of venom glands of *Bracon hebetor* (Say.) (Hymenoptera: Braconidae) for characterization of main venom components. P.P. 256. International Congress of Entomology (ICE 2016 XXV) September 25-30, 2016.**Orlando, Florida, USA**.

21. 2Hoor Shaina, **Zain ul Abdin**, Bruce A. Webb, Atif Manzoor, 2016. Identification of the main venom proteins of Cotton mealybug parasitoid *Aenasius bambawalei* Hayat by RNA-Seq analysis. PP 321. International Congress of Entomology (ICE 2016 XXV) September 25-30, 2016. **Orlando, Florida, USA**

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20. Zain ul Abdin, 2015. Biodiversity of parasitic Hymenoptera offers a natural source of Novel genes/peptides for the development of sustainable plant protection strategies: Biotechnological and entrepreneurial approaches. International Conference on Latest Trends in Biotechnology and Biodiversity. August 24-26, **Dubai, UAE**

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19. **Zain ul Abdin et al.**, 2015. Insect Parasitoids are a rich source of novel genes and peptides for the development of sustainable plant protection strategies. 4<sup>th</sup> International conference of Eco-friendly Applied Biological Control of Agricultural pests and Phytopathogens (ESBCP 2015). Organized by Egyptian Society for Biological Control of pests, October 19, 2015, Cairo, **Egypt**

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18. **Zain ul Abdin**, Ashfaq, M., Suhail, A., Arshad, M., Gogi, M. D., Manzoor, A., Shaina, H., Mubarik, E. 2011. Host regulation by mealybug parasitoid *Aenasius bambawalei* Hayat (Encyrtidae: Hymenoptera). PP.17. Abstract. VII<sup>th</sup> International Conference on Arthropods: Chemical, Physiological, Biotechnological and Environmental aspects. Stefan Kopeć Memorial Conference, September 18-23, 2011, **Poland**.

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17. Muhammad Arshad, Anjum Suhail, **Zain ul Abdin**, H.Fahim udin Shah. Effectiveness of Transgenic *Bt* cotton with CRY1AC against spotted bollworm *Earias insulana* (Boisd) and pink bollworm *Pectinophora gossypiella* (Saund). PP.39. Abstract. VII<sup>th</sup> International Conference on Arthropods: Chemical, Physiological, Biotechnological and Environmental aspects. Stefan Kopeć Memorial Conference, September 18 -23, 2011, **Poland**.

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16. **IZain ul Abdin \***, Amer Jamil, M. Jalal Arif, Hoor Shaina 2012. Functional analysis of the venom of mealybug parasitoid *Aenasius bambawalei* Hayat (Hymenoptera: Encyrtidae). Abstract. '12O '12, Res National Science meeting, organized by Royal Entomological Society, U.K. in Anglia Ruskin University, July 18-20, 2012 **Cambridge, UK**.

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15. **Zain ul Abdin**, M. Jalal Arif, A.Suhail, M. Ahsan Khan, W. Wakil, M. D. Gogi, M. Arshad, F. Hussain, 2012. Biological Characteristics, host stage preference, and reproductive fitness of mealybug parasitoid *Aenasius bambawalei* Hayat (Hymenoptera: Encyrtidae). 0407F16 Abstract. XXIV International Congress of Entomology (ICE) 2012, August 19-25, 2012. **Daegu, Korea**.

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14. M. Arshad, A. Suhail, M. D.Gogi, M.H. Bashir, **Zain ul Abdin**, M. A. Khan, 2012. Effectiveness of transgenic bt cotton on the non-target sucking insect pests community. 0403TU11. Abstract. XXIV International Congress of Entomology (ICE) August 19-25, 2012. **Daegu, Korea**

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13. Anjum Suhail, Muhammad Arshad, **Zain ul Abdin**, Muhammad Dildar Gogi, Rashid Rasool Khan, 2012. Diversity of non-target insect community in *Bt* and non-*Bt* cotton. PS7TH474. Abstract. XXIV International Congress of Entomology (ICE) August 19-25, 2012. **Daegu, Korea**

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12. M. D. Gogi, M.J. Arif, M. Ashfaq, A.Suhail, S. Ahmed, M. A. Khan, M.H. Bashir, **Zian ul Abdin**, M. Arshad, A. Anwar, 2012. Impact of different pheromone traps installation on the capture and damage intensities of fruit fly species in various host crops.0401M25. Abstract. XXIV International Congress of Entomology (ICE) August 19-25, 2012. **Daegu, Korea**

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11. M. D. Gogi, M. H. Bashir, M. Arshad, **Zain ul Abdin**, M. A. Khan, 2012. Evaluation of some botanical extracts, adult food baits, oviposition baits, colored egg receptacles, and cultural practices and their possible integration for IPM of melon fruit flies.0401M27. Abstract. XXIV International Congress of Entomology (ICE) August 19-25, 2012. **Daegu, Korea**.

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#### **Abstracts published in the proceedings of National Conferences/symposia**

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10. **Zain ul Abdin, 2016**. Biotechnology based on sustainable insect control strategies. PP.113 (Keynote lecture). International Conference of Biochemistry, Biotechnology, and Biomaterials (ICBBB-2016). February 22-24, 2016, Department of Biochemistry, University of Agriculture, Faisalabad

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09. **Zain ul Abdin\*** and Hoor Shaina, **2016**. Transcriptome analysis of Parasitic Hymenoptera: A Novel Approach for the Development of innovative plant protection strategies (Oral presentation) P.P. 28-29. International Conferences "Recent advances and challenges in Molecular Biology, Biochemistry, and Biotechnology." August 25-27, 2016. Organized by the Center for Advanced Drug Research, COMSATS Institute of Information Technology Abbottabad (Pakistan)

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08. **Zain ul Abdin et al., 2016**. Novel Biotech insect control strategies for the suppression of sucking insect pests of cotton.75th Plenary Meeting of the ICAC October 30- November 4, 2016, Islamabad, Pakistan "Emerging Dynamics in Cotton: Enhancing Sustainability in the Cotton Value Chain."

07. Muhammad Shehzad, **Zain ul Abdin\***, Muhammad Tahir, Muhammad Arshad, Rao Sohail Ahmed Khan **2016**. Biochemical analysis of Phenoloxidase in the Haemolymph of *Galleria mellonella* (Lepidoptera, pyralidae) parasitized by the ecto parasitoid *Bracon hebetor* (Say.) (Hymenoptera, braconidae). (Oral Presentation) P.P. 6. International Congress of Entomology and one Exclusive Day on Current Scenario and management of Pink Bollworm” on 16-18 December 2016. Organized by Department of Entomology, University of Agriculture, Faisalabad, Pakistan

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06. **Zain ul Abdin**, Atif Manzoor, Hoor Shaina and Saqi Kosar Abbas, **2014**. Toxic genes from insect parasitoids are a rich source of environmentally benign novel natural bio-insecticides for sustainable insect control programs. Abstract. International Conference of Biochemical and chemical sciences (ICBCS 2014) To be held in the Department of Chemistry & Biochemistry, University of Agriculture, Faisalabad, Pakistan. February 24-26, 2014. **(Oral presentation)**

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05. Gogi, M.D., Arif, M.J., **Zain ul Abdin**, Arshad, M., Ahmad, S. And Mujtaba, M. 2011. Evaluation of synergism/antagonism in the toxicity of insecticides against cotton mealybug through co-administration with silicon dioxide under laboratory conditions. PP.93. Abstract. 31<sup>st</sup> Pakistan congress of Zoology (International Congress), University of Azad Jammu Kashmir, Muzaffarabad, Pakistan, April 19 to 21, 2011.

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04. Arshad, M., Suhail, A., **Zain ul Abdin** and Gogi, D., 2011. Efficacy of Transgenic Bt cotton against *Helicoverpa armigera* (Lepidoptera: Noctuidae) in the Punjab, Pakistan. PP.87. Abstract. 31<sup>st</sup> Pakistan congress of Zoology (International Congress), University of Azad Jammu Kashmir, Muzaffarabad, Pakistan, April 19 to 21, 2011.

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03. Gogi, M.D., Ashfaq, M., Arif, M. J., **Zain ul Abdin**, Khan, M. A., Bashir, H., Arshad, M., 2011. Evaluation of different IPM models for their performance in Bitter Gourd (*Momordica charantia*) crop against melon fruit fly (*Bactocera cucurbitae* coquille) pest. P.P. 94. Abstract. 31<sup>st</sup> Pakistan congress of Zoology (International Congress), University of Azad Jammu Kashmir, Muzaffarabad, Pakistan, April 19 to 21, 2011.

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02. Arshad, M., Suhail, A., Gogi, M. D., and **Zain ul Abdin.**, 2011. Seasonal pattern of infestation by spotted bollworm *Earias insulana* (Boisd.) and Pink Bollworm *Pectinophora gossypiella* (Saund.) in field plots of Transgenic Bt and non- Bt cotton. P.P. 86. Abstract. 31<sup>st</sup> Pakistan congress of Zoology (International Congress), University of Azad Jammu Kashmir, Muzaffarabad, Pakistan, April 19 to 21, 2011.

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01. **Zain ul Abdin**, 2011. Parasitic Hymenoptera is a rich source of novel insecticidal proteins. PP.125. Abstract. 10<sup>th</sup> International and 22<sup>nd</sup> National Chemistry Conference organized by Department of Chemistry & Biochemistry, University of Agriculture, Faisalabad, Pakistan, Under the auspices of the chemical society of Pakistan November 21-23, 2011.

## ADVISING AND SUPERVISION OF RESEARCH STUDENTS

### As Ph.D. advisor

Four Ph.D. students have completed their Ph.D. degrees under my supervision. They also spent six months in the lab of Prof. Bruce A. Webb, University of Kentucky, USA, and Prof. Bruce E. Tabashnik's Research group lab at the University of Arizona, USA, for conducting a partial component of the research of their theses on Pink bollworm and RNA-Seq Illumina Technology (Next-generation sequencing) and *De novo* assembly.

Dr. Saqi Kosar Abbas. 2016.

**Thesis title:** Molecular and functional characterization of bioactive peptides from the venom of *Aenasius bambawalei* Hayat (Hymenoptera: Encyrtidae)

Dr. Atif Manzoor, 2016.

**Thesis title:** Molecular and functional characterization of bioactive peptides from the venom of *Bracon hebetor* (Say.) (Hymenoptera, Braconidae)

Dr. Hoor Shaina, 218.

**Thesis title:** Cloning and expression of cDNA encoding bioactive venom proteins from mealybug parasitoid *Aenasius bambawalei* Hayat (Hymenoptera, Encyrtidae)

Dr. Fiaz Hussain, 2018.

**Thesis title:** Isolation and characterization of genes related to the suppression of host immune response by *Bracon hebetor* (Say). (Hymenoptera: Braconidae)

Dr. Muhammad Rizwan Tufail, 2020.

### As a member of the thesis supervisory committee

Three Ph.D. students have completed their Ph.D. degrees under my supervision as a member of their thesis supervisory committee.

**Thesis title:** Characterization of *Xanthomonas campestris* pv. *malvacearum* from the cotton belt of Punjab and its management through various strategies

Dr. Muhammad Zeshan Ahmed, 2019.

**Thesis title:** Molecular Characterization of *Lasiodiplodia theobromae* associated with citrus gummosis from major citrus growing areas of Punjab, Pakistan

DR. Hafiz Muhammad Usman Aslam, 2019.

**Thesis title:** Molecular Characterization of pathogen-associated with Rice Blast Disease from major rice-growing areas of Punjab

### **As Master/M.Phil. Academia advisor**

Following eight seven (87) students with a Master's/M.Sc. (Hons)/M.Phil. Entomology and Zoology have completed their degrees.

S. No	Name of Student	Year	Thesis Title
88.	Salman Sultan Riaz 2016-ag-5310 M.Sc (Hons) Entomology	2024	Evaluation Of Parasitic Potential Of <i>Exorista Xanthaspis</i> : A Larval-Pupal Parasitoid Of Fall Army Worm <i>Spodoptera Frugiperda</i> In Maize Crop Grown In District Faisalabad
87.	Sheheryar 2018-ag-7087 M.Sc (Hons) Entomology	2024	Study The Toxic Effects Of Recommended Insecticides For Citrus On Parasitization Rate Of <i>Tamarixia Radiata</i> , An Ectoparasitoid Of Asian Citrus Psyllid, <i>Diaphorina Citri</i> In Citrus Growing Areas Of Punjab Province, Pakistan
86.	Tausif Ahmad 2018-ag-8826 M.Sc (Hons) Entomology	2024	Biodiversity Of The Fauna Of Parasitoids Associated With The Mealybug Species <i>Phenacoccus Solenopsis</i> Tinsley (Hemiptera: Pseudococcidae) In Different Agro Ecologies Of The Province Punjab, Pakistan
85.	Muhammad Azeem Yousaf 2017-ag-10094 M.Sc (Hons) Entomology	2023	Population Dynamics Of Insect Fauna Associated With Brinjal Crop Grown In Peri-Urban Agroecosystems In District Faisalabad
84.	Muhammad Bilal Afzal 2017-ag-9106 M.Sc (Hons) Entomology	2023	<i>In Vitro</i> Assessment Of Toxicological And Hematological Impacts Of Some Essential Oils On The <i>Trogoderma Granarium</i> And <i>Tribolium Castaneum</i>
83.	JAVED IQBAL KHAN 2017-ag-9061 M.Sc (Hons) Entomology	2023	Response Of <i>Callosobruchus Chinensis</i> , <i>Tribolium Castaneum</i> And <i>Rhyzopertha Dominica</i> Against Different Concentrations Of Flonicamid, Deltamethrin, Spinetoram And Chlorefenapyr
82.	Syed Asad Ali Bukhari 2017-ag-9100 M.Sc (Hons) Entomology	2023	Study Of The Hemocyte-Mediated Immunity Of <i>Plutella Xylostella</i> In Response To <i>Azadirachtin</i> For Bio Rational Management Of Cauliflower Grown In Peri-Urban Areas Of District Faisalabad
81.	Maham Hanif Awan 2014-ag-3244 M.Sc (Hons) Entomology	2023	<i>In Vitro</i> Studies Of Life Table Parameters Of The Field-Collected Population Of Fall Armyworm On Artificial Diets
80.	Zuriat Fatima 2017-ag-9303 M.Sc (Hons) Entomology	2023	Population Dynamic Assessment Of Fall Armyworm Parasitoids In Different Maize Grown Areas Of District Faisalabad
79.	Eisha Murriam 2021-ag-1379 M. Phil Zoology	2023	Biodiversity Of Ants (Hymenoptera: Formicidae) In Different Cropping Systems Of District Faisalabad And The Study Of The Role Of Trail Pheromones in Route Learning
78.	Iram Nisa 2021-ag-1457 M. Phil Zoology	2023	<i>In Vitro</i> Study the Effectiveness Of <i>Azadirachtin</i> -Based Insecticide For The Management Of Human Head Lice Infestation In Human Population Of Urban And Rural Areas Of District Of Faisalabad



S. No	Name of Student	Year	Thesis Title
77.	Mariam Sohail 2021-ag-1382 M. Phil Zoology	2023	Some Laboratory Studies For Quality Comparison Of Honey Produced By Different Honey Bee Species In Urban And Rural Areas Of District Faisalabad, Punjab, Pakistan
76.	Naeem Shahid 2021-ag-1378 M. Phil Zoology	2023	The Comparative Study Of The Quality Of Royal Jelly Through Melissopalynological Approach Produced By Wild And Domesticated Bees In Peri-Urban Areas Of District Faisalabad
75.	Noor Bakhtawar 2021-ag-1385 M. Phil Zoology	2023	Study Of Association/Correlation Of Dandruff, Hair Lubrication, And Infestation Of Head Lice In Urban And Rural Human Populations In District, Faisalabad, Pakistan
74.	Tehreem Iftikhar 2021-ag-1384 M. Phil Zoology	2023	Study Of Biodiversity Of Termites Associated With Urban Trees And Damage Assessment From Different Localities In Faisalabad, Punjab, Pakistan
73	Unsa Ajmal 2021-ag-1459 M. Phil Zoology	2023	Comparative Study Of Physicochemical Characteristics Of Honey Of Wild And Domesticated Bees From Different Origins
72.	Maryam Inamullah Shahid 2020-ag-1727 M.Phil. (Zoology)	2022	Study of Pollen Transfer Mechanism by Honeybee Foragers on Citrus Plants grown in citrus orchards of the University of Agriculture, Faisalabad.
71.	Sidra Ahmad M.Phil. (Zoology)	2022	Preliminary Studies on the effect of different Temperature Range on the life cycle of Fall Armyworm, ( <i>Spodoptera frugiperda</i> ) collected from different cropping areas of district Faisalabad
70.	Muhammad Sufyan Murtza 2016-ag-6130 M.Sc. (Hons) Entomology	2022	Preliminary Studies on larval feeding Behavior of Fall Armyworm <i>Spodoptera frugiperda</i> (Lepidoptera: Noctuidae) on <i>Bt</i> and non- <i>Bt</i> crop plants
69.	Shazma Amin, 2016-ag-6792 M.Sc. (Hons) Entomology2	2022	Some Preliminary investigations of Cannibalism in mosquito Populations Collected from Urban areas of Sheikhupura, Pakistan
68	Muhammad Usama Arif 2016-ag-6518 M.Sc. (Hons) Entomology	2022	<i>In Vitro</i> Studies for understanding the influence of population density and abiotic factors on larval Development and survival of <i>Aedes aegypti</i> (Diptera: Culicidae)
67	Ms. Iqra Nasir 2020-ag-66 M. Sc .(Hons) Entomology	2022	Evaluation of Fitness of Fall armyworm <i>spodoptera frugiperda</i> under laboratory conditions to <i>Bt</i> corn along with Solanaceous crops grown in district Faisalabad
66	Muhammad Amad Ulfat 2020-ag-55 M.Sc. (Hons.) Entomology	2022	Some preliminary study of mathematical biology (population dynamics) of mango mealybug <i>Drosicha mangiferae</i> in mango orchards located in District Faisalabad, Pakistan
65.	Ms. Amna Zafar, 2016-ag-6264, M.Sc. (Hons) Entomology	2022	Some laboratory studies on the reproductive dynamics of <i>Aedes aegypti</i> collected from urban and peri-urban areas of district Faisalabad, Pakistan, under the influence of physical factors (body size)
64.	Mr. Numan Ejaz (2014-ag-5285) M.Sc. (Hons) Entomology	2020	Some laboratory studies for the evaluation of Predatory Response of <i>Coccinella septempunctata</i> (Coleoptera: Coccinellidae) to varying densities of the host population
63.	Mr. Asif Hussain (2018-ag-44) M.Sc. (Hons) Entomology	2020	Impact of different planting times on population dynamics of the fauna of natural enemies of cotton crop grown in different Agro-ecological zones of Punjab, Pakistan
62.	Mr. Khurram Waqel (2014-ag-4901) M.Sc. (Hons) Entomology	2020	Effect of different host (Aphid) densities on the Predatory Response of larval and adult stages of <i>Coccinella septempunctata</i> (Coleoptera: Coccinellidae).
61.	Mr. Shafqat Ijaz	2020	Study the effects of abiotic factors on the life table of invasive



S. No	Name of Student	Year	Thesis Title
	2018-ag-28 M.Sc. (Hons) Entomology		species, cotton mealybug, <i>Phenacoccus solenopsis</i> Tinsley (Hemiptera: Pseudococcidae).
60.	Mr. Ammad Asif 2014-aga-5367 M.Sc (Hons) Entomology	2020	<i>In vitro</i> studies for the cannibalistic behavior and choice of probing sites of <i>Bracon hebetor</i> Say (Hymenoptera: Braconidae)
59.	Miss. Akasha Sarfraz (2018-ag-38) M.Sc. (Hons) Entomology	2020	Some Laboratory Studies on The Life Cycle of Blowfly <i>Chrysomya Megacephala</i> (Fabricius) (Diptera: Calliphoridae), The Most Abundant and Predominant Forensic Insect Species
58.	Miss. Nusra Mukhtar 2016-ag-1873 M.Phil.-Zoology	2020	Study of Population Diversity of insect pollinators associated with Citrus Crop grown in citrus orchards of the University of Agriculture, Faisalabad
57.	Miss. Iqra Jabeen 2016-ag-2428 M.Phil.-Zoology	2020	Some Laboratory Studies for the Evaluation of Parasitic Potential and Parasitism by Aphid Parasitoid <i>Aphidius ervi</i> Haliday (Hymenoptera: Braconidae)
56.	Miss. Nimra Waseem 2016-ag-2259 M.Phil.-Zoology	2020	Study of Population dynamics of Butterflies of district Faisalabad, Punjab, Pakistan
55.	Miss. Rubab Pervaiz, 2018-ag-3696 M.Phil.-Zoology	2020	A preliminary survey of forensically important flies (Diptera: Calliphoridae) and their Role in Determining Postmortem Interval (PMI) in District Faisalabad, Pakistan
54.	Miss. Syeda Firdous (2016-ag-2296) M.Phil.-Zoology	2020	Some Laboratory Studies for the Assessment of Parasitic Response of Ectoparasitoid <i>Tamarixia Radiata</i> towards its Host Asian Citrus Psyllid <i>Diaphorina citri</i>
53.	Miss. Iqra Fayyaz (2018-ag-3699) M.Phil.-Zoology	2020	Effects of artificial temperature on the development of body on differential responses between the relationship of host-parasitoid interaction <i>Aenasius arizonensis</i> - <i>Phenacococcus solenopsis</i>
52.	Miss. Zernesh Rehman (2016-ag-4591) M.Phil.-Zoology	2020	Development of conservation strategies for insect fauna of dung beetle/scavenger beetles ( <i>Scarabaeidae: Coleoptera</i> ) in District Faisalabad, Punjab, Pakistan
51.	M. Ashraf 2018-ag-3745 M.Phil.-Zoology	2020	Study the phenomenon of cannibalism in ladybird beetle <i>Coccinella septempunctata</i> L. (Coleoptera: Coccinellidae) for sustainable biological control of soft-bodied insects
50.	Miss. AtifaAfzal Chughtai (2018-ag-3694) M.Phil-Zoology	2020	Laboratory studies for morphological and Developmental Stages of Locust <i>Schistocerca Gregaria</i> of Southern Punjab, Pakistan
49.	Mr. Arif Ullah (2018-ag-3757) M.Phil-Zoology	2020	Study of population dynamics of polliniferous bee fauna of Lakki Marwat district, Khyber Pakhtunkhwa, Pakistan
48.	Miss. Annum Nosheen 2017-Ag-2981 M.Phil-Zoology	2019	Some laboratory studies for the evaluation of Parasitic Potential and host searching ability of mealybug Parasitoid <i>Aenasius arizonensis</i> (Encyrtidae: Hymenoptera)
47.	Miss. Anza Ahmad 2017-ag-3052 M.Phil.-Zoology	2019	<i>In vitro</i> studies for the evaluation of the effects of host-size on the development of mealybug parasitoid <i>Aenasius arizonensis</i> (Encyrtidae: Hymenoptera)
46.	Miss. Farhat Bano 2017-Ag-2949 M.Phil.-Zoology	2019	A survey and some laboratory studies for the evaluation of parasitic potential and Temperature-dependent development of the most dominant natural enemies of cereal aphids in District Faisalabad, Pakistan
45.	Miss. Hasooba Hira 2015-Ag-1245 M.Phil.-Zoology	2019	A laboratory study of Temperature-dependent developmental biology of endoparasitic wasp <i>Aenasius arizonensis</i> (Girault) (Hymenoptera: Encyrtidae): A Potent Parasitoid of mealybug, <i>Phenacoccus solenopsis</i>

S. No	Name of Student	Year	Thesis Title
44.	Miss. Maria Naz 2017-Ag-2976 M.Phil.-Zoology	2019	Molecular detection of <i>Wolbachia</i> infection in Lepidopterous insects collected from different crops of District Faisalabad, Pakistan
43.	Miss. Nida Tariq 2017-Ag-3026 M.Phil.-Zoology	2019	Study of biology and silk recycling mechanism during larval development of wax moth, <i>Galleria mellonella</i> (Lepidoptera: Pyralidae)
42.	Miss. Shehar Bano 2017-Ag-3024 M.Phil.-Zoology	2019	PCR-based detection of Tomato yellow leaf curl virus Transmitted by whitefly species in District Faisalabad, Pakistan
41.	Khurram Shehzad (2017-Ag-3111) M.Phil. Zoology	2019	Evaluation of Parasitic Potential of Fruit Fly Parasitoid <i>Diachasmimorpha longicaudata</i> (Hymenoptera: Braconidae) on different host species in the population of fruit flies from District Faisalabad, Pakistan
40.	Hafiz Imran Hussain Kalyar 2017-Ag-0088	2019	Study of Cadherin alleles associated with resistance development to <i>Bacillus thuringiensis</i> in Pink Bollworm Population of District Faisalabad, Pakistan
39.	Mirza Aizaz Asim 2013-Ag-2883	2019	DNA Barcoding of insect vectors for Zoonotic diseases from District Faisalabad, Pakistan
38.	Miss. Sonia Shoukat Ali 2017-Ag-0074	2019	Genomic studies of oriental Latrine fly, <i>Chrysomya Megacephala</i> (Diptera: Calliphoridae): An important forensic insect species
37.	Muhammad Zain Akhtar 2013-Ag-3935	2019	Molecular identification and diversity of Bacterial Endosymbionts from whitefly species collected from Different Cotton Growing Districts of Punjab, Pakistan
36.	Zulfiqar Mushtaq 2017-Ag-0048	2019	Study of biology and genetic diversity of forensically important Blowflies (Diptera: Calliphoridae) in Faisalabad, Pakistan
35.	Amir Sohail 2012-ag-3231	2018	Study of parasitism and superparasitism behavior in the host-parasitoid relationship of <i>Bracon hebetor</i> and <i>Galleria mellonella</i>
34.	Faisal Muneer 2012-ag-33762	2018	Use of mitochondrial DNA sequences for the identification of Forensically important blowflies (Diptera: Calliphoridae) in Faisalabad, Pakistan
33.	Haider Ali 2012-ag-3269	2018	DNA Barcoding for the detection of Parasitism of fruit fly parasitoid <i>Diachasmimorpha longicaudata</i> (Hymenoptera: Braconidae) and differentiation of host species in the population of fruit flies collected from District Faisalabad, Pakistan
32.	Waqas Ahmad 2012-Ag-4105	2018	DNA-based screening for the development of Resistance in Pink Bollworm ( <i>Pectinophora gossypiella</i> (Saunders) against <i>Bt</i> cotton grown in District Faisalabad, Pakistan
31.	Miss. Ayesha Aslam 2016-ag-742- M.Phil.-Zoology	2018	Evaluation of Parasitic Potential of <i>Aenasius arizonensis</i> (Girault) (Hymenoptera, Encyrtidae) on the laboratory-reared population of cotton mealybug, <i>Phenacoccus solenopsis</i> Tinsley (Hemiptera: Pseudococcidae)
30.	Miss. Ayesha Ishtiaq Cheema 2016-ag-1470- M.Phil. Zoology	2018	A preliminary study of the genetic basis of resistance against <i>Bt</i> cotton associated with Cadherin gene in pink bollworm ( <i>Pectinophora gossypiella</i> ) (Saunders) population in District Faisalabad, Pakistan
29.	Miss. Samina Akhlaq 2016-Ag-566 M.Phil. Zoology	2018	Study of mode of reproduction in <i>Phenacoccus solenopsis</i> : An invasive insect pest of cotton crop in Punjab, Pakistan
28.	Miss. Sana Rashid 2016-Ag-741 M.Phil. Zoology	2018	Genetic polymorphism of forensically important Diptera species associated with dog Carcasses ( <i>Canis domesticus</i> L.) in District Faisalabad, Pakistan
27.	Miss. Natasha Rafique 2011-Ag-3815	2017	Determination of Parasitization rate of endo Parasitoid <i>Aenasius arizonensis</i> (Girault) (= <i>Aenasius bambawalei</i> Hayat) (Hymenoptera: Encyrtidae) in response to the host stage and

S. No	Name of Student	Year	Thesis Title
			Temperature effects in <i>Phenacoccus Solenopsis</i> Tinsley (Hemiptera: Pseudococcidae)
26.	Muhammad Rashid 2011-Ag-3389	2017	PCR-based evaluation of Parasitism by ectoparasitoid <i>Tamaraxia Radiata</i> (Waterson) (Hymenoptera: Eulophidae) in its host Asian citrus psyllid, <i>Diaphorina Citri</i> Kuwayama (Hemiptera: Psyllidae)
25.	Muhammad Shahzad 2014-ag-3030	2016	Biochemical analysis of Phenoloxidase in the Haemolymph of <i>Galleria melonella</i> (Lepidoptera, Pyralidae) parasitized by the ectoparasitoid <i>Bracon hebetor</i> (Say.) (Hymenoptera, Braconidae)
24.	Syed Hussan Zarain Naqvi 2014-ag-8110	2016	Some laboratory studies of biological characteristics and biochemical analysis of glycogen, total sugar and lipid levels of ectoparasitoid <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae) reared on different host densities of <i>Galleria melonella</i> (Lepidoptera: Pyralidae)
23.	Umair Nawaz 2010-ag-2822	2016	PCR based detection of Parasitism by endoparasitoid <i>Aenasius bambawalei</i> Hayat (Hymenoptera: Encyrtidae) in the host mealybug <i>Phenacoccus solenopsis</i> Tinsley (Hemiptera: Pseudococcidae)
22.	Zia ur Rehman 2014-ag-1172	2016	Laboratory studies of cannibalism in the host-parasitoid system, <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae) and <i>Galleria mellonella</i> (Lepidoptera: Pyralidae)
21.	Ikram ullah 2014-ag-1229	2016	PCR based screening of Wolbachia in a host-parasitoid model system, <i>Aenasius bambawalei</i> Hayat (Hymenoptera: Encyrtidae) and <i>Phenacoccus solenopsis</i> Tinsley (Hemiptera: Pseudococcidae)
20.	Sherish Rasool 2009-ag-2165	2015	Effects of host-size on larval competition in the gregarious parasitoid <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae)
19.	Sumra Ashraf 2009-ag-2112	2015	The effect of different dietary sugars and honey on longevity and fecundity on <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae)
18.	Maryam Anwar 2009-ag-2115	2015	The effects of cold storage on the development and longevity of ectoparasitoid <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae)
17.	Miss. Anum Jamil (2008-ag-2059)	2014	Multiple effects of host density on egg density and the sex ratio of the progeny of <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae)
16.	Miss. Farzana Bhatti (2008-ag-1803)	2014	Role of female stinging behavior of ectoparasitoid <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae) in egg deposition on the host
15.	Mr. Husnain Irshad (2007-ag-2625)	2014	Host stage preference and reproductive fitness of Ecto parasitoid <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae) on <i>Galleria mellonella</i> (Lepidoptera: Pyralidae)
14.	Mr. Shahid Iqbal (2012-ag-623)	2014	The role of parasitoid age on the fecundity and sex ratio of the parasitoid <i>Aenasius bambawalei</i> Hayat (Hymenoptera: Encyrtidae)
13.	Mr. Muhammad Tahir 2011-ag-589	2013	Host regulation effects of the venom of <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae) on hemolymph proteins of the host, <i>Galleria mellonella</i> (L.) (Lepidoptera: Pyralidae)
12.	Muhammad Qammar Shahzad 2011-ag-518	2013	The effect of Parasitism by <i>Aenasius bambawalei</i> Hayat (Hymenoptera: Encyrtidae) on Development and Reproduction of the Mealybug <i>Phenacoccus solenopsis</i> Tinsley (Hemiptera: Pseudococcidae)
11.	Mr. Muhammad Ijaz Aziz, (2010-ag-837)	2013	Functional analysis of the female reproductive secretion of mealybug parasitoid <i>Aenasius bambawalei</i> Hayat (Hymenoptera: Encyrtidae)

S. No	Name of Student	Year	Thesis Title
10.	Mr. Tahir Shafeeq, 2007-ag-2560	2013	Parasitism by <i>Aenasius bambawalei</i> Hayat (Hymenoptera: Encyrtidae) induces castration in mealybug, <i>Phenacoccus solenopsis</i> Tinsley (Hemiptera: Pseudococcidae)
09.	Mr. Kashif Nabi 2011-ag-508	2013	Host-size mediated Trade-off in mealybug parasitoid <i>Aenasius bambawalei</i> Hayat (Hymenoptera: Encyrtidae)
08.	Mr. Fiaz Hussain (2006-ag-1426)	2012	Host stage preference and reproductive fitness of mealybug parasitoid <i>Aenasius bambawalei</i> Hayat (Hymenoptera, Encyrtidae) on <i>Phenacoccus solenopsis</i> Tinsley (Hemiptera, Pseudococcidae)
07.	Miss. Hoor Shaina (2005-ag-1463)	2011	Molecular analysis of the venom of mealybug parasitoid <i>Aenasius bambawalei</i> (Hayat) (Hymenoptera: Encyrtidae)
06.	Miss. Erum Mubarik (2005-ag-1792)	2011	Functional analysis of the venom of mealybug parasitoid <i>Aenasius bambawalei</i> (Hayat) (Hymenoptera: Encyrtidae)
05.	Mr. M. Saifullah (2009-ag-536)	2011	Molecular analysis of the venom of Lepidopterous parasitoid <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae)
04.	Mr. Atif Manzoor (2005-ag-1903)	2011	Functional analysis of the venom of Lepidopterous parasitoid <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae)
03.	Mr. Hafiz Waqar Ahmad Sheikh (2009- ag-535)	2011	Host regulation effects of ovary fluid of <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae) on host development
02.	Muhammad Tayyib	2005	Efficacy of some new Chemistry insecticides for controlling the sucking insect pests and mites on cotton.
01.	Syed Adeel Akhtar Shah	2004	Comparative studies on the External Morphology of some species of the Genus <i>Acrotylus</i> Fieber (Orthoptera)

#### **As Master/M.Phil. Committee member advisor**

I served as Co-supervisor/member of the thesis supervisory committee of 33 students who completed their M.Sc. (Hons)/M.Phil. Degrees by conducting research in my lab. These students belong to different departments of the University like CABB, Biochemistry, Plant Pathology, Entomology, Zoology, etc.

S. No	Name of Student	Department	Year	Thesis Title
33.	Mr. Muhammad Sajid Sharif 2009-ag-3577	Entomology	2016	Evaluation of the combined effect of molecular-induced resistance and biological control of aphids in Transgenic oilseed rape ( <i>Brassica napus</i> L)
32.	Mr. Rashid Mushtaq 2009-ag-2743	Entomology	2016	Molecular detection of NPV and its biological activity for the Control of armyworm <i>Spodoptera litura</i> F (Lepidoptera, Noctuidae)
31.	Miss. Mafaza Mazhar 2014-ag-1307	CABB	2016	Identification, isolation, and sequencing of endogenous cellulase (endo- $\beta$ -1,4-glucanase) gene from Termites
30.	Miss. Sidra Ramzan 2010-ag-3223	Plant Pathology	2016	Chemical management of citrus fruit blemishes on Kinnow mandarins
29.	Miss. Naila Liaqat 2010-ag-2621	Plant pathology	2016	Evaluation of Chemicals interfering Quorum Sensing circuit of <i>Pectobacterium atrosepticum</i>
28.	Mr. Muhammad Hassan 2014-ag-1093	CABB	2016	Isolation, cloning, and sequence characterization of 16s ribosomal RNA gene from Chloroplast of Sorghum using Bioinformatics approaches
27.	Miss. Fasiha tun Nisa 2014-ag-1099	Biochemistry	2016	Isolation and sequence analysis of defensin-like genes from selected medicinal plants
26.	Syed Ali Irfan Bukhari	CABB	2016	Developing cDNA of Pink Bollworm ( <i>Pectinophora gossypiella</i> Saund.) and cloning of PCR amplified genes

S. No	Name of Student	Department	Year	Thesis Title
	2014-ag-6			
25.	Miss. Saima Sultana 2014-ag-752	Plant Pathology	2016	Molecular diversity and biochemical analysis of <i>Xanthomonas axonopodis</i> pv. <i>Citri</i> associated with citrus canker disease
24.	Miss. Sabiha Khalid 2010-ag-3522	CABB	2016	Computational and molecular characterization of Barley DNA sequence encoding plastidic 16s ribosomal RNA
23.	Mr. Muhammad Asif Nawaz 2009-ag-2821	Agri. Extension	2015	Comparative evaluation of public and private extension service providers in Tehsil Sahiwal, District Sargodha by using ASKME framework
22.	Mr. Muhammad Hassan 2013-ag-541	Biochemistry	2015	Molecular studies of GDF-11 gene from <i>Oryctolagus</i> species
21.	Mr. Ghulam Farid 2009-ag-2498	CABB	2015	Dissecting 16s ribosomal RNA gene for point mutation conferring resistance to Spectinomycin in Barley
20.	Miss. Shehla Javaid 2010-ag-1153	Biochemistry	2015	Isolation and sequence analysis of defensin like genes (DEFL) from selected Solanaceae plants
19.	Miss. Zainab Ali 2013-ag-1112	CABB	2015	Genetic diversity among sap-feeding insects against gene encoding Sheath protein
18.	Miss. Amnah Khalid 2008-ag-2232	Plant Pathology	2014	PCR amplification and cloning of beta satellite molecules associated with cotton leaf curl disease
17.	Mr. Aamer Hayat 2008-ag-1768	Entomology	2014	Diversity and Abundance in cotton and Rice crops grown under Recommended Regimes
16.	Mr. Mohsin Raza 2008-ag-1710	Entomology	2014	Diversity and Abundance of coleopterans in cotton and rice crops under recommended regimes
15.	Mr. Zahid Arfan 2008-ag-1731	Entomology	2014	Diversity of major insect pests and their predators (Coccinellids and Chrysoperla sp.) on okra crops under sprayed and unsprayed conditions
14.	Mr. Muhammad Shafiq 2008-ag-2138	Entomology	2014	Evaluation of gustatory/olfactory response of melon fruit fly ( <i>Bactocera cucurbitae</i> ) to different food-bait traps and their impact on fruit quality of Bitter Gourd ( <i>Momordica charantia</i> ) in integration with reducing risk insecticides
13.	Miss. Saira Ali 2012-ag-523	Biochemistry	2014	Production and purification of L-Asparaginase obtained from <i>Aspergillus terreus</i> by using solid-state fermentation
12.	Mr. Inayat Ullah Danish 2005-ag-1670	Entomology	2012	Comparative efficacy of some new chemistry insecticides against jassid and spotted bollworm ( <i>Earias</i> spp.) of okra ( <i>Abelmoschus esculantus</i> L)
11.	Mr.M. Jawad Saleem 2010-ag-545	Entomology	2012	Impact of Transgenic <i>Bt</i> cotton against sucking insect pest complex
10.	Mr. Tajammal Shafait (2005-ag-1825)	Entomology	2011	Impact of different seed treatment products on wheat aphids and their coccinellids predators under field conditions
09.	Faheem Shahzad.	Entomology	2004	Biodiversity of sucking insect pests associated with cotton crop in the Multan District (Pakistan)
08.	Ikram Ahmed	Entomology	2004	Biodiversity of chewing insects associated with cotton crop in Multan District (Pakistan)
07.	Masood Ahmad	Entomology	2004	Comparative morphology of the Genus <i>Sphingonotus</i> Spp

S. No	Name of Student	Department	Year	Thesis Title
06.	Muhammad Arshad	Entomology	2004	Comparative studies on the external morphology of some species of the genus <i>Alolopus fiber</i> (Orthoptera)
05.	Muhammad Jamil	Entomology	2004	Biodiversity of insect fauna associated with summer vegetables in Bahawalpur District (Pakistan)
04.	Shazia yousaf2	Entomology	2005	Sytemtatics of <i>Calyptraie</i> muscoid flies attracted to baited traps in winter in residential areas of Faisalabad
03.	Asya Azam	Entomology	2005	Biodiversity of calliphorid and sarcophagid flies in response to baited traps in vegetative areas of Faisalabad during winter
02.	Sohaib Iftikhar	Entomology	2005	Biodiversity of insects associated with rice crop in Gujrawanwala
01.	Adnan Ahmad	Entomology	2005	Biodiversity of insects associated with sugar cane crop in Faisalabad

## TEACHING EXPERIENCE

### Undergraduate Courses

Course No.	Course Title	Credit hours	Degree Class
ENT-301	Introductory Agric. Entomology	4(2-2)	B. Sc (Hons) Agriculture
ENT-502	Insect Physiology	3(2-1)	B.Sc. (Hons) Agri. Entomology
Ent-503	Principles of Insect Taxonomy	4(3-1)	B.Sc. (Hons) Agri. Entomology
Ent-311	Vertebrate Pests and Their Management	3(2-1)	B.Sc. (Hons) Agri. Entomology
Ent-316	Introduction to Insect Molecular Genetics	2(1-1)	Elective undergrad.
Ent-401	Entomology-I	3(2-1)	B.Sc. (Hons) Agri. Entomology
Ent-413	Pest Management and Phytosanitary Measures	3(2-1)	B.Sc. (Hons) Agri. Entomology

### Post Graduate Courses

ENT-701	Research Methods in Entomology	3 (2-1)	M.Sc. (Hons.) & PhD
Ent-702	Insect evolutionary Biology	2 (1-1)	M.Sc. (Hons.) & PhD
ENT-708	Insect Molecular Biology	(1-1)	M.Sc. (Hons.) & PhD
ENT-704	Insect Biochemistry	3(2-1)	M.Sc. (Hons.) & PhD
ENT-719	Special Problem	1(1-0)	M.Sc. (Hons.) & PhD
ENT-720	Seminar	1(1-0)	M.Sc. (Hons.) & PhD
Ent-722	Drosophila genetics and genomics	3(2-1)	M.Sc. (Hons.) & PhD

### PARTICIPATION IN TRAINING, SYMPOSIA, WORKSHOPS, SEMINARS

33.	Participated in the China-Pakistan Science workshop on "Use of New Technologies in Locust Control" on August 20, 2020. Organized by PASTIC, Islamabad, and Beijing Technology Business University (BTBU) Beijing, China.
32.	I attended the virtual Apollo software (genome annotation and editor tool) workshop. July 27, 2020. Organized by USDA-ARS, National Agricultural Library
31.	Participated in a workshop on "Recent Trends in Molecular Diagnosis of Viral Diseases" January 12-14, 2017. Organized by Molecular Care, Department of Biochemistry, University of Agriculture, Faisalabad, Pakistan
30.	Participated in Hands-on Training "Basic Principles of Pesticides Risk Assessment for Pollinators". December 9, 2016. Organized by the Department of Entomology, University of Agriculture, Faisalabad, Pakistan (Resource person. Prof. G. Cristopher Cutler, Dalhousie University, Canada)
29.	Completed a four days Training workshop COMSTECH-FCC-ECOSF INTERNATIONAL WORKSHOP "GENOMICS AND GENOME EDITING" May 24 <sup>th</sup> -27 <sup>th</sup> , 2016, organized by Forman Christian College (A Chartered University), Lahore, Pakistan.

28. Attended a Training workshop" on "Crystal structure determination by **X-ray crystallography** from November 7 to December 2, **2016**. Organized by the Department of Chemistry, University of Agriculture, Faisalabad, Pakistan

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27. Participated in two days "**National Conference on Sustainable Management & Control of fruit fly infestation.**" November 23-24, **2016**. Organized by Climate Change Chair, US-Pakistan Center for Advanced Studies in Agriculture & Food Security (USPCAS-AFS)

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26. Attended a seminar" on "**Hybrid Wheat for Food Security**". February 25, **2016**. Organized by Work Package Leader-Breeding program, University of Agriculture, Faisalabad, Pakistan

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25. Participated three days training workshop, "Sustainable and integrated management of insect pests and disease of crops. September 15-17, **2015**. NIAB, Faisalabad, Pakistan

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24. 2Completed ten days training workshop, "Biochemical and Molecular Techniques in Plant Breeding, organized by a Marker-assisted breeding group. October 6-16, **2015**, NIAB, Faisalabad, Pakistan

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23. Participated in a five days training workshop 4<sup>th</sup> national Training course on "Bacterial identification and Metagenomics" March 16-20, **2015**, NIBGE, Faisalabad, Pakistan

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22. Attended a seminar on "Graduate Programmes" delivered by Dr. Thomas L. Ross and Dr. James E. Hill, University of California, Davis, USA. Organized by ORIC, UAF. August 21, **2015**

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21. Attended a workshop on Writing graduate group bylaws" Resource person Dr. Thomas L. Rost, University of California, Davis, USA. Organized by ORIC, UAF. August 20-22, 2015

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20. Participated in a training program called "International Workshop on "Bioinformatics: Ensemble Database Mining and Whole Genome Sequencing Analyses" December 16-18, **2014**, COMSTECH Islamabad, Pakistan.

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19. Participated as an **oral presenter** in "**The International Conference of Biochemical and Chemical Sciences (ICBCS 2014)** To be held from February 24-26, **2014**, in the Department of Chemistry & Biochemistry, University of Agriculture, Faisalabad

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18. Hands-on Training on Application of Genomics in Plant Breeding Batch XI- April 28 to May 2, **2014**. Organized by Deptt. of Plant Breeding and Genetics, UAF.

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17. 1Participated in Project formulation workshop, December 3-4, **2013**, organized by Pakistan Science Foundation (PSF), held in the University of Agriculture, Faisalabad (UAF)

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16. 1Participated in the two-day symposium on "**Dengue Fever: Virology and Vector Control**" held from 31<sup>st</sup> January to February **2013** at the National Institute for Biotechnology and Genetic Engineering (NIBGE) Faisalabad, Pakistan.

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15. Participated in a workshop, "Emerging Superbugs-Standardizing Antimicrobial Susceptibility Testing, Surveillance and Lab Biosafety Hands-On Workshop (February 25-27, **2013**) held at Agha Khan University Karachi, Pakistan.

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14. Participate in the "2<sup>nd</sup> Postgraduate Entomological Research Conference, July 08-09, **2013**. Organized by the Department of Entomology, UAF

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13. Participated in an international training workshop on "ASEAN Science and Technology Park (Development Zone) from August 30, 2013, to September 13, **2013**, held at Beijing Great Wall Enterprise Institute (GEI), **CHINA**

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12. Participated in Post Graduate Entomological Research Conference, June 22-23, **2012**, organized by the Department of Agri. Entomology, University of Agriculture, Faisalabad, Pakistan

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11. Participated in a workshop called "Training on Termite Management for Stakeholders as Community Service. April 25-27, **2012**. Organized by the Department of Agri. Entomology and Endowment Fund secretariat, University of Agriculture, Faisalabad, Pakistan.

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10. Participated in a three-day SAARC regional conference on "New frontiers in Agricultural Genomics and Biotechnology. June 5-7, **2012**. Organized by the National Institute for genomics and advanced biotechnology, National Agricultural Research canter, Pakistan Agricultural Council (PARC)

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9. Participated in the conference, "Increasing productivity and unleashing growth in Pakistan. May 26-27, **2012**. Organized by USAID (IFPRI, Pakistan Strategy Support Program)

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8. Participated in a day conference on "Productivity, Growth and Poverty Reduction in Rural Pakistan. December 13-14, **2012**. Organized by the Planning Commission, Islamabad, Pakistan

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6. Acted as a Resource person in the "**HEC Workshop on Imparting Practical Training in Molecular and Biochemical Techniques.**" November 27 to December 1, **2012**. Organized by the Department of Chemistry and Biochemistry, University of Agriculture, Faisalabad.



6. Attended one-day seminar regarding “Innovations in instrumentation on the topic Droplet digital PCR by Chemical House Lahore. May 17, **2012**, organized by ORIC, University of Agriculture, Faisalabad
5. Participated in the international workshop on “**Biotechnology for Economic Development**” in February 16-18, **2011**. Organized by the OIC Ministerial Standing Committee on Scientific and Technological Cooperation (COMSTECH) held at COMSTECH building, Islamabad, Pakistan
4. Participated in the international workshop on “**Promotion of Farmer Field School-Based Integrated Pest Management Approach OIC Member States**” July 4-6, **2011**. Organized by the OIC Ministerial Standing Committee on Scientific and Technological Cooperation (COMSTECH) held at COMSTECH building, Islamabad, Pakistan.
3. Completed a one-week Training workshop on “**Imparting practical training in Molecular and Biochemical Techniques**” held on June-08-14, **2011**, during Chemistry and Biochemistry week of Golden Jubilee celebrations, University of Agriculture, Faisalabad, Pakistan
2. Participated in an international workshop on “**Biosafety, Biosecurity and Bioethics**” October 17-19, **2011**, at COMSTECH, Islamabad, Pakistan
1. Participated in an international workshop on “**Advances in Genetic Engineering of Plants**” December 20-22, **2011**, at COMSTECH, Islamabad, Pakistan

### **HONORS, AWARDS, AND FELLOWSHIPS**

1.	Member of Fulbright Association, USA	Since 2019
2.	Fellow of Royal Entomological Society, U.K.	Since 2014
3.	Member of Entomological Society of America, ESA (USA)	Since 2015
4.	Fellow of the Zoological Society of Pakistan	Since 2016
5.	Fellow of Commonwealth Charles Wallace Trust, Pakistan, British Council, U.K. <i>Under this fellowship program, the School of Biology of The University of Nottingham &amp; and the School of Biology, University of St. Andrews, Scotland, UK, were visited as an academic visitor</i>	2012
6.	Member Pakistan Biological Safety Association	2016
7.	Approved Ph.D. Supervisor Higher Education Commission, Islamabad, Pakistan	Since 2010
8.	The Government of Italy awarded the Italian Government Postgraduate Research fellowship under the European Union exchange scholar program for Ph.D. Study Degree Program.	2005-2009

### **PROFESSIONAL SERVICE AND MEMBERSHIPS**

2019	<b>Member of International Branch Awards Committee, ESA 2019</b>
2019	Member of Organizing Committee, International Entomological Congress-2019: Emerging Entomological Challenges and their Solutions, 08-10 April 2019, Department of Entomology, University of Agriculture, Faisalabad, Pakistan
2016	Member Organizing Committee, International Entomological Congress (One Exclusive Day on Current Scenario and Management of Pink Bollworm), 16-18 December 2019, Department of Entomology, University of Agriculture, Faisalabad, Pakistan
2018	Member of the Editorial Board for the Journal of Molecular and Cellular Biology Forecast. USA
Since 2017	Member of Reviewer committee of research projects submitted under the National Research Program for Universities (NRPU) of the Higher Education Commission, Pakistan

### **COUNTRIES VISITED**

Country Visited	Duration	Purpose of Activity
1. USA (2019)	June 2019- July 2020	Fulbright Postdoc training at Florida International University, Miami, USA, Funded by the Department of State, USA.

	<b>Country Visited</b>	<b>Duration</b>	<b>Purpose of Activity</b>
2.	CANADA (2018)	November 11, 2018- November 18, 2018 (10 days)	Oral presentation in “International Conference/joint Annual meeting “2018 ESA, ESC, and ESBC Entomology 2018. November 11-14, 2018, Vancouver, CANADA. HEC provided travel funds
3.	USA (2017)	November 2, 2017—November 8, 2017	For delivering an oral presentation at the International Entomological Conference "Entomology 2017, ESA's 65th Annual Meeting", November 5-8, Denver, Colorado, USA.
4.	AFGHANISTAN (2017)	March 27, 2017— April 2, 2017 (9 days)	As a Trainer / CABI consultant/ resource person for holding a Training workshop for agriculture scientists regarding the management of the damage caused by insect pests in fruits and vegetables. Funding provided by CABI
5.	USA (2016)	September 22.2016- -October 15.2016	I attended the ICE 2016 (International Congress of Entomology) in Orlando, Florida, and a collaborative Research project meeting at the University of Arizona, Tucson. Travel funds provided by the Endowment Fund secretariat, Uni. Agri. Fsd
6.	CHINA (2013)	July 30, 2013--- August 13, 2013	Completed a training workshop/training course, “ASEAN: Science and Technology Park (Development Zone (30th July--13th August 2013) in Beijing, China. Travel funds were provided by the COMSAT secretariat in Islamabad, Pakistan
7.	UK (2012)	January 24, 2012— April 22, .2012 (03 months)	Visited School of Biology of The University of Nottingham and University of St. Andrews, Scotland, UK under Commonwealth Charles Wallace Visiting Fellowship, British Council, Pakistan
		July 18, 2012 –July 20, 2012	For presenting research article in “Ento ’12, Res National Science Meeting, Anglia Ruskin University, Cambridge, UK Travel funds provided by the Endowment Fund secretariat, Uni. Agri. Fsd
8.	POLAND (2011)	September 18, 2011 – September 23, 2011	For presenting a research article in the VIIth International conference on Arthropods: Chemical, Physiological, Biotechnological and Environmental aspects. Poland. Travel grant provided by HEC
9.	REPUBLIC OF SOUTH AFRICA (2007)	July 9, 2007, --July 13..2007	Attending a training workshop, "Theoretical and Practical Course on Proteomics and Protein Bioinformatics,” University of Limpopo, South Africa. Travel funds provided by Kirkhouse Trust, UK.
10.	ITALY (2005 to 2009)	01-11-2005, 30-11- 2009 (3 years)	To pursue my Ph.D. Studies under the fellowship of the Government of Italy