

CURRICULUM VITA

Zain UL ABDIN (Ph.D)

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Personal statement



An Entomologist by education with over 13 years of experience in teaching, research and community service working with the overall aim to improve the socio-economic conditions of Pakistani farmers by enhancing production of their agricultural crops through sustainable and novel plant protection strategies. Currently working as an Assistant Professor in the Department of Entomology, University of Agriculture, Faisalabad, Pakistan. I have established a research group and Lab. "Insect Molecular Biology Lab" in the Department of Entomology, University of Agriculture, Faisalabad, Pakistan; as a matter of fact this research group and lab. was established and initiated by myself a few years back when I returned back from Italy after completion of my Ph.D studies. Major research focus of my Lab/group is cloning and expression of bioactive genes and peptides with potential insecticidal activity derived from parasitic hymenoptera and study of gene regulation. The lab facilities have been developed out of external grants earned from different funding sources. I have completed three research projects as PI and one as Co.PI. one HEC research grant is running as PI: Two research grants funded by Higher Education commission of Pakistan, one under Pakistan Science foundation and one under IFS (International foundation of Science, Sweden). Due to my experience and expertise I have been taken as Co-PI in different research projects. Further an international collaboration is developed with the University of Kentucky, and University of Maryland, USA for work on insect genomics and proteomics. I am actively engaged to uplift the standards of teaching and research in the University including development of new courses, mentoring students and researcher from different Departments and problem oriented focused R&D and capacity building activities, with special focus on non-chemical control of insects for improving the food security and food safety by reducing toxic chemical residues in food supply chain to human beings. Our R&D and capacity building approach is to develop need-based technologies by taking R&D projects for training of postgraduate students for their research theses and this provides R&D based local solutions along with technically trained human resource. Apart from academics, made significant contribution in several projects mentioned above. Previously did Ph.D from University of Basilicata, Potenza, Italy by winning a competitive fellowship awarded by the Italian Ministry of Foreign Affairs through European Union. Also received Gold and Silver Medals awarded by the Govt. of Pakistan for academic distinction in Bachelor and Master of science by securing CGPA: 4.00/4.00 in both degrees and remained University Merit scholarship holder from 1996-98, presented R&D work at several significant international conferences, including in USA, UK, Poland and Italy. Participated in a number of professional training/workshops. **I have the honour to be a fellow of Royal Entomological Society, UK and member of Entomological Society of America and recently presented our work in ICE 2016 (International Congress of Entomology) September 25-30, 2016. Orlando (Florida) USA.**

PERSONAL INFORMATION:

Name : **Zain UL ABDIN**
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Date of birth : August 19, 1975
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EDUCATION:

Degree	University / Board	Year	C.G.P.A.	Marks	% Age	Division/ Position
Ph.D European Ph.D course “Insect Science and Biotechnology”	University of Basilicata, Potenza, ITALY	2009	Title of Ph.D Thesis “GENES EXPRESSED IN THE VENOM GLAND OF THE APHID PARASITOID APHIDIUS ERVI (HALIDAY) (HYMENOPTERA, BRACONIDAE)”			
M.Sc. (Hons) Agricultural Entomology	University of Agriculture, Faisalabad, Pakistan	2002	4.00/4.00	849/940	90.31%	1 st A
B.Sc. (Hons) Agricultural Entomology	University of Agriculture, Faisalabad, Pakistan	2000	4.00/4.00	3517/4040	87.05 %	1 st A

Professional Honours & Distinctions:

- **GOLD MEDAL & 1st Position** in B.Sc. (Hons) Agricultural Entomology by securing C.G.P.A: **4.00/4.00 & 87.05 %** Marks, awarded by the honourable Governor Punjab / Worthy Chancellor of the University of Agriculture, Faisalabad, in 12th Convocation, January 24, 2004.
- **SILVER MEDAL & 1st Position** in M.Sc (Hons) Agricultural Entomology by securing C.G.P.A: **4.00 /4.00 & 90.31 %** Marks, awarded by the honourable Governor Punjab/ Worthy Chancellor of the University of Agriculture, Faisalabad, in 14th convocation, March 28, 2 005.
- **Merit Scholarship holder** in B.Sc (Hons) Agriculture from 1996 to 1998, awarded by the University of Agriculture, Faisalabad.

PROFESSIONAL EXPERIENCE:

Total Experience: Teaching & Research: ≥ 13 Years

Organization	Designation	From	To	Duration	BPS (Pay scale)	Brief job description
University of Agriculture, Faisalabad	Assistant Professor (TTS)	April 16, 2009	To date		19	Teaching & Research
University of Agriculture, Faisalabad	Lecturer	April 12, 2003	April 15, .2009	6 years & 3 days	18	Teaching & Research

Salient Features

- Offered many courses especially in the area of Entomology MSc (Hons)/MPhil and PhD students; including two new courses. Developed and offered as course coordinator
- Produced two Ph.D scholars; one more submitted her thesis and waiting for result; five are completing their degrees under my supervision as major supervisor and three are from different Departments completing their degrees as a member of supervisory committee.
- Produced 23 M.Sc (Hons)/M.Phil scholars in Entomology as major supervisor and 24 as member of supervisory committee. 11 M.Sc(Hons)/M.Phil students are completing their degrees as major supervisor whereas 23 as member of supervisory committee
- As External Examiner evaluated many students of other universities and institutions and paper setter of comprehensive Ph.D examination
- Published 30 original full text research articles in journals having impact factor well reputed and HEC recognized journals as well and several Abstracts published in proceedings of different national and international conferences/symposia in which self or students presented oral presentations
- Participated in 32 scientific activities; actively participated in organization of an international congress of Entomology (organized by the Deptt of Entomology); many oral presentations in foreign countries including Florida, USA, UK and Poland; many other oral presentations and invited lectures within the country
- Reviewed several research papers from high rated journals
- Editorial Assistant of the journal “Pakistan Entomologist”
- Developed a collaboration with the University of Kentucky and University of Maryland, USA
- Won an international project from IFS on highly competitive grounds
- Completed 03 competitive research grants as PI and one as Co.PI. One HEC research project is running as PI and 07 were submitted as PI to different funding agencies including mainly PAK-US, U.S.-Pakistan Center for Advanced Study in Agriculture and Food Security (USPCAS-AFS)
- Managed a tutorial group as Tutor (Shabir Shaheed-2)
- Hostel superintendent: Member of hall senate and serving as superintendent Liaquat (boys residential hostel)
- Member of several committees constituted in the university such as purchase/tender committee, fundraising committee during various festivals as an outreach University programme etc.
- Fellow of Royal Entomological society, UK and Charles Wallace Trust, British Council, UK and member of several professional societies.
- Member of Entomological Society of America (ESA)
- Established an “Insect Molecular Biology Lab”.in the Department of Entomology

(I) A : Teaching:

Expertise is in the area of “Insect Molecular Biology”. Offered following different courses to various under and postgraduate students of Entomology as well as to the students of other departments. Offered continuously two new independent courses i.e., ENT-316 and ENT-708 as the Course-coordinator, as had a major contribution in developing these courses and these courses were completely developed and introduced by myself.

- **ENT-316: 2(1-1)** (Introduction to Insect Molecular genetics) offered as an independent under graduate elective course; this course was completely developed and introduced by myself. It is a compulsory minor for B.Sc (Hons) Biotechnology (CABB).
- **ENT-708: 2(1-1)** (Insect Molecular Biology) offered as an independent post graduate elective course; this course was also completely developed and introduced by myself. Mostly multidisciplinary students (M.Sc (Hons) & Ph. D) enroll this course who are interested in Insect genetics

The following undergraduate and postgraduate courses offered by the Department of Entomology are assigned to me for teaching

Undergraduate Courses				
Sr. No.	Course No.	Course Title	Credit hours	Degree Class
i.	ENT-102/302	Introductory Agric. Entomology	4(2-2) Old scheme 3(2-1) New scheme	B. Sc (Hons) Agriculture
ii.	ENT-302	Insect Physiology	3(2-1) *	B.Sc (Hons) Agri. Entomology
iii.	ENT-303	Principles of Insect Taxonomy	4(3-1)	B.Sc (Hons) Agri. Entomology
iv.	Ent-311	Vertebrate Pests and Their Management	3(2-1)	B.Sc (Hons) Agri. Entomology
v.	Ent-316	Introduction to Insect Molecular Genetics	2(1-1) **	Elective undergrad course
vi.	Ent-401	Entomology-I	3(2-1)	B.Sc (Hons) Agri. Entomology
vii.	Ent-413	Pest Management and Phytosanitary Measures	3(2-1) **	B.Sc (Hons) Agri. Entomology
Post Graduate Courses				
i.	ENT-701	Research Methods in Entomology (Compulsory)	3 (2-1) *	M.Sc (Hons.) & Ph.D
ii.	ENT-704 / 725	Insect Biochemistry	3(2-1) *	M.Sc (Hons.) & Ph.D
iii.	ENT-708	Insect Molecular Biology	2(1-1) **	M.Sc (Hons.) & PhD
iv.	ENT-719	Special Problem	1(1-0)	M.Sc (Hons.) & PhD
v.	ENT-720	Seminar	1(1-0)	M.Sc (Hons.) & PhD

(I) B. Student Supervision: As Major supervisor

i) Ph.D. Students:

a. Completed:

02 Ph.D students completed their degrees, both are HEC awardee but one Ph. D student Mr. Atif Manzoor has also been awarded HEC (IRSIP) fellowship for conducting partial research (6 months) in the University of Kentucky, USA

	Name	Title	Status
1.	Mr. Saqi Kosar Abbas (Regd. No. 2008-ag-37) HEC Awardee	Molecular and functional characterization of bioactive peptides from the venom of <i>Aenasius bambawalei</i> Hayat (Hymenoptera: Encyrtidae)	Degree completed 18.07.2016
2.	Mr. Atif Manzoor (2005-ag-1903) HEC awardee	Molecular and functional characterization of bioactive peptides from the venom of <i>Bracon hebetor</i> say (Hymenoptera, Braconidae)	Degree completed 29.11.2016

b. Ongoing:

05 PhD students are working under my supervision as major supervisor, one of them is HEC awardee and IRSIP fellowship holder conducted her research in University of Kentucky and submitted her thesis for foreign evaluation, second one is only HEC (IRSIP) fellowship holder and conducting his partial research in the University of Arizona, USA. One Ph.D student has been inducted as Research associate in my HEC funded research project. Rest of them are completing their degrees as non-HEC student.

	Name	Title	Progress
1.	Miss. Hoor Shaina (2005-ag-1463) HEC awardee	Cloning and expression of cDNA encoding bioactive venom proteins from mealybug parasitoid <i>Aenasius bambawalei</i> Hayat (Hymenoptera, Encyrtidae)	Thesis submitted for Foreign evaluation
2.	Mr. Fiaz Hussain, 2006-ag-1426 HEC (IRSIP) awardee	Isolation and characterization of genes related to the suppression of host immune response by <i>Bracon hebetor</i> (Say). (Hymenoptera: Braconidae)	Course work completed, synopsis submitted & research work is in progress Recently awarded IRSIP fellowship for 6 months training in University of Arizona, USA
3.	Mr. Muhammad Tahir 2011-ag-589 HEC (IRSIP) awardee	Isolation, characterization and expression of apoptotic genes from the venom of <i>Bracon hebetor</i> (Say.) (Hymenoptera, Braconidae)".	Course work completed, synopsis submitted, research work is in progress Recently awarded IRSIP fellowship for 6 months training in University of Georgia, USA
4.	Muhammad Shehzad 2010-ag-3030 Research Associate in HEC funded Project		2 nd semester, course work is in progress
5.	Zaheer Sikandar 1986-ag-1009	Cellular immune defense response of honey bee (<i>Apis mellifera</i> L.) adult worker to <i>Bacillus thuringiensis</i> at different temperature and relative humidity combinations	He is nominee of Govt. of Punjab Course work is in progress

ii. **M.Sc (Hons)/M.Phil Entomology Students:**

a. **Completed** as Major Supervisor: 23 students completed their M.Sc (Hons) theses under my supervision

	Name of student	Year	Titles of M.Sc (Hons) Theses
1.	Muhammad Shahzad 2014-ag-3030	2016	Biochemical analysis of phenoloxidase in the Haemolymph of <i>Galleria melonella</i> (Lepidoptera, Pyralidae) parasitized by the ecto-parasitoid <i>Bracon hebetor</i> (Say.) (Hymenoptera, Braconidae)
2.	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 ecto parasitoid <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae) reared on different host densities of <i>Galleria melonella</i> (Lepidoptera: Pyralidae)
3.	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)
4.	Zia ur Rehman 2014-ag-1172	2016	Laboratory studies of cannibalism in host parasitoid system, <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae) and <i>Galleria mellonella</i> (Lepidoptera: Pyralidae)
5.	Ikram ullah 2014-ag-1229	2016	PCR based screening of Wolbachia in host parasitoid model system, <i>Aenasius bambawalei</i> Hayat (Hymenoptera: Encyrtidae) and <i>Phenacoccus solenopsis</i> Tinsley (Hemiptera: Pseudococcidae)
6.	Sherish Rasool 2009-ag-2165	2015	Effects of host size on larval competition in the gregarious parasitoid <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae)
7.	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)
8.	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)
9.	Miss. Anum Jamil (2008-ag-2059)	2014	Multiple effects of host density on egg density and the sex ratio of progeny of <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae)
10.	Miss. Farzana Bhatti (2008-ag-1803)	2014	Role of female stinging behaviour of ecto parasitoid <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae) in egg deposition on the host
11.	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)
12.	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)
14.	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)
15.	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)
16.	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)

17.	Mr. Kashif Nabi 2011-ag-508	2013	Host-size mediated Trade-off in mealybug parasitoid <i>Aenasius bambawalei</i> Hayat (Hymenoptera: Encyrtidae)
18.	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)
19.	Miss. Hoor Shaina (2005-ag-1463)	2011	Molecular analysis of the venom of mealybug parasitoid <i>Aenasius bambawali</i> (Hayat) (Hymenoptera: Encyrtidae)
20.	Miss. Erum Mubarak (2005-ag-1792)	2011	Functional analysis of the venom of mealybug parasitoid <i>Aenasius bambawali</i> (Hayat) (Hymenoptera: Encyrtidae)
21.	Mr. M. Saifullah (2009-ag-536)	2011	Molecular analysis of the venom of Lepidopterous parasitoid <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae)
22.	Mr. Atif Manzoor (2005-ag-1903)	2011	Functional analysis of the venom of Lepidopterous parasitoid <i>Bracon hebetor</i> (Say.) (Hymenoptera: Braconidae)
23.	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

(I) C: Student supervision: as Co-supervisor/member of Thesis Supervisory Committee:

i. Ph.D students:

a. Completed: Nil

b. Ongoing Ph.D Students as Co-Supervisor

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	Name of student	Department	Title of Ph. D Theses	Progress
1.	Mr. Hafiz Muhammad Usman Aslam 2008-ag-2605	Plant Pathology	Molecular Characterization of pathogen associated with Rice Blast disease from major rice growing areas of Punjab.	Course work completed, Synopsis defended on 12.06.2015
2.	Mr. Muhammad Rizwan Tufail 2008-ag-2201	Plant Pathology	Characterization of <i>Xanthomonas campestris</i> pv. <i>malvacearum</i> from cotton belt of Punjab and its management through various strategies	Course work Completed, Synopsis defended 12.06.2015
3.	Miss. Naila Nazir 2015-AGRI-415	Department of Entomology, University of Poonch, Rawalakot, Muzaffarabad, Azad Kashmir		Course work is in progress

ii. M.Sc/M.Sc (Hons) / M. Phil:

a. Completed: 24

Served as Co-supervisor/member of thesis supervisory committee of 24 students who completed their **M.Sc (Hons)/M.Phil degrees**. These students belong to different Departments like CABB, Biochemistry, Plant Pathology, Entomology and Zoology etc. have completed under my supervision as a member of their Theses committee

*conducted research in my lab

	Name of student	Department	Year	Title of M.Sc (Hons) Theses
1.	Mr. Muhammad Sajid Sharif 2009-ag-3577	Entomology	2016	Evaluation of combined effect of molecular induced resistance and biological control of aphids in Transgenic oil seed rape (<i>Brassica napus</i> L)
2.	Mr. Rashid Mushtaq 2009-ag-2743	Entomology	2016	Molecular detection of NPV and its biological activity for the control of army worm <i>Spodoptera litura</i> F (Lepidoptera, Noctuidae)
3.	Miss. Mafaza Mazhar 2014-ag-1307	CABB	2016	Identification, isolation and sequencing of endogenous cellulase (endo- β -1,4-glucanase) gene from Termites
4.	Miss. Sidra Ramzan 2010-ag-3223	Plant Pathology	2016	Chemical management of citrus fruit blemishes on Kinnow mandrins
5.	Miss. Naila Liaqat 2010-ag-2621	Plant pathology	2016	Evaluation of Chemicals interfering Quorum Sensing circuit of <i>Pectobacterium atrosepticum</i>
6.	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.
7.	Miss. Fasiha tun Nisa 2014-ag-1099	Biochemistry	2016	Isolation and sequence analysis of defensin like genes from selected medicinal plants
8.	Syed Ali Irfan Bukhari 2014-ag-6	CABB	2016	Developing cDNA of Pink BollWorm (<i>Pectinophora gossypiella</i> Saund.) and cloning of PCR amplified genes
9.	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
10.	Miss. Sabiha Khalid 2010-ag-3522	CABB	2016	Computational and molecular characterization of Barley DNA sequence encoding plastidic 16s ribosomal RNA
11.	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 frame work
12.	Mr. Muhammad Hassan 2013-ag-541	Biochemistry	2015	Molecular studies of GDF-11 gene from <i>Oryctolagus</i> species
13.	Mr. Ghulam Farid 2009-ag-2498	CABB	2015	Dissecting 16s ribosomal RNA gene for point mutation conferring resistance to Spectinomycin in Barley
14.	Miss. Shehla Javaid 2010-ag-1153	Biochemistry	2015	Isolation and sequence analysis of defensin like genes (DEFL) from selected Solanaceae plants
15.	Miss. Zainab Ali 2013-ag-1112	CABB	2015	Genetic diversity among sap feeding insects against gene encoding Sheath protein
16.	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
18.	Mr. Mohsin Raza 2008-ag-1710	Entomology	2014	Diversity and abundance of coleopteran in cotton and rice crops under recommended regimes
19.	Mr. Zahid Arfan 2008-ag-1731	Entomology	2014	Diversity of major insect pests and their predators (Coccinellids and Chrysoperla sp.) on okara crops under sprayed and unsprayed

				conditions
20.	Mr. Muhammad Shafiq 2008-ag-2138	Entomology	2014	Evaluation of gustatory/olfactory response of melon fruitfly (<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 reduce risk insecticides
21.	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
22.	Mr. Inayat ullah Danish 2005-ag-1670	Entomology	2012	Comparative efficacy of some new chemistry insecticides against jassid and spotted boll worm (<i>Earias</i> spp.) of okra (<i>Abelmoschus esculantus</i> L.)
23.	Mr.M. Jawad Saleem 2010-ag-545	Entomology	2012	Impact of Transgenic <i>Bt</i> cotton against sucking insect pest complex
24.	Mr. Tajammal Shafait (2005-ag-1825)	Entomology	2011	Impact of different seed treatment products on wheat aphids and their coccinellids predators under field conditions.

Facilities and expertise extended to the researchers and students of other Departments, Universities/Institutes

- Collaboration with Department of Biochemistry, University of Agriculture, Faisalabad** for conducting research on “Hyper gene expression of Bioactive genes/peptides in heterologous hosts”
- Collaborative research with** Department of Entomology, University of Poonch, Rawalakot, Muzaffarabad, Azad Kashmir for conducting research on DNA barcoding and Transcriptomic study of venom glands of Fruitfully parasitoids
- Research expertise extended** to the students of the Department of Biochemistry, CABB, Plant Pathology and Zoology of the University of Agriculture, Faisalabad

(II) Scholarly Publications:

- Sehrish Rasool, **Zain ul Abdin***, Saqi Kosar Abbas, Sumra Ashraf, Maryam Anwer, Atif Manzoor, Muhammad Tahir and Hoor Shaina, **2017**. Effect of Host Size on Larval Competition of the Gregarious Parasitoid *Bracon hebetor* (Say.) (Hymenoptera: Braconidae). <http://dx.doi.org/10.17582/journal.pjz/2017.49.3.1085.1091> (**corresponding author**)
- Sumra Ashraf, **Zain ul Abdin***, Saqi Kosar Abbas, Rao Sohail Ahmad Khan, Muhammad Tahir, Sehrish Rasool, Maryam Anwar and Fiaz Hussain , **2017**. Effect of Different Diet Concentrations on Longevity and Fecundity of Parasitic Wasp *Bracon hebetor* (Say.) (Hymenoptera: Braconidae). <http://dx.doi.org/10.17582/journal.pjz/2017.49.3.761.767> (**corresponding author**)
- 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) Comparative biochemistry and Physiology, Part D. 20, 101-110. <http://dx.doi.org/10.1016/j.cbd.2016.08.002> (IF.2.3) (**corresponding author**)
- 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> (IF.2.3) (**corresponding author**)

5. Muhammad Shahid Iqbal, **Zain ul Abidin***, Muhammad Arshad, Saqi Kosar Abbas, Muhammad Tahir, Amer Jamil and Atif Manzoor, **2016**. The Role of Parasitoid Age on the Fecundity and Sex Ratio of the Parasitoid *Aenasius bambawalei* (Hayat) (Hymenoptera: Encyrtidae). Pakistan J. Zool., vol.48(1), pp 67-72. [http://www.zsp.com.pk/pdf48/67-72%20\(8\)%20QPJZ-0128%20-2015%20%2010.9.2015%20\(Final\).pdf](http://www.zsp.com.pk/pdf48/67-72%20(8)%20QPJZ-0128%20-2015%20%2010.9.2015%20(Final).pdf) (IF.0.4) **(Corresponding author; research work conducted under my supervision in my lab)**

6. Maryam Anwar, **Zain ul Abidin,*** Saqi Kosar Abbas, Muhammad Tahir, Fiaz Hussain and Atif Manzoor, **2016**. Effect of Cold Storage on the Survival, Sex Ratio and Longevity of Ectoparasitoid, *Bracon hebetor* (Say.) (Hymenoptera: Braconidae). Pakistan J. Zool., Vol.48 (6) pp 1775-1780. (IF.0.4) **(Corresponding author; research work conducted under my supervision in my lab)**
[http://zsp.com.pk/pdf48/1775-1780%20\(23\)%20QPJZ-0498-2015%209-8-16.pdf](http://zsp.com.pk/pdf48/1775-1780%20(23)%20QPJZ-0498-2015%209-8-16.pdf)

7. Muhammad Javid Iqbal, Yasir Maqsood, **Zain Ul Abidin**, Atif Manzoor, Muhammad Hassan, Amer Jamil, **2016**. SSR Markers Associated with Proline in Drought Tolerant Wheat Germplasm. Appl Biochem Biotechnol., 178(5):1042-52. PMID:26637362 DOI: [10.1007/s12010-015-1927-1](http://dx.doi.org/10.1007/s12010-015-1927-1) ISSN: 0273-2289 (print version), ISSN: 1559-0291 (electronic version) (IF.1.6) **(Provided guidance and technical support)**

8. Shahzad, M.Q., **Ul Abidin, Z***, Abbas, S.K., Tahir, M. and Hussain, F. **2016**. Parasitic Effects of Solitary Endoparasitoid, *Aenasius bambawalei* Hayat (Hymenoptera: Encyrtidae) on Cotton Mealybug, *Phenacoccus solenopsis* Tinsley (Hemiptera: Pseudococcidae). *Advances in Entomology*, 4, 90-96. http://file.scirp.org/pdf/AE_2016041415205306.pdf **(Corresponding author; research work conducted under my supervision in my lab)** (Google based IF. 0.68)

9. Anam Jamil, **Zain ul Abidin*** Muhammad Arshad, Patrizia Falabella, Saqi Kosar Abbas, Muhammad Tahir, Amer Jamil, Atif Manzoor and Hoor Shaina, **2015**. Multiple Effects of Host Density on Egg Density and the Sex Ratio of Progeny of *Bracon hebetor* (Say.) (Hymenoptera: Braconidae). Pakistan J. Zool., vol. 47(2), pp. 455-460. [http://zsp.com.pk/pdf47/455-460%20\(20\)%20PJZ-1962-14%2028-2-15%20Corrected.pdf](http://zsp.com.pk/pdf47/455-460%20(20)%20PJZ-1962-14%2028-2-15%20Corrected.pdf) (IF.0.4) **(Corresponding author; research work conducted under my supervision in my lab)**

10. Muhammad Arshad, **Zain-ul-Abidin**, Muhammad Dildar Gogi, Muhammad Jalal Arif and Rashad Rasool Khan, **2015**. 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 Cottons. Pakistan J. Zool., vol. 47(1), pp. 177-186, 2015. [http://zsp.com.pk/pdf47/177-186%20\(24\)%20PJZ-2050-14%2011-12-14%20Corrected%20paper%20for%20PJZ.pdf](http://zsp.com.pk/pdf47/177-186%20(24)%20PJZ-2050-14%2011-12-14%20Corrected%20paper%20for%20PJZ.pdf) (IF.0.4) **(Provided guidance and technical support)**

11. N. Yasmin, **Z. Ulabdin**, M. Shahid, M.A. Sheikh, A. Manzoor and A. Jamil, **2015**. Biosorption Characteristics and Novel Antifungal Activity of *Abrus precatorius* Seed Extract. Asian J. Chem. 27(4): 1388-1390. http://www.asianjournalofchemistry.co.in/User/ViewFreeArticle.aspx?ArticleID=27_4_47 (IF.0.355) (The journal had impact factor when accepted for publication) **(Provided guidance and technical support)**

12. Saqi Kosar Abbas, **Zain ul Abidin**, Muhammad Jalal Arif1 & Amer Jamil, **2014**. Functional analysis of the venom of mealybug parasitoid *Aenasius bambawalei* (Hymenoptera: Encyrtidae). *Biologia, Section Zoology*, 69/8: 1046-1050. <http://link.springer.com/article/10.2478/s11756-014-0402-8> (IF 0.696) **(Corresponding author; research conducted under my supervision in my lab.)**

13. Sadia Falak, **Zain ul Abdin** , Tahira Iqbal , Muhammed Ashraf and Amer Jami l, **2014**.
Differential gene expression profiling of *Nigella sativa* under salt stress. JOKUL JOURNAL (ISSN: 0449-0576). Vol 64, No. 6 (IF: 1.604) <http://www.jokulljournal.com/index.html>
(Provided guidance and technical support)
14. Raheela Jabeen & Ghulam Mustafa, **Zain ul Abdin**, M. Javid Iqbal and Amer Jamil, **2014**.
Expression Profiling of Bioactive Genes from *Moringa oleifera*. *Appl Biochem Biotechnol*. 174(2):657-66. doi: 10.1007/s12010-014-1122-9
<https://www.ncbi.nlm.nih.gov/pubmed/25086925> (IF .1.687)
(Provided guidance and technical support).
15. Muhammad Dildar Gogi, Muhammad Jalal Arif, Muhammad Arshad, Muhammad Ahsan Khan, Muhammad Hamid Bashir, Khuram Zia and **Zain-ul-Abdin**, **2014**. Impact of Sowing Times, Plant-to-Plant Distances, Sowing Methods and Sanitation on Infestation of Melon Fruit Fly (*Bactrocera cucurbitae*) and Yield Components of Bitter Gourd (*Momordica charantia*). INTERNATIONAL JOURNAL OF AGRICULTURE & BIOLOGY. ISSN Print: 1560–8530; ISSN Online: 1814–9596, 13–997/16–3–521–528
https://www.fspublishers.org/published_papers/18834_.pdf (IF. 0.902)
(Provided guidance and technical support).
16. 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 cotton dusky bug, *Oxycarenus laetus* Kirby (Hemiptera: Lygaeidae) in cotton. Turk J Agric For. 38: TUBITAK. Doi: 10.3906/tar-1303-21, <http://dergipark.gov.tr/download/article-file/119366>
(Provided guidance and technical support) (IF.0.731)
17. Arshad, M., M.J. Arif, M.D. Gogi, M. Abdul ur Rehman, **Zain-ul-Abdin**, W. Wakil and N.A. Saeed, **2014**. Seasonal abundance of Non-Target Natural enemies in Transgenic *Bt* and conventional cotton. Pak. Entomol., 36(2):115-118.
<http://www.pakentomol.com/Downloads/Issues/2014-2/07.pdf>
(HEC Recognized Y-category Journal)
18. Arif, M.J., M.D. Gogi, Wajeeh-Ud-Din, M. Arshad, **Zain-ul-Abdin** and W. Wakil, **2014**.
Laboratory bioassay for investigating the repellent and oviposition-deterrent impacts of various IGRs on guava fruit fly, *Bactrocera correcta* (Diptera: Tephritidae). Pak. Entomol., 36(1):39-44. <http://www.pakentomol.com/Downloads/Issues/2014-1/08.pdf> (HEC Recognized Y-category Journal)
19. **Zain-ul-Abdin**, F.Hussain, M.H.Khan, S.K.Abbas, A.Manzoor and H.Shaina, **2013**.
Reproductive Fitness of Mealybug Parasitoid, *Aenasius bambawalei* Hayat (Hymenoptera: Encyrtidae). World Applied Sciences Journal (WASJ) 26(9): 1198-1203.DOI:10.5829/idosi.wasj.2013.26.09.76202.
[https://www.idosi.org/wasj/wasj26\(9\)13/10.pdf](https://www.idosi.org/wasj/wasj26(9)13/10.pdf)
(Corresponding author; research conducted under my supervision in my lab.)
20. Arif, M.J., M.D. Gogi, M.J. Hussain, M. Arshad, A. Suhail, **Zain-ul-Abdin**, W. Wakil, A. Nawaz and J.N. Ahmad, **2013**. Evaluation of some IGRs alone and in combination with seed treatments against *Chilo partellus* Swinhoe (Pyralidae: Lepidoptera) and *Atherigona soccata* Rodani (Muscidae:Diptera) on field maize. Pak. Entomol., 35(1): 27-35.
<http://www.pakentomol.com/Downloads/Issues/2013-1/06.pdf>
(HEC Recognized Y-category Journal)
21. Arif, M.J., M.D. Gogi, M. Arshad, **Zain-ul-Abdin**, W. Wakil and A. Nawaz, **2013**.
Comparative toxicity of some IGRs, a mineral oil and carbosulfon against canola aphid under laboratory condition. Pak. Entomol., 35(2): 151-155.
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22. Arshad, M., A. Suhail, M.M. Majeed, H. Bilal, M. D. Gogi, **Zain-ul-Abdin** and M.H. Bashir, **2012**. Determination of economic threshold level (ETL) for the chemical control of rice leaf folder, *Cnaphalocrocis medinalis* Gn. (Pyralidae: Lepidoptera). Pak. Entomol., 34(1): 79-81. [http://www.pakentomol.com/Downloads/Issues/2012-1/016-%20M.%20Arshad%20-%20Entomol.%20Journal%20\(Jan-June%202012\).pdf](http://www.pakentomol.com/Downloads/Issues/2012-1/016-%20M.%20Arshad%20-%20Entomol.%20Journal%20(Jan-June%202012).pdf) (HEC Recognized Y-category Journal)
23. **Zain-ul-Abdin**, M.J. Arif, M.D. Gogi, M. Arshad, F. Hussain, S.K. Abbas, H. Shaina and A. Manzoor, **2012**. Biological characteristics and host stage preference of mealybug parasitoid *Aenasius bambawalei* Hayat (Hymenoptera: Encyrtidae). Pak. Entomol., 34(1): 47-50. [http://www.pakentomol.com/Downloads/Issues/2012-1/009-%20Zain%20ul%20Abdin%20-%20Entomol.%20Journal%20\(Jan-June%202012\).pdf](http://www.pakentomol.com/Downloads/Issues/2012-1/009-%20Zain%20ul%20Abdin%20-%20Entomol.%20Journal%20(Jan-June%202012).pdf) (Corresponding author; research conducted under my supervision in my lab.)
24. Gogi, M.D., M.J. Arif, M. Asif, **Zain-ul-Abdin**, M.H. Bashir, M. Arshad, M.A. Khan, Q. Abbas, M.R. Shahid³ and A. Anwar¹, **2012**. Impact of nutrient management schedules on infestation of *Bemisia tabaci* on and yield of non-Bt cotton (*Gossypium hirsutum*) under unsprayed condition. Pak. Entomol., 34(1): 87-92. [http://www.pakentomol.com/Downloads/Issues/2012-1/018-%20M.%20Dildar%20-%20Entomol.%20Journal%20\(Jan-June%202012\).pdf](http://www.pakentomol.com/Downloads/Issues/2012-1/018-%20M.%20Dildar%20-%20Entomol.%20Journal%20(Jan-June%202012).pdf) (Provided guidance and technical support).
25. Arif, M.J., M.D. Gogi, M. Arshad, A. Ashraf, A. Suhail, **Zain-ul-Abdin**, W. Wakil and A. Nawaz, **2012**. Host-plants mediated population dynamic of cotton mealybug, *Phenacoccus solenopsis* (Hemiptera: Pseudococcidae) and its parasitoid, *Aenasius bambawalei* Hayat (Hymenoptera: Encyrtidae). Pak. Entomol., 34(2): 179-184. <http://www.pakentomol.com/Downloads/Issues/2012-2/15.pdf>
26. Khan, M.A.¹, M.D. Gogi¹, M.A. Rasheed¹, M.H. Bashir¹, M. Arshad¹, **Zain-ul-Abdin**¹ and R.A. Khan², M. A. Khan³, **2012**. Performance of LEPIK technology in regulating whitefly, *Bemisia tabaci* (Aleyrodidae: Homoptera) density in cotton. Pak. Entomol., 34(2):185-188. <http://www.pakentomol.com/Downloads/Issues/2012-2/16.pdf>
27. **Zain-ul-Abdin**, M.J. Arif, A. Suhail, M.D. Gogi, M. Arshad, W. Wakil, S.K. Abbas, A. Altaf, H. Shaina and A. Manzoor, **2012**. Molecular analysis of the venom of mealybug parasitoid *Aenasius bambawalei* Hayat (Hymenoptera: Encyrtidae). Pak. Entomol., 34(2): 189-193. <http://www.pakentomol.com/downloads/issues/2012-2/17.pdf> (Corresponding author; research conducted under my supervision in my lab.)
28. Manzoor, A., **Zain-ul-Abdin**, M. Arshad, M.D. Gogi, H. Shaina, E. Mubarik, S.K. Abbas and M.A. Khan, **2011**. Biological activity of the toxic peptides from venom of *Bracon hebetor* (Say.) (Hymenoptera: Braconidae). Pak. Entomol., 33(2): 125-130. <http://www.pakentomol.com/Downloads/Issues/2011-2/09%20Manzoor%20et%20al..pdf>. (Corresponding author; research conducted under my supervision in my lab.)
29. Arshad, M., A. Suhail, **Zain-ul-Abdin** and M.D. Gogi, **2011**. Efficacy of transgenic Bt cotton against *Helicoverpa armigera* (Lepidoptera: Noctuidae) in the Punjab, Pakistan. Pak. Entomol., 33(2): 119-123. <http://www.pakentomol.com /Downloads/ Issues/2011 2/08%20Arshad%20et%20al..pdf> (Provided guidance and technical support)
30. Gogi, M.D., N. Ijaz, M.J. Arif, **Zain-ul-Abdin**, M. Arshad, M.H. Bashir and M.A. Khan, **2011**. Impact of synergism with combinations of silicon oil, clove oil and sulfuric acid on the toxicity of some insecticides against cotton mealybug, *Phenacoccus solenopsis* (Hemiptera: Pseudococcidae). Pak. Entomol., 33(2): 137-141. <http://www.pakentomol.com/Downloads/Issues/2011-2/11%20Gogi%20et%20al.pdf> (Provided guidance and technical support).

(III) Abstracts published in proceedings of National Conferences/symposia

1. **Zain Ul Abdin***, Ikramu Ullah, Rao Sohail Ahmad Khan, Muhammad Tahir, Atif Manzoor, **2017**. PCR based Screening of *Wolbachia* in host Parasitoid model system, *Aenasius arizonensis* (Girault) (Hymenoptera, Encyrtidae) and *Phenacoccus Solenopsis* Tinsley (Hemiptera: Pseudococcidae). 37th Pakistan Congress of Zoology (International) February 28--March 2, 2017. Organized by Department of Zoology, GC University, Faisalabad, Pakistan
2. **Zain ul Abdin, 2016**. Biotechnology based sustainable insect control strategies. PP.113 (Key note lecture). International Conference of Biochemistry, Biotechnology and Biomaterials (ICBBB-2016). February 22-24, 2016, Department of biochemistry, University of Agriculture, Faisalabad
3. **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) PP. 28-29. International Conference "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)
4. **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 30 October- 04 November, 2016 Islamabad, Pakistan "Emerging Dynamics in Cotton: Enhancing Sustainability in the Cotton Value Chain"
5. 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) PP. 6. International Congress of Entomology and one Exclusive Day on Current Scenario and management of Pink Boll Worm" on 16-18, December, 2016. Organized by Department of Entomology, University of Agriculture, Faisalabad, Pakistan.
6. **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 bioinsecticides for sustainable insect control programmes. 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)**
7. 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 condition. PP.93. Abstract. 31st Pakistan congress of Zoology (International Congress), University of Azad Jammu Kashmir, Muzaffarabad, Pakistan, April, 19 to 21, 2011.
8. 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. 31st Pakistan congress of Zoology (International Congress), University of Azad Jammu Kashmir, Muzaffarabad, Pakistan, April, 19 to 21, 2011.
9. 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 fruitfly (*Bactocera cucurbitae* coquille) pest. PP. 94. Abstract. 31st Pakistan congress of Zoology (International Congress), University of Azad Jammu Kashmir, Muzaffarabad, Pakistan, April, 19 to 21, 2011.

10. Arshad, M., Suhail, A., Gogi, M. D. and **Zain ul Abdin.**, 2011. Seasonal pattern of infestation by spotted boll worm *Earias insulana* (Boisd.) and Pink Boll worm *Pectinophora gossypiella* (Saund.) in field plots of Transgenic Bt and Non- Bt cottons. PP. 86. Abstract. 31st Pakistan congress of Zoology (International Congress), University of Azad Jammu Kashmir, Muzaffarabad, Pakistan, April, 19 to 21, 2011.
11. **Zain ul Abdin**, 2011. Parasitic hymenoptera is a rich source of novel insecticidal proteins. PP.125. Abstract.10th International and 22nd National Chemistry Conference organised by Department of Chemistry & Biochemistry, University of Agriculture, Faisalabad, Pakistan, Under the aspires of the chemical society of Pakistan November 21-23, 2011. **(Oral Presentation)**

Abstracts published in proceedings of International Conferences/symposia

1. **Zain 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.**
2. 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. PP. 256. International Congress of Entomology (ICE 2016 XXV) September 25-30, 2016.**Orlando, Florida, USA.**
3. Hoor 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**
4. 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**
5. Zain ul Abdin, 2015. Insect Parasitoids are a rich source of novel genes and peptides for the development of sustainable plant protection strategies. 4th International conference of Eco-friendly Applied Biological Control of Agrultural pests and Phtopathogens (ESBCP 2015). Organized by Egyptian Society for Biological Control of pests, October 19, 2015, Cairo, **Egypt**
6. **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. VIIth International conference on Arthropods: Chemical, Physiological, Biotechnological and Environmental aspects. Stefan Kopeć Memorial Conference, September 18-23, 2011, **Poland. (Oral Presentation)**
7. 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. VIIth International conference on Arthropods: Chemical, Physiological, Biotechnological and Environmental aspects. Stefan Kopeć Memorial Conference, September 18 -23, 2011, **Poland.**
8. **Zain ul Abdin ***, Amer Jamil, M. Jalal Arif., Hoor Shaina 2012. Functional analysis of the venom of mealybug parasitoid *Aenasius bambawalei* Hayat (Hymenoptera: Encyrtidae). Abstract. ENTO '12, Res National Science meeting, organized by Royal Entomological Society, UK in Anglia Ruskin University, July 18-20, 2012 **Cambridge, UK.**
(Oral presentation)

9. **Zain ul Abidin**, 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.
10. M. Arshad, A. Suhail, M. D.Gogi, M.H. Bashir, **Zain ul Abidin**, M. A. Khan, 2012. Effectiveness of transgenic bt cotton on the non-target sucking insect pest's community. 0403TU11. Abstract. XXIV International Congress of Entomology (ICE) August 19-25, 2012.
Daegu, Korea
11. Anjum Suhail, Muhammad Arshad, **Zain ul Abidin**, 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.
12. M. D. Gogi, M.J. Arif, M. Ashfaq, A.Suhail, S. Ahmed, M. A. Khan, M.H. Bashir, **Zian ul Abidin**, 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.
13. M. D. Gogi, M. H.Bashir, M. Arshad, **Zain ul Abidin**, M. A. Khan, 2012. Evaluation of some botanicals extracts, adult food-baits, oviposition-baits, coloured 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.**

(IV) **Participation in symposia, workshops, seminars etc.**

1. Conducted a Training workshop as CABI consultant/resource person on “**Diagnostic Techniques for insect pests and plant diseases and their database management**” March 27 to April 2, 2017
Kabul, Afghanistan
2. Participated in 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
3. 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**)
4. Completed a four days Training workshop COMSTECH-FCC-ECOSF INTERNATIONAL WORKSHOP “**GENOMICS AND GENOME EDITING**” May 24th -27th, 2016 organized by Forman Christian College (A Chartered University), Lahore, Pakistan.
5. Attended a Training workshop on “Crystal structure determination by **X-Rays Crystallography**” November 7 to December 2, 2016. Organized by the Department of Chemistry, University of Agriculture, Faisalabad, Pakistan
6. 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)
7. Participated in “2nd National Stakeholder’s Conference on **Precision Agriculture**, Status and future Prospects of adopting precision Agriculture in Pakistan’s Farm Settings”.April 16, 2016
8. Attended a seminar on “**Hybrid Wheat for Food Security**”. February 25, 2016. Organized by Work Package Leader-Breeding programme, University of Agriculture, Faisalabad, Pakistan

9. Participated three days training workshop “Sustainable and integrated management of insect pest and disease of crops. September 15-17, **2015**. NIAB, Faisalabad
10. Completed ten days training workshop “Biochemical and Molecular Techniques in Plant Breeding, organized by Marker assisted breeding group. October, 6-16, **2015**, NIAB, Faisalabad, Pakistan
11. Participated in a 5 days training workshop 4th national Training course on “Bacterial identification and Metagenomics” March 16-20, **2015**, NIBGE, Faisalabad, Pakistan
12. Attended a seminar on “Graduate Programmes” delivered by Dr. Thomas L.Rost and Dr. James E.Hill, University of California, Davis USA. Organized by ORIC, UAF. August 21, **2015**
13. Attended a workshop on “Writing graduate group by laws” Resource person Dr. Thomas L. Rost, University of California, Davis USA. Organized by ORIC, UAF. August 20-22, **2015**
14. Participated in a training programme “International Workshop on “Bioinformatics: Ensemble Database Mining and Whole Genome Sequencing Analyses” December 16-18, **2014**, COMSTECH Islamabad, Pakistan.
15. Participated as **oral presenter** in “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
16. 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.
17. Participated in Project formulation workshop, December 3-4, **2013** organized by Pakistan science Foundation (PSF), held in University of Agriculture, Faisalabad (UAF)
18. Participated in two-day symposium on “Dengue Fever: Virology and vector control” held from 31st January-1st February **2013** at National institute for Biotechnology and genetic engineering (NIBGE) Faisalabad
19. Participated in three days’ workshop on “Emerging Superbugs-Standardizing Antimicrobial Susceptibility Testing, Surveillance and Lab Biosafety Hands-On Workshop (February 25-27, **2013**) held at Agha Khan University Karachi, Pakistan
20. Participated in “2nd Post graduate Entomological research conference, July 08-09, **2013**. Organized by the Department of Entomology, UAF
21. Participated in 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**
22. Participated in Post Graduate Entomological Research conference, June 22-23, **2012** organized by Department of Agri. Entomology, University of Agriculture, Faisalabad, Pakistan
23. Participated in a workshop “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.
24. Participated in a three days 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 center, Pakistan Agricultural council (PARC)

25. Participated in a two days' conference "Increasing productivity and unleashing growth in Pakistan. May 26-27, **2012**. Organized by USAID (IFPRI, Pakistan Strategy support programme)
26. Participated in a two days conference on "Productivity, Growth and Poverty reduction in rural Pakistan. December 13-14, **2012**. Organized by the Planning Commission, Islamabad, Pakistan
27. Acted as Resource person in "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.
28. 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
29. Participated in international workshop on "Biotechnology for economic development" February 16-18, **2011**. Organized by the OIC Ministerial Standing Committee on Scientific and Technological Cooperation (COMSTECH) held at COMSTECH building, Islamabad, Pakistan.
30. Participated in 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.
31. 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
32. Participated in an international workshop on "Biosafety, Biosecurity and Bioethics" October 17-19, **2011** at COMSTECH, Islamabad, Pakistan
33. Participated in an international workshop on "Advances in genetic engineering of plants" December 20-22, **2011** at COMSTECH, Islamabad, Pakistan

(V) Other Scholarly Activities:

i. As Examiner:

- a. **External Examiner of Punjab University:** Acted as an external examiner for M. Sc Zoology paper, Punjab University, Lahore and University of Baluchistan Quetta
- b. **Ph.D Comprehensive examination at UAF**
Chairman board of examiners, paper setter in Ph.D written and VC nominee for oral comprehensive examinations for many students

ii. Scientific Professional Collaborations.

We have Developed collaborations with Dr. Bruce A. Webb, Department of Entomology, University of Kentucky, USA. And with Prof. David O'Brochta, Department of Entomology, University of Maryland, USA to perform research in the area of Insect Biotechnology/Molecular Biology and genetic insect control Technologies. Further, University of Kentucky and University of Maryland are our research partners and we have submitted a joint Project under PAK-US science and Technology cooperation programme and USPCAS-AFS (U.S.-Pakistan Center for Advanced Study in Agriculture and Food Security, University of Agriculture Faisalabad/University of California, Davis). Further, my two Ph.D students spent six months in Prof. Bruce Webb lab. University of Kentucky, USA under 6 months Training programme of HEC (IRSIP) and did a wonderful research work on RNA Seq Illumina Technology (Next generation sequencing) and *De novo* assembly and published their research work in peer reviewed journals (copies attached in Publication section).

iii. New Courses developed and offered

I have developed two independent courses which were continuously offered for B.Sc (Hons) agriculture and M.Sc (Hons) & PhD degree programmes during the report period. These were developed by me independently

1. ENT-316 2(1-1) "Introduction to Insect Molecular Genetics"
 2. ENT-708 2(1-1) "Insect Molecular Biology"
 3. **A public lecture was delivered** "Parasitoid wasps as a source of novel insecticidal molecules" August 2nd, 2012 at 11.00 am in video conference room under schedule for lectures to be delivered by the faculty on TTS through video conferencing -Phase-VI
1. **Participated in PSSP 2nd** research competitive grants conference on February 8-10th, 2013 at Marriott hotel in Islamabad

iv. Articles published in local language (Urdu):

We are working with the aim to solve the actual problems faced by our stake holders (growers/farmers) for the protection of their crops and farm produce, therefore, it is imperative to transfer the knowledge/information obtained from labs. Research to the end users by translating in to non-technical/local languages and published them in local journals and magazine. This is our extension/community service because we believe that knowledge obtained from lab. research must be translated in to goods and services.

1. What if there were no Insectss? February, 2015 Kisan Rasala 12(04). PP.37.
2. *Bracon hebetor* a very useful insect, December 2014. Kisan Rasal 12 (02), PP.10-11
3. Control of malaria by sterile insect techniques January 2014. Zari Digest, 49(1) pp.29-30
4. Role of Biotechnology in modern Agriculture, 2014. Kisan Rasal, Lahore. 11(04). Pp.16
5. Sustainable control of mango mealybug, March, 2013. 51 (06). PP.18-19. Zarat Nama
6. Harmful effects of mango mealybug, April 2013, Kisan World 4(4) pp.42-43
7. Dengue fever, 2013. Shifa News, 13(11) 20-22.
8. Biological control of citrus fruit fly, December, 2012. Volume No.12, PP.48-50. Monthly Kisan world Lahore.

v. Fellowships/memberships of professional societies (Annexure-XXI)

- Fellow of Royal Entomological Society, UK
- Fellow of Common Wealth Charles Wallace Trust, British Council, UK
- Member of Entomological Society, USA
- Member of International organization for Biological control (IOBC)
- Pakistan Entomological Society (life time member) and Treasurer
- Member Pakistan Biological Safety association (Membership No.341)
- **As Reviewer of Scientific journals:**
- Associate Editor, Pakistan Entomologist

- Reviewer of HEC (NRPU) project
- PCST's Journal of Science, Technology and Development
- Member of editorial board of STM journals, India
- Journal of Agricultural Sciences and Technology, David Publishing company, USA

vi. Participation in collaborative Project meetings:

I got the opportunity to visit the lab of Bruce E. Tabashnik (world known authority on Pink Boll Worm) for developing a joint project on Resistance management of pink bollworm.

vii. Invitation to be Chair/Speaker in World fame conferences:

I have been invited to be Chair/speaker in

- World gene Convention-2017, Macao, China
- World Biotechnology Congress 2017, New Delhi, India and
- 6th International conference of Insect Physiology, biochemistry and molecular biology, 2017. Hangzhou, China.

(VI) Advisory, Administrative and Community Services etc.

There is a long list but some of them are presented below

- (i) Member of the Senate of the University** (w.e.f. 11.03.2015, Endst.No. Coord/PB/8-83/1940-2040)
- (ii) Tutor:** Acting as tutor for Tutorial Group (**Shabbier Shaheed- 2**), this Tutorial group comprising 50 students
- (iii) Hostel Superintendent:** Serving as superintendent Boys Residential hostel "Liaquat Hall" (No. SR-17.10.2012)
- (iv)** Established an equipped lab. "Insect Molecular Biology Lab." In the Deptt. of Entomology, UAF from the funds from HEC, PSF and IFS.

(v) Foreign academic visits:

S.No	Country	Duration	Purpose of visit
1.	Afghanistan	March 27 to April 2, 2017	Participated as a resource person/CABI consultant for conducting Training workshop "Diagnostic Techniques for Insect Pests and Plant Diseases and their data base management" at Kabul, Afghanistan
2.	USA	September 25-30, 2016	For oral presentation of Research article in International Congress of Entomology (ICE 2016 XXV) September 25-30, 2016.Orlando, Florida, USA.
3.	China	August 30, 2013 September 13, 2013	Attended a training workshop "ASEAN: Science and Technology Park" sponsored by COMSATS, Islamabad, Pakistan
4.	UK	July 18-20, 2012	For presenting research article in "Ento '12, Res National Science Meeting, Anglia Ruskin University, Cambridge, UK. Sponsored by Endowment Fund, University of Agriculture, Faisalabad

5.		January 24, 2012----- April 22-2012	Visited School of Biology of The University of Nottingham & and school of Biology, University of St. Andrews, Scotland, UK sponsored by Commonwealth Charles Wallace Visiting fellowship, British Council, Pakistan
6.	Poland	<i>September 18 - 23, 2011</i>	For presenting research article in VII th International conference on Arthropods: Chemical, Physiological, Biotechnological and Environmental aspects. Poland, travel grant provided by HEC
7.	Italy	November 27, 2005- April 30, 2009	For pursuing Ph. D studies
8.	Republic of South Africa	June 19, 2007- July 18, 2007	For attending a training workshop “Theoretical and Practical Course on Proteomics and Protein Bioinformatics” University of Limpopo, South Africa, travel grant provided by the Kirkhouse Trust, UK

(VII) Research and Development Competitive Grants Funding

A: Research Projects as Principal Investigator (PI):

a. Completed:

03 Research projects were completed

	Funding agency	Title	Worth	Duration	status	Role as
1.	PSF (Pakistan Science Foundation)	Parasitoid wasps as a source of novel insecticidal molecules	Rs.1,931,350 / Million	3-Years	Completed	P.I
2.	IFS (International Foundation of Science) SWEDEN	Development of environmentally benign novel natural bioinsecticides for effective insect control derived from the naturally occurring toxic genes in the female secretions of insect parasitoids	11750 USD	2-Years	Completed	P.I
3.	HEC (Higher education commission, Govt. of Pakistan)	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	Rs.3,099,106 / Millions	3-years	Completed	P.I

b. Ongoing Research Project as PI

01 HEC project is running as **P.I** during report period

	Funding agency	Title	Worth	Duration	status	Role as
1	HEC (Higher education commission, Govt. of Pakistan)	Novel non-venom insecticidal genes and peptides of Parasitic origin for sustainable insect control applications	Rs. 5.024493 Million	3-years	In progress	P.I

(B): Projects as Co-Principal Investigator/Team Member

Active participation in different projects by PIs from other departments to provide guidance and expertise in the field of Insect Molecular Biology.

a. Completed:

01 Research project was completed as Co. P.I.

	Funding agency	Title	Worth	Duration	status	Role as
1.	HEC	Genetic diversity among sap feeding insects against gene encoding sheath protein	PAK.Rs.0.495 Million	12 months	Completed	Co. P.I