



***Prof. Dr. Farkhanda Manzoor***  
***Chairperson, Department of Zoology***  
***Lahore College for Women University, Lahore.***

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**Education:** Postdoctoral Fellow, the Ohio State University, USA; Ph.D. (Entomology), University of the Punjab, Lahore; M.Sc.(Zoology), Government College Lahore; M.Ed (Teacher Education); PGD Environmental Law: University Law College, P.U. Lahore.

**Thesis title:**

Postdoctorate: Biological control of termites

Ph.D: “Morphometric studies on termite genus *Odontotermes*”

M.Sc: Branchiopods from Southern Punjab

M.Ed: Evaluation of Text Book of Biology for class XI.

***PROFESSIONAL STATUS***

- Chairperson, Department of Zoology, 23<sup>rd</sup> January 2015 to date
- Professor, 14<sup>th</sup> October 2011, to date
- Jan 2011 to 13<sup>th</sup> Oct 2011: Associate professor, Lahore college for women university, Lahore
- 2007 to 2011: Assistant professor (TTS), and 2004 to 2007: Assistant professor, Lahore college for women university, Lahore
- 1998 to 2004: Assistant professor at Garrison Post Graduate College for women, 52-Tufail road, Lahore. Cantt.
- 1990 to 1998: Lecturer at Garrison Post Graduate College for women, 52-Tufail road, Lahore, Cantt.
- Visiting Faculty in the Discipline of Environment Management at National College of Business Administration and Economics Lahore.
- Member/ Advisor Biology at National Museum of Science and Technology, Lahore Pakistan

- **Director Academic Planning, LCWU 1-10-2015 to date**
- **Director Linkages, LCWU 15<sup>th</sup> May, 2011-todate**
- **Senior Manager, ORIC, LCWU- 2013-todate.**
- **Editor-in-Chief Journal of Innovative Sciences. LCWU 2015- todate**
- **President, Society for the Promotion of Science and Technology, LCWU 2015 to date.**
- **Facilitator, Active Citizenship Program LCWU and British Council 2014-todate.**
- President, Zoology Society, LCWU,2004-todate
- Chairperson, Dengue control & Prevention Cell, LCWU.2011-todate
- Member, Senior Management Committee, LCWU.
- Focal person for Active Citizens Program of British Council (ACP) at Zoology Department, LCWU.2014-todate
- President, Society for the Promotion of Science and Technology, LCWU 2015 todate.
- Member, Faculty Board, LCWU. 2011.
- Member, Board of Studies Deptt of Zoology, Punjab University, Lahore (2003-2005)
- Member, Board of Studies, Department of Zoology, LCWU(2005-2014)
- Convener, Board of Studies, Department of Zoology, LCWU(2015 to date)
- Convener, Ethical Review Committee, Department of Zoology, LCWU(2015 to date)
- Convener, Purchase Committee, Department of Zoology, LCWU. 2015-todate
- Member, Advance Research Board, LCWU.2013-todate.
- Member Disaster, Prevention and Management Committee. LCWU.2013-todate
- Member, Tenure Review Committee (DTRC), LCWU, 2015 todate.
- Member Ethical Committee, (LCWU) 2015 to date.
- Convener, Plagrism Committee, Department of Zoology, 2009-todate.
- Member, Ethical Review Committee, Department of Pharmacy, LCWU 2015-todate.
- Chairperson, Assessment team QEC, LCWU. 2015 todate.s
- Associate Editor, the “Environ monitor” a magazine on Environment (Journal of Environmental Sciences, Technologies and Engineering) ISSN:1684-8012.
- Member Editorial board for the Proceedings on International Seminar on “Medicinal plants: Isolation and Application 21-23 May, 2008.
- Internationally recognized in the field of Termitology.
- Member, Scientific committee on Biotechnology & Kitchen Gardening Lahore Chamber of Commerce, Lahore (LCCI ), Lahore Chamber of Commerce, Lahore
- Member South Asian Invertebrate Specialist Group, Species survival Commission. New Delhi India.
- Member of Chairman Squad for Annual Examination at Board of Intermediate & Secondary Education, Lahore (2011).
- Member, Rotary Club of Lahore Garrison
- Consultant FMC, Corporation Lahore.
- Focal person “sequencing DNA barcodes of economically important insect species of Pakistan.”(Termite group) in Collaboration with Biodiversity Institute of Ontario (BIO) at the University of Guelph. Canada.

- Co-Ordinator WWF-Pakistan For ECO Internship Programme at LCWU(2013-todate).
- Member Asian Council of Science Editors (ASE), 2014-onward
- Member Scientific and technical committee & Editorial review board on Animal and Veterinary Sciences, USA
- Commission Member - IUCN SSC South Asian Invertebrate Specialist Group 2013-2016
- Commission Member - IUCN Species Survival Commission, Pakistan. 2013-2016
- Member –Organization for women in science for developing world (OWSD) since 2005.
- Member Punjab Zoos and Safari Park, Zoo Management Committee since 2017.

**Teachings:** Teaching of both undergraduate and postgraduate students including PhD. Acting as research supervisor of students pursuing their Master/M.Phil and Doctorate degrees.

- Evolution and Principles of Systematics, Insects of Veterinary and Medical Importance, Invertebrate and Chordate Diversity, Fundamentals of Environment Science, Environmental Law, Environment Education, Environment Issues and Environment Impact Assessment, Educational Psychology, General Science, Biology Teaching Methodology, Evaluation and Assessment.
- Teachings of Science Education (Postgraduate Diploma in Education at LCWU).
- Morphology, Physiology and Ecology of Insects, Insect classification and pest Management, Insects of Medical and Veterinary Importance, Advanced Morphology and Physiology of Insects. Research methods in Entomology, Integrated pest Management, Insecticide toxicology. Advances of Biological Control, Molecular Entomology, (BS, MS and Ph.D level). All courses taught with Lab work, Seminars, Assignments and Research work.
- Paper Setter / Examiner for Medical Entry test, University of Health Sciences, Lahore
- Examiner in thesis ( based on research work) for award of M.Sc, M.Phil degrees of G.C University, Lahore, University of the Punjab, Board of Advanced studies &Research, University of Karachi, University of Veterinary and Animal Sciences, Lahore, Department of Environment Sciences and Management, National College of Business &Economics. Lahore, NWFP Agriculture University, Peshawar. University of Sindh, Jamshoro, Federal Public Service Commission. Interview Panel of Punjab Public Service Commission.
- **Research: Areas of Interest:**
- Urban& Medical Entomology: Termite Taxonomy (Morphological and Molecular level), Biology and Control. Natural insecticides, Insecticide resistance, Integrated pest Management, Pesticides exposure and cancer, Biodiversity, Control of mosquito, Cockroach, ticks and mites.
- Focus on applied research - **Development of botanical insecticides, insect anti-feedants and repellents.**
- Performed applied research on mosquito/termite control/ecology. Served as study/project director for evaluations of insecticide efficacy to monitor effectiveness

of products, technology and techniques. Conducted evaluations of chemical and biological control agents of mosquito larvae and adults using WHO guidelines. Established a program to monitor insecticide susceptibility of mosquito populations.

- **HEC Approved Supervisor Ref# 1-30/HEC/ HRD/2008/39(2) 48**

### ***BOOKS WRITTEN (National)***

- Biology for class XI(Chapter contributed) by Punjab Text Book Board, Lahore
- Gene Cloning, published by Urdu Science Board (First Book in Urdu in Pakistan)
- Animal Biology, published by Urdu Science Board
- Biology part 1 and part 2, for F.Sc .students, by Polymer Publications
- Biology practical notebooks for Matric, FS.c published by New Star Publications
- Primary Science by Star Publications
- Informative booklets on biology published by National Museum of Science and Technology, Lahore. Pakistan
- Member review committee of Model text book on Environmental studies for class IX.
- Developed laboratory Manual/practical workbook of Biology for students of Grade 10 by textbook board Punjab (2011).
- Edited Abstract Book of “**Sustainable Approaches for Pest and Vector Management in Pakistan**”, at Department of Zoology, Lahore College for Women University, Lahore on 21-22nd February, 2011.
- Sample Lesson Plans (SLOs based) for Science (Elementary level). 2011
- Material Development for Pre-service Induction training on teachers Review for Finalization on 28-29 January, 2012.
- Revised Teacher’s guide for Primary School Teachers (class 4<sup>th</sup>& 5<sup>th</sup>) as Reviewer at Directorate of staff Development, Lahore 2012.
- Reviewer Text Book (General Science- VII) 2013-2014.
- Edited Proceedings on “Awareness of Emerging Issues of Cancers in Pakistan at LCWU” on 6<sup>th</sup> May 2014.
- Material Developer, Reviewer, Pilot Reviewer, Teacher Trainer in Directorate of Staff Development& Punjab Text Book Board, Lahore.
- Convenor for Review of modified Curricula Biology (IX-X) at Punjab Text Book Board Lahore. March, 2014.

### ***International***

- Monograph on “Morphometric studies on the termite genus *Odontotermes*” (**Higher Education Commission, Pakistan). 2006.**
- Morphometric studies on the termite genus *Odontotermes* (Imago caste, Soldier caste) VDM Verlag Dr. Müller (2009-09-24), ISBN-13:978-3-639-18012-1
- Efficacy of different insecticides used against termites in Pakistan 978-3-639-22920-2 (**vdm-verlag.de (Germany) 2010**)

- Subterranean termites in Pakistan: constructional damages VDM Verlag Dr. Müller (2010-05-18) - ISBN-13: 978-3-639-25077-0 (**vdm-verlag.de**) **2011**
- Efficacy of plants extracts: Subterranean termite control in Pakistan(**vdm-verlag.de (Germany)2011** VDM Verlag Dr. Müller (2011-04-08) - ISBN-13: 978-3-639-34885-9**vdm-verlag.de**)
- Insecticides Resistance in American Cockroach from Urban Lahore. LAP LAMBERT Academic Publishing (2011-09-05)-ISBN-13:978-3-8454-7740-4(**vdm-verlag.de**) **2012**
- Insecticide Resistance: Stored grain Pests In *T. castaneum* (H.) and *R. dominica* (F.) LAP LAMBERT Academic Publishing (2012-04-11 ) ISBN-13: 978-3-8484-8766-0
- Larvicidal Property of essential oils against Mosquito larvae (Lambert Academic Publishing,**2012** LAP LAMBERT Academic Publishing (2011-11-25) - ISBN-13: 978-3-8465-9151-2
- Biototoxicity of insecticides in *Aedes aegypti* & *Culex quinquefasciatus* LAP LAMBERT Academic Publishing (2012-01-16)-ISBN-13:978-3-8473-3196-4**ISBN-13: 978-3847331964 2012**
- Molecular Diagnostics of termites of Pakistan 2012 online Publication LAP LAMBERT Academic Publishing (2012-07-24)- ISBN-13: 978-3-659-18479-6 ISBN:978-659-18479-6.
- Biological Control of *Culex* Mosquitoes (larvae) in Pakistan **ISBN-13:978-3-659-53700-4, Publishing house: LAP LAMBERT Academic Publishing: Website: <https://www.lap-publishing.com>. 2014.**
- Populations Dynamics, Knowledge and Control against Dengue Vector **ISBN-13:978-3-659-54613-6, Publishing house: LAP LAMBERT Academic Publishing: Website: <https://www.lap-publishing.com>. 2014.**
- Mosquitoes- The urban Pests Published by Pakistan Book Centre, Lahore. ISBN 978-969-23066-0-7, S2015.
- Termites: the Urban Pests Published by The NOOR Publishing Germany,ISBN 978330801608.2017.

#### ***TECHNICAL RESEARCH REPORTS***

- Synergism of imidacloprid and entomopathogenic nematodes for control of the Eastern Subterranean termites *Reticulitermes flavipes* (Isoptera: Rhinotermitidae). Extension Entomology, OSU,USA. 29<sup>th</sup> Nov, 2006- 17<sup>th</sup> August 2007.
- Survey and Control Strategies of Termites in Urban Areas of Pakistan. Approved By FMC Corporation Of Pakistan 2009-2010.
- Baseline Biodiversity study of six leaf areas and two factory sites: Pakistan Tobacco Company Limited, 2010
- Repellency and toxicity of different essential oils against termites No. 20-578/ R&D/ HEC/05 2007-2011.
- Final Technical Report on “Molecular Diagnostics of Subterranean Termites of Pakistan.”Project No: 20-1298/ R&D/HEC/2008-2012.

- Final Report on “Baseline Surveys of Butterflies in Coniferous forests of Punjab” WWF/SC/HA (11)/1507. 2011-2012.
- Prepared Reports on Preventive measures for Dengue Control and population dynamics of Mosquitoes *Spp* at LCWU (2011-2013, 2014).
- Bioavailability and Degradation Of Biflex (Bifenthrin) and Fipronil (Phenyl Pyrazole) Against Subterranean Termites (Isoptera: Rhinotermitidae) Under Laboratory and Field Conditions at LCWU (2011-todate ).

### ***CO-CURRICULAR ACTIVITIES***

- “DoostHamary” A PTV Program for children written and compared
- Written many articles on science and women in the Newspapers and journals like “News”, Jang, Nawa- i-Waqat, etc.
- Working as an honorary consultant for Biology in the National Museum of Science and Technology, Lahore
- Compared and wrote the program “University Magazine” for students at radio Pakistan.
- Participated in many Radio and Television programs on literacy, Examination System, Women, Education, Food and Nutrition and Environment
- Compared many programs at “Khawateen Time”(Morning transmission of PTV)
- Script written “On the History of the University of the Punjab for PTV.
- Co-ordinator for Higher Education Commission Inter Provincial student Exchange program at Lahore College for Women University. (2005& 2006).

### ***PAPERS PRESENTED AT SEMINAR/CONFERENCES/WORKSHOP AT NATIONAL & INTERNATIONAL LEVEL***

- Resource person for “**Science teacher training workshop**” organized by Lahore Garrison Institutions, Lahore (1991, 1992, 1993, 1994).
- Delivered “**26 lectures on Biology**” for AllamaIqbal Open University at Pakistan Television Lahore (1997-1998).
- Paper Presented at One Day National Seminar and Expo on “**Food and Beverages**” on occasion of World Food Day at Lahore Chamber of Commerce and Industry, 16th October 2003
- Paper Presented at One Day National Seminar and Expo on “**Water and Disasters**” held on occasion of World Water Day 22<sup>nd</sup> March 2004 at Lahore Chamber of Commerce and Industry.
- Attended and Presented Paper “**Major Environmental issues of Pakistan**” at the “8<sup>th</sup> Islamic Countries Conference on Statistical Sciences” (ICCS-VIII) on 19-20<sup>th</sup> Dec, 2005.
- Attended and Presented Paper “**Morphometric studies on termite genus Odontotermes**” Presented at “International Science Conference” (ISC, 2005) at Kaula Lumpur from 3-6 August, 2005.
- Attended and Presented Paper “**A new record of termites from Indo Malayan region**” at the “Royal Entomological Society Symposium and National meeting” Sussex University, U.K from 12-14<sup>th</sup> Sept, 2005.

- Presented paper at “Consultative Workshop for “**Consolidation of Persistent Organic Pollutants (POP’s) Inventorization Process**”23-24 December, 2005.
- Paper Presented at the “**National Insect workshop**” at Pakistan Agriculture Research council (PARC) Islamabad 13-15 February, 2006.
- Presented Paper at the “**Royal Entomological Society Conference**” at Brighton University, U.K from 20-22<sup>nd</sup>Sept,2006.
- Delivered Lecture on “**Environmental Issues of Pakistan**” on world Environment Day 3<sup>rd</sup> June, 2006 at Lahore Chamber of Commerce.
- Paper Presented at the International Union for “**The Study of Social Insects**” (IUSI) at Washington, D.C, U.S.A from 29 July-5<sup>th</sup> August, 2006.
- Resource person & Delivered Lecture on “**Entomological Techniques for Insect** Resource person on three days Short course on Research Methods and Survey Techniques for Environmental Research 15-16 November, 2007.
- Lectures delivered to students at Department of Architecture UET, on “**Termite and its Control**” 2008- 2009.
- Paper Presented on “**Pakistan Fauna and Flora and the challenges of termite management in Pakistan**” at University of Melbourne, 2<sup>nd</sup> April,2009.
- Paper presented at International Seminar on Medicinal on Medicinal Plant. “**Effect of Eucalyptus oil on the Formosanus Subterranean termite (Isoptera: Rhinotermitidae) in laboratory and field trials**” organized by HEC &British Council at LCWU, Lahore 20-6-2009.
- Paper presented “**Prevalence of termite infestation and wood preferences**” at 40<sup>th</sup> Annual Meeting of International Research Group on Wood Protection at Beijing, China 24-28 May, 2009.
- Lectures delivered on “**Crime scene intelligence and forensic Entomology**” to students of Diploma in Forensic Chemistry at GC Lahore. 2010.
- Paper presented on “**Use of essential oils against termites of Pakistan**”at2<sup>nd</sup> International Seminar on Medicinal Plants 14-16 January, 2010.
- Paper presented on “**Impact of Pesticides on Food Commodities**”on World Food day Seminar 16<sup>th</sup> Oct, 2010 organized by the Royal Society of UK & Environ Monitor.
- Paper presented on “**Aedes mosquito and its Life cycle**” atAdvocacy seminar on Dengue Fever, LCWU Nov, 2010.
- Paper Presented “**Effects of pesticides on women health with reference to kitchen environment**” at National seminar on women as custodian of environment and health Ambassador Hotel, Lahore (Pakistan) 21 May, 2011.
- Paper presented on “**Biodiversity & Foraging behavior of Termites**” at three day National Symposium on Biodiversity of Pakistan 7-9 June, 2011.
- Lecture delivered “**Dengue How & Why**” Islamia College For Women, Lahore, June 2011.
- Paper Presented on “**Worsening Pesticide Impacts on Women and Children**” at National seminar on “women as custodian of environment and health”Ambassador

Hotel, Lahore (Pakistan) 21 May, 2011 organized by the Royal Society of UK & Environ Monitor.

- Paper Presented on “**Environment and Dengue control**” Seminar on Review of food & Environmental concerns in flood affected areas 15<sup>th</sup> October 2011 organized by the Royal Society of UK & Environ Monitor.
- Paper Presented on “**Survey of Termite attack in the Forests of the Punjab**” at the Punjab Forest Department on 24<sup>th</sup> April, 2011.
- Paper Presented on “**Termite treatment and Construction techniques**” at Lahore, Islamabad organized by FMC Ltd Pakistan July, August, 2011.
- Papers Presented on “**Termites as Natural Engineers**” and “**Similarity of Building Ventilation and Termite Mounds Architecture**” at Pakistan Engineering Congress, Lahore on 20<sup>th</sup> Dec, 2011.
- Guest Speaker at one day Seminar on “**Biotechnology and 21<sup>st</sup> Century**” at LCCI July 21, 2011.
- Paper Presented on “**Incidence of Dengue Fever**” at Seminar on Review of Food & Environmental concerns in Flood Affected areas 15 Oct, 2011
- Paper presented on “**Efficacy and Longevity of Some Soil termiticides under Field Trials in Urban Areas of Pakistan**” Ninth Conference of the Pacific Rim Termite Research Group at Hanoi, Vietnam, 27-28<sup>th</sup> February, 2012.
- Paper presented on “**Larvicidal property of essential oils against *Aedes aegypti* and *Culex quinquefasciatus* larvae (Diptera: culicidae)**” presented at 32<sup>nd</sup> Pakistan Congress of Zoology (International Congress) March 6–8, 2012, G.C University, Lahore.
- Paper presented at National Seminar on “**Biogas-challenges & opportunities in Pakistan**” at Lahore Chamber of Commerce & Industry on 8-5-2012.
- Paper presented on “**Impact of climate change on Butterflies of Pakistan**” at International conference on Climate change: Opportunities and Challenges at NUST Islamabad, from 9<sup>th</sup> -11<sup>th</sup> May, 2012.
- Paper presented “**Laboratory and Field evaluation on Natural Resistance and Feeding Preference of Different Wood Species to Subterranean Termites (Isoptera: Rhinotermitidae, Termitidae) in Pakistan**” at the International Research IRG/ WP 12-60336 Group on wood protection from 5<sup>th</sup> -10<sup>th</sup> May, 2012 at Malaysia.
- Lectures delivered to Engineers at “**Termite Control in Buildings**” at Institute of Engineers, Lahore July 14, 2012.
- Paper presented at National Seminar on “**Bio-Fuel Challenges & Opportunities in Pakistan**” on 11-12-2012, at Lahore Chamber of Commerce & Industry.
- Lecture delivered on “**Vector Borne Diseases and Waste Management**” at National Workshop on Waste Management 26 Feb, 2013.
- Paper presented at 33<sup>rd</sup> Pakistan Congress of Zoology, 2-4<sup>th</sup> April, 2013.
- Lecture delivered on “**Anopheles: The mosquito vector of Malaria**” on World Malaria Day Seminar on 25<sup>th</sup> April, 2013 at LCWU.
- Paper presented on “**Bioavailability of Bifenthrin and Fipronil against subterranean termites (Isoptera: Rhinotermitidae) in various soils**” at IRG 44



(The International Research Group on Wood Protection) at Sweden on 16-20<sup>th</sup> June 2013.

- Key Note Speaker **“Biosensors for termite control”** at International Conference on Sensing for Industry Controls Communications & Security Technologies at HEJ Karachi from 24-26<sup>th</sup> June 2013 organized by Indus University, Karachi.
- Paper presented on **“Susceptibility of *Culex quinquefasciatus* (Diptera: Culicidae) in Lahore (Pakistan) to Temephos, *Bacillus thuringiensis serovar. Israelensis* (Bti) and Turpentine oil”** presented at 34th Pakistan Congress of Zoology, Multan 25-27<sup>th</sup> February, 2014.
- Paper presented on **“Efficacy of Biflex and Fipronil in controlling subterranean termites (Isoptera: Rhinotermitidae) in different soils types in Pakistan. Pacific-Rim Termite Research Group Conference (TRG 10)” 26---28 February 2014 Malaysia-Kuala Lumpur.**
- Paper presented **“Marine Biodiversity Conservation and threats at National Conference on Pakistan’s Marine Resources Present Scenario: Futuristic Potential”** on 15<sup>th</sup> March, 2014.
- Delivered lecture on **“Biopesticides”** at BIO-WORLD FORUM, National Seminar on Agriculture Biotechnology on 11-4-2014 at LCCI, Lahore.
- Paper presented on **“Role of Biocides for control of *Aedes aegypti* larvae”** at International conference on Innovative Biological and Public Health Research (IBPHR-2014) at G.C University, Lahore.
- Paper presented on **“Comparative study on resistance of common wood species to attack by termites in Pakistan: Status of *Mangifera indica* L. (mango) at World Mango Conference, The Islamia University of Bahawalpur June 24-25, 2014.**
- Paper presented on **“Redescription of *Aedes aegypti* and Detection of Dengue Virus from Field collected Larvae from Lahore, Pakistan at Eighth International Conference on Urban Pests, University of Zurich, Switzerland. 20-23th July, 2014.**
- Paper presented on **“Vector Borne Diseases and Climate Change”**International Conference on Environment and Sustainable Development 16-17 December, 2014 at GCU Lahore.
- As an Expert participated in discussion in the **“Product Launch Ceremony of X-term-Revolutionary Termite Baiting Technology, Gokilaht & Sumilarv at Royal Palm Club, 12<sup>th</sup> January 2015.**
- Presented poster at Three- Day International Conference on Exploring New Avenues in Medicinal Chemistry Opportunities & Challenges at F.C College Chartered University, Lahore from 21-23 January, 2015.
- Poster presented at the 5<sup>th</sup> International Fisheries Symposium, 24-25 February, 2015 at P.C Hotel Lahore.
- Delivered lecture as Invited Speaker on **“Animal Rights”** at Special Animal & Veterinary Emergency Relief Society of UVAS - Savers Campaign on 16<sup>th</sup> April, 2015.

- Delivered lecture as Resource person in two days workshop on “Biosafety and Biosecurity” Significance of Biosafety and Biosecurity in Laboratories on August 18-19<sup>th</sup> 2015.
- Delivered lecture as Resource person in the Technical session of workshop on Dengue Management December 21, 2015 at Institute of Agricultural Sciences University of the Punjab Lahore on “Status Scenario of Dengue Mosquito in Pakistan”.
- Paper presented on “Use of mt COI sequences for the identification of subterranean termite species from Punjab, Pakistan” International Conference by Entomological Society of America (ESA) 16-20 November, 2015 Minneapolis Convention Center, USA
- Delivered lecture as guest speaker on “Vector & Vector Borne Diseases” at Islamia College for Women Cooper road Lahore on 12/1/2017.
- Delivered lecture as guest speaker for “Research Colloquium” at Lahore College for Women University, Lahore on 16<sup>th</sup> to 19<sup>th</sup> January 2017.
- Presented paper at Pakistan Congress of Zoology (International) “Effects of Temperature changes on the life cycle of Mosquitoes species”, Lahore from 28-2 March, 2017.
- Poster presented at Third FAO–IAEA International Conference on Area-wide Management of Insect Pests: Integrating the Sterile Insect and Related Nuclear and Other Techniques to be held at the IAEA’s Headquarters in Vienna, Austria, from 22 to 26 May, 2017.
- Presented paper “*Laboratory study of persistence and residual activity of pyrethroid against anopheles fasciatus (DIPTERA: CULICIDAE)*” at International Conference on Urban Pests (ICUP) nternational) “laboratory study of persistence and residual activity of pyrethroid against *anopheles stephensi* and *aedes aegypti* (diptera: culicidae) in Pakistan. Birmingham, UK 9-12 July, 2017.
- Paper presented at International Conference on Science, Health and Medicine (ICSHM) “Increased Expression of Myocardin in dilated Cardiomyopathy” held in Brisbane, Australia on 4 5<sup>th</sup> August, 2017. At University of Lahore.
- Paper presented as resource person at 1<sup>st</sup> National Conference on Bioactivity of Phytochemicals (NCBP) at University of Lahore from 4<sup>th</sup> to 6<sup>th</sup> October, 2017.
- As resource person at “Three days Hands on Training on Biological Techniques” at Department of Zoology, LCWU on 4<sup>th</sup> to 6<sup>th</sup> October, 2017.
- Paper presented as Invited speaker at International Parasitology Conference on Recent Advances & Emerging Issues in Parasitology at University of Veterinary and Animal Sciences, Lahore from 25<sup>th</sup> to 26<sup>th</sup> October, 2017.
- Paper presented on “Persistence and degradation of termiticides under field trials in Pakistan” at ESA’s 65th Annual Meeting on November 5-8 in Denver, Colorado USA.

- Paper presented as Invited speaker at One International Conference (OHC-2017) at University of Veterinary and Animal Sciences, Lahore from 13<sup>th</sup> to 14<sup>th</sup> November, 2017.
- **SEMINAR/CONFERENCES/WORKSHOP NATIONAL & INTERNATIONAL ATTENDED AND CERTIFICATE RECEIVED**
- Attended Seminar on “**Arsenic in ground water of Pakistan**” arranged by LCWU at Lahore. 2003.
- Attended Workshop on “**Quality in Education**” by British Council, Lhr at LCWU, 26 February, 2003.
- Attended “**Food and Beverages Conference**” at L.C.W.U Lahore. 2003
- Attended one day seminar on “**Writing of Research Projects**” organized by Pakistan Science Foundation on 5-3-2005.
- Attended International Workshop on “**Potential Biosphere Reserves in Pakistan**” organized by Pakistan Museum of Natural History and UNESCO at Islamabad on Jan 26, 2006.
- Attended Two Days International Workshop on “**Health Impact Assessment and Risk Mitigation of Arsenic contamination in Rural Areas through Community Participation**” April 5-6, 2006 at LCWU Campus
- Attended International Workshop on “**Monitoring of Tectonic Plates: Use of Seismic and GPS Technology**” at Islamabad May 02-03, 2006
- Attended Workshop on “**Projection of Scientific Knowledge in Mass Media of Pakistan**”, June 8-10, June 2006, Lahore.
- Attended lecture on “**Biodiversity and Conservation of Wetlands in Pakistan**” at **WWF, Karachi**. 2006.
- Attended International Workshop Training of Trainers for “**Women on water networking for poverty alleviation in rural areas**” jointly organized by UNESCO-ISESCO on 10-12 March, 2008 at LCWU( Phase 1)
- Attended three days training course on “**Health risk Assessment & Management**” 17-19 December, 2009.
- Attended National Symposium on “**Pharmacological Studies of Medicinal Plants**” Organized by British Council, LCWU, June, 2009.
- Attended workshop at “**Exploring the Jigsaw of Assessment**” organized by HEC Regional Centre, Lahore January 4-5, 2010.
- Attended two days workshop on “**Development of Sustainable and Collaborative arch Networks under Talented Research Exchange Program-INSPIRE Pakistan** from 2-3 August, 2010 at LCWU.
- Attended 5<sup>th</sup> Meeting of Asian Cotton research & Development Network from 23-25<sup>th</sup> Feb, LHR. 2011.
- Attended International Conference on **Quality-Inequality Transacting Learning Relevance & Teacher Education in South- Asia from Salzburg to Lahore**, at P.C. Hotel, Lahore 4-5 April, 2012.
- Attended conference on “**People Healthy Through quality pharmacy services**” organized by Department of Pharmacy, LCWU, 25-5-2012

- Attended various meetings on Science & Technology as an expert at Lahore, Chamber of Commerce & Industry 2010-2012.
- Attended workshop on **“Women in Leadership”** organized by British Council & LCWU, 11-10-2012.
- Attended International Conference on **“Ideal Human & Ideal Society”** at Punjab University Organized by Pak- Turk on 21<sup>st</sup> November, 2012.
- Attended National Workshop on **“Application of Chemical Technologies for treatment of Water & Food at Community Level”** Lahore, 24 March, 2012.
- Attended Seminar on **“Quality Enhancement & Management in Higher Education Sector: Managing University Expansion and Growth”** by Prof Christine, UK at LCWU on 6-12-2012.
- Attended International Conference on **“Language Sciences and the developing World”** at LCWU on 12<sup>th</sup> January, 2013.
- Attended National Seminar on World Health Day held at Lahore on 06 April, 2013.
- Attended & participated in International conference on **“Fundamentals of Assessment in Higher Education”** at LCWU from 13-16<sup>th</sup> September, 2013.
- Workshop on **“New Paradigm of Learning Organization”** at **DFDI**, LCWU on 27<sup>th</sup>-28<sup>th</sup> November, 2013.
- Attended & participated in **South Asia Women Leadership Forum** on November 29, 2013 organized by Women Chamber of Commerce & Industry (Lahore Division) at Royal Palm Country Club, Lahore.
- Attended & participated in workshop on **“Change Management”** on 10-12-2013 conducted by DFDI, LCWU Lahore
- Attended & participated in workshop on **“Time Management”** on 11-12-2013 conducted by DFDI, LCWU Lahore
- Novel Approaches to Monitor Air Pollution and Environmental Health Issues on 6-9<sup>th</sup> January 2014 organized by British Council TNE-308 Lecture series and Training Workshop Zoology Deptt, Punjab University Lahore.
- Emerging infectious diseases and prophylaxes” by Professor Khushi Muhammad on 12-3-2014 at Department of Biotechnology, LCWU.
- 1<sup>st</sup> FEEDing Pakistan Aquaculture Conference and Small Trade Show & Poster exhibition April 02 & 03, 2014, Pearl Continental Hotel, Lahore.
- Participated in 2<sup>nd</sup> Inter Collegiate and University Science Symposium and Model/ Poster Competition on **“The Revolution of Biotechnology”** on 18<sup>th</sup> April 2014. Organized by Biotechnology LCWU, Lahore.
- Workshop on the **“Awareness of Emerging Issues of Cancers in Pakistan at LCWU”** on 6<sup>th</sup> May 2014.
- Global Conference **“NEXT GENERATION INSECURE LIVES, UNTOLD STORIES”** by British Council Lahore at PC Hotel ,Lahore 8<sup>th</sup> May 2014.
- Seminar on **“Awareness on Cybercrime and Computer Forensic”** on 29<sup>th</sup> May 2014 at in IT Conference Room.

- 1<sup>ST</sup> International Conference on Forensic Science & Justice Held on 22<sup>nd</sup>- 24<sup>th</sup> October 2014 Department of Chemistry, G.C University, Lahore.
- 1<sup>ST</sup> International Conference on Bioenergy: Challenges and Opportunities in Pakistan held on 20<sup>th</sup>- 21<sup>st</sup> November 2014 University of South Asia, Lahore.
- Innovative Leadership Conference organized by UMT, ORIC & National Out Reach Program at UMT Seminar Hall, 27<sup>th</sup> December, 2014.
- HR Conference Career Building: A game of Strategy Not Chance Organized by UMT, ORIC & National Out Reach Program at UMT Seminar Hall, 3<sup>rd</sup> January, 2015.
- Entrepreneurship Conference organized by UMT, ORIC & National Outreach Program at UMT Seminar Hall, 10<sup>th</sup> January, 2015.
- Attended Three- Day International Conference on Exploring New Avenues in Medicinal Chemistry Opportunities & Challenges at F.C College Chartered University, Lahore from 21-23 January, 2015.
- Seminar on Next Step: Value Chains, Quality Control & Market Development for Pakistan's Fish Farms and Launching Ceremony Aquaculture Hand Book – Fish Farming and Nutrition in Pakistan January 29,2015 P.C Hotel Lahore.
- Participated in the 5<sup>th</sup> International Fisheries Symposium, 24-25 February, 2015 at P.C Hotel Lahore.
- Attended one day “Scientific Seminar & Poster Competition” on 11<sup>th</sup> March, 2015 at Institute of Pharmacy, LCWU, Lahore.
- Attended three day course on “Data Management” organized by Controller of Examination, LCWU on April, 23-24<sup>th</sup> 2015.
- Attended Seminar on “World Intellectual Property Day” with the theme “IRP for Innovation and Creativity” arranged by ORIC at LCWU on 5<sup>th</sup> May, 2015.
- Attended National workshop on “Controlling Biorisk in Labs” organized by University of Veterinary and Animal sciences, Lahore at Institute of Public Health, Lahore from 11-13 May, 2015.
- Attended Meeting of Asian Council of Science Editors held in Dubai, UAE, August 13-14 2015.
- Attended International Conference on *Climate Change and Sustainable Development* held at Lahore College for Women University, Lahore (28<sup>th</sup> – 29<sup>th</sup> January, 2016).
- Attended International Aquaculture Conference , Exhibition and Trade Show by World Aquaculture Society, at Los Angelis, America 22-26 February, 2016.
- Attended International Conference on Shunning Sectarianism and Promoting InterFaith Harmony for peaceful Coexistence at LCWU, 27/28/29 April, 2016.
- Attended National Workshop on “Organic Food and Health: Avenues of Innovation and Entrepreneurship” August 29, 2016 UMT, Lahore organized by PCST.

- Attended one day Provincial Multi Stakeholder consultative meeting on Sustainable consumption & Production pattern (SCP) for preparation of National Action Plan (NAP)  
And revised National Sustainable Development Strategy (NSDS) organized by Ministry of Climate Change, EPD and UNEP on 4<sup>TH</sup> and 7<sup>TH</sup> September, 2016.
- Attended first International Conference on Education at LCWU from 2<sup>nd</sup> to 4<sup>th</sup> November, 2016.
- Attended Global Gender Perspective Conference organized by WILL, LCWU from 14<sup>th</sup> to 16<sup>th</sup> November, 2016 at PC Hotel Lahore.
- Participated in 2<sup>nd</sup> Editors Café organized by Asian Council of Science Editors at Islamabad on 21<sup>st</sup> November, 2016.
- Attended "Women Role in Economic Development" being held on 13th, 14th and 15th March 2017, at Hockey ground, LCWU.
- ***Seminar/ workshop organized***
  - Organized workshops and seminars on **“Environmental degradation and Aids”** at Garrison Post Graduate College For Women ( 1992-2003).
  - One day Seminar on **“Role of students towards Environmental Management”** in Educational Institutions at Garrison Post Graduate College For Women Sep, 2004.
  - Two Days workshop on **“Self-Assessments procedures for Quality assurance in Higher Education”**, LCWU 19-20 June, 2006
  - A National Symposium on **“Termite proofing: Latest research in Pakistan”** organized by FMC Corporation and Lahore college for women university, Lahore on 22<sup>nd</sup> October, 2009.
  - One day workshop on **“Termite management practices in Pakistan”** 02.05.2009 at Lahore College for Women University.
  - One day seminar **“Biodiversity Issues and Challenges in Pakistan”** on 17<sup>th</sup> April, 2010 in the University seminar room, I.T Department LCWU.
  - Organized Advocacy seminar on Dengue Fever at LCWU in collaboration with PMS 5<sup>TH</sup> November, 2010.
  - International Conference on **“Sustainable Approaches for Pest and Vector Management in Pakistan”**, at Department of Zoology, Lahore College for Women University, Lahore on 21-22nd February, 2011.
  - **Principles of Plant Breeding and Advancement of Molecular Techniques to Breeding of Bioscience** at Department of Biotechnology and Microbiology from 21<sup>st</sup> May -7<sup>th</sup> June, 2012.
  - One-day workshop on **‘Butterfly Study, biodiversity & its Sustainable Use** on 19<sup>th</sup> December 2012 at Zoology Department, LCWU.
  - **Bird and Pet Show** at Lahore College for Women University, Lahore on 20<sup>th</sup> March, 2013 in collaboration with Aviculture Society of Pakistan.
  - Seminar on **“Prevention and Control of Malaria” 25<sup>th</sup> April, 2013** at LCWU.

- Seminar on “**Anti Dengue day**” *3<sup>rd</sup> November , 2013* at LCWU.
- Seminar on “**Industrial Collaborations**” 25<sup>th</sup> October, 2013 at LCWU.
- **Motivational Lecture on Entrepreneurship** in collaboration with First Women Bank, Ltd at ORIC, LCWU.
- Seminar on **Awareness of Breast Cancer**, 25<sup>th</sup> February, 2014 in collaboration with Urdu Science Board and Shahzada Begum Trust.
- One day Seminar on **Urban Pest Management** at Zoology department, Lahore on 8<sup>th</sup> May 2014.
- Being Focal Person Dengue Prevention and control Cell, LCWU Organized One day orientation workshop “**Mosquito Control and Management**” on 28-5-2014 at Seminar room of City and Regional Planning Department.
  - Being President Zoology Society organized One day Seminar and Poster competition on the “**Conservation of Endangered Species in Pakistan**” on **30<sup>th</sup> May, 2014** in collaboration with WWF, Pakistan at Zoology Department, LCWU.
  - Organized International culture awareness day at LCWU in Collaboration with WWF, 9<sup>th</sup> September, 2014.
  - Two Days National Conference on “Defeating the Public enemy, The Mosquito: A Real Challenge” 3<sup>rd</sup> -4<sup>th</sup> December, 2014, LCWU.
  - Workshop Organized on Research Planning, Execution, Data Handling and Analysis by Prof. Dr Muhammad Tariq Javed on 12 June, 2015
  - One day Seminar on “Skin & Hair Problems” by Dr Waris Anwar on 21<sup>st</sup> October, 2015.
  - Organized two Days Workshop on “ Biosafety and Biosecurity” at Department of Zoology, LCWU 18-19<sup>th</sup> August 2015.
  - Two days training workshop (14<sup>th</sup> 15<sup>th</sup> October, 2015 on "Biostatistics tools in Biological Research" organized at Department of Zoology, Lahore College for Women University Lahore,
  - Two days training workshop (6<sup>th</sup> 7<sup>th</sup> January, 2015 on " Research Writing Skill and Training on Endnote” at Department of Zoology, Lahore College for Women University Lahore.
  - Three Days International Conference on “Aquaculture Development in Pakistan”; Poster Display and 1<sup>st</sup> Tilapia Cooking Competition 7<sup>th</sup>-9<sup>th</sup> January, 2016.
  - Aquaculture and Feeding Management and Study Tours of Fish Feed Mills and Fish Ponds, Lahore College For Women University, Pakistan, 3<sup>rd</sup> – 5<sup>th</sup> August, 2016.
  - Model building Competition on Biodiversity, 27<sup>th</sup> May 2016.
  - Wildlife and its Conservation in Pakistan, WWF, Pakistan, Lahore College For Women University, Pakistan, 28<sup>th</sup> October, 2016.
  - Raise Awareness against Vector Borne Diseases / PCR based Techniques in Biological Research, 19<sup>th</sup> – 20<sup>th</sup> December, 2016.
  - International symposium on Recent trends in Biotechnology, March 30<sup>th</sup> 2017 at LCWU.

- Three days Hands on Training on Biological Techniques” at Department of Zoology, LCWU on 4<sup>th</sup> to 6<sup>th</sup> October, 2017.
- International Conference on “New Trends in Natural Sciences: From Basics to Applied from 27<sup>th</sup> to 29<sup>th</sup> October, 2017 at LCWU.

- **PROFESSIONAL AFFILIATIONS:**

- Member “National Curriculum Revision committee”, in Entomology at Higher Education commission, Pakistan. (Revised and Developed Curriculum for Entomological Study in the Universities of Pakistan). 2005, 2010, 2014.
- Member, Third World Organization for Women in Science.
- President “Friends of Nature Society “at Garrison Post Graduate College for women, Lahore Cantt. ( 1997- 2004)
- Resource person, National Program on Aids
- Member, Rotary club of Lahore Garrison
- Member, youth council for Antinarcotics
- General secretary, Environment Media Forum – Pakistan
- Member, Pakistan Association for the Advancement of Science.
- Life Fellow, Zoological Society of Pakistan.
- Member, Pakistan Society for Parasitology
- Member, Royal Entomological Society London, U.K
- Member, Entomological Society of America ( 2006-2016)
- Member Asia Pacific Rim Termite Research Group( TRG)
- Member International group on Wood protection (IRG).
- Member, The Asian Council of Science Editors (ACSE)

### **TRAINING / COURSES**

- One week Workshop on “**Pakistan’s Fresh water Biodiversity Conservation Assessment & Management plan**” by IUCN at Islamabad from 13 – 17<sup>th</sup> December, 2004
- One month “**Staff Development Course**” under the scheme National Academy of Higher Education from May 9<sup>th</sup>- June 4, 2005.
- Six weeks Training Courses “**Experimental Techniques and Research Methodologies**” from 8<sup>th</sup> January-25<sup>th</sup> February, 2005.
- Consultative workshop for Consolidation of “**Persistent Organic Pollutants**” ( pops) inventorization process organized by UNDP and E.P.A. 23-24 December, 2005.
- Course Coordinator and Resource Person “**Faculty Development Program**” at Lahore College for Women University, under the scheme National Academy of Higher Education.
- “**Ohio Wood Destroying Insect Inspection**” Training, March 13,2007 taught at Ohio Department of Agriculture, Reynoldburg, Columbus. USA.
- Ohio Turf grass Conference at Greater Columbus Convention Centre, Lecture delivered byS



- usan Jones on **“Termites in the Landscape-Mulch Mania”** on December 6, 2006.
- 2006-2007 Rectification Conferences for **“Ohio Pesticide Commercial applicators”** Dec 14<sup>th</sup>, 2006 Wilmington, OH. USA.
- Special Lecture & Training on **“Atomic Absorption Spectrophotometer”** organized by British Council, LCWU, 15 December, 2007.
- Workshop on **“Assay Techniques for the Isolation of Bioactive compounds”** 12-13 December, 2007.
- International workshop on **“Training of Trainers for Women on Water Networking For Poverty Alleviation in Rural Areas”** UNESCO-ISESCO, LCWU 11-14 March, 2008.
- International workshop on **“Training of Trainers for Women on Water Networking For Poverty Alleviation in Rural Areas”** UNESCO-ISESCO, LCWU 27-29 May, 2008.
- Training course on **“Health risk Assessment & Management”** 17-19 December, 2009
- Training workshop on **“Natural photography & GIS”** from 30-31<sup>st</sup> January 2008 at University of veterinary and animal sciences, Lahore
- Training for the **“Use of Gas Chromatography-Mass Spectrometry (GC-MS)”** 31<sup>st</sup> October, 2009.
- **“Forensic DNA process including extraction, Real Time PCR quantification and Genetic Analyzers”** at Forensic DNA department of Cuyahoga County Coroner’s Office, Cleveland U.S.A from April 19 to May 4, 2010
- Workshop on **“Development of Sustainable and Collaborative arch Networks under Talented Research Exchange Program-INSPIRE Pakistan** from 2-3 August, 2010 at LCWU.
- Five days training workshop **“Training in Field and laboratory techniques for studying Volant and non-Volant small Mammals”** Department of Zoology and Fisheries, University of Agriculture, Faisalabad. 26-30 July, 2011.
- Training course on **“Advances in Applications of Molecular Biology”** organized by and held at Centre of Excellence in Molecular Biology, Punjab University 19-23<sup>rd</sup> Dec, 2011.
- A Training Workshop on Use of Turnitin. Lahore College for Women University, Jail Road Lahore. 2010
- Two day training workshop on **“Disaster Risk Management”** 16-17<sup>th</sup> January 2012 LCWU, Lahore.
- One week training course on **“Project Planning for Officers”** held at Punjab Institute of Management and Professional Development, from 23-01-2012 to 27-01-2012.
- Three months training on **“Internationalization of Higher Education”** by British Council Lahore & LCWU from January –March, 2012.
- Five Days Workshop on **“Prevention and Control of Dengue Vector”** at GCU Organized by GCU & HEC from 5-9<sup>th</sup> November, 2012.
- National Workshop on **Environmental Assessment of Energy Projects**, at Hotel Ambassador Organized by National Foundation For Environment on 29-1-2013.

- Workshop on HCFC'S Phase –out and Alternatives at PC Lahore on 12 -2 2013 organized by OZONE CELL Ministry of Climate Change with HVACR Pakistan.
- One day training workshop on“**IRP, Patents and Patenting**” at LCWU Lahore. Organized by ORIC on 22-2-2013.
- 9<sup>th</sup> National **Honeybee Farming and Management Training Workshop** at Department of Zoology, University of the Punjab, Lahore March 11-15,2013.
- Three days workshop on “**Case Study Methods Workshop**” June 2013 organized by QEC,LCWU Lahore.
- Training Course on “**Diagnosis of Viral Diseases**” 17<sup>th</sup> to 20<sup>th</sup> November, 2014 organized by Nuclear Institute for Agriculture and Biology (NIAB) Faisalabad, Pakistan.
- One Day Training on “**Climate Change and Clean Development Mechanism**” on 15-11-2014 by British Council, Inspire and LCWU.
- Three days HOD's training conducted by Dr. Qaiser Sultana from 10th to 12th of December 2014 organized by DFDI, LCWU.
- The Asian Council of Science Editors (ACSE) Workshop on “**Journal Editors on Publication Esthics**” at Islamabad Marriott Hotel on 5<sup>th</sup> February, 2015 led by Dr Elizebeth Wager.
- Five days Training under “**Indigenous on Campus Training under HEC Modern University Governance Programme**” organized by Higher Education Commission of Pakistan and LCWU January-February, 2015.
- Training on “**Understanding Examination Process and Training on Data Submission at LCWU**”, on 21<sup>st</sup> and 22<sup>nd</sup> April, 2015.
- Three day course on “Data Management” organized by Controller of Examination, LCWU on April, 23-24<sup>th</sup> 2015.
- Training National workshop on “Controlling Bio Risk in Laboratories” organized by University of Veterinary and Animal sciences, Lahore at Institute of Public Health, Lahore from 11-13 May, 2015.
- Asian Council of Science Editors Short courses for Journal editors on “ **Developing a Successful Journal**” Led by Pippa Smart held in Dubai, UAE, August 13, 2015.
- Asian Council of Science Editors Short courses for Journal editors on “ **Marketing for Scholarly journals** ” Led by Pippa Smart held in Dubai, UAE, August 13, 2015.
- Asian Council of Science Editors Short courses for Journal editors on “ **Publication Ethics, Peer Review and Metrics**” Led by Elizebeth Wager held in Dubai, UAE, August 13, 2015
- FEEDing Pakistan Fish Feed and Fresh Water Short Course at Department of Grain Science and Industry, Kansas State Univrsity, USA. February 15-17, 2016.
- Training workshop on DNA Fingerprinting technique Spoligotyping 11, 12 November 2016 at Department of Veterinary Pathology, University of Agriculture, Faisalabad.
- Technical training & skill development in Animal keeping at PC Hotel Lahore 27<sup>th</sup> to 31<sup>st</sup> March, 2017 sponsored by University of the Punjab and British Council.

- One day training Workshop on “Approaching Towards Comprehensive Elimination of Persistent Organic Pollutants ( Pesticides) in Pakistan” on 13.9.2017 at Holiday Inn Lahore, organized by Ministry of Climate Change, UNDP and GEF.

### **AWARDS**

- Roll of Honour in M. Sc. (Zoology) from Govt .College, Lahore.
- Selected as PhD approved supervisor by Higher Education Commission, Government of Pakistan Since 2005
- Conference Participation Award (2005) - \$450 By Royal Entomological Society, London.
- Conference Participation Award (2006) - \$450 By Royal Entomological Society, London.
- Awarded **Postdoc Fellowship** by Higher Education Commission, Government of Pakistan on competitive basis from all over Pakistan, 2006
- Visiting fellowship from The University of Melbourne, Australia, 2009.
- Ron Cockcroft Award (RCA) by IRG at the 40<sup>th</sup> Annual meeting of International Research group on wood protection at Beijing, China May 24-28, 2009.
- Selected as Member of the delegation by Government of the Punjab for the visit of 27 universities of Sweden, France, Germany, Netherland and U.K, 2010.
- USM-TWAS Visiting Researcher Fellowship 2012 (Ref: TWAS003/11(VR)).
- Research Productivity Award (on RESEARCH OUTPUT in 2012) by Ministry of Science and Technology, through Pakistan Council for Science and Technology, Government of Pakistan / 2913.
- 8 Travel grant awarded by HEC to present paper at International conferences
- 4 Travel grants by FMC International Corp
- 2 Royal Entomological Society London
- 1 by Third FAO–IAEA International Conference on Area-wide Management of Insect Pests: Integrating the Sterile Insect and Related Nuclear and Other Techniques to be held at the IAEA’s Headquarters in Vienna, Austria, from 22 to 26 May 2017.
- Gold Medal 2013-2014 by Idara Farogh-a- Taleem.
- Innovation Award in 3<sup>rd</sup> Invention to Innovation Summit, 2014 held on March, 19-20 2014 at University of the Punjab, Lahore. Project title Boric Acid Bait – An Effective Mosquito Control Strategy.
- Awarded **Better Incentive** initiative for the year 2012-2013 (Cash) on the Recommendation of the Vice Chancellor.

### ***Research Achievements: (Total 120)***

- 50 Research Publication at International level with Impact Factor
- 50 Research Publication at National level without Impact Factor
- 10 Publications in Internationally Recognized Journals without Impact Factor
- 50 Abstracts, 20 Posters, 20 Proceedings
- 16 Conferences, 19 Seminars and 18 Workshops attended at National and International Level,

- 25 Research Papers Presented at International Conferences
- 30 Training Courses Attended at National and International Level
- 30 MS Students, 35 B.S (Hons) Supervised
- 8 Ph.D. Students (working), 3 completed.

### ***Research Projects Awarded:***

- Research project entitled” Repellency and Toxicity of different plant extracts /oils against termites” was awarded under National Research program for universities (HEC), dated 16-8-2006. (2 Millions) **Completed.**
- Survey and Control Strategies of Termites in Urban Areas of Pakistan. Approved By FMC Corporation of Pakistan. Dated 1-5-2008 (1 Million) **Completed.**
- Molecular diagnostics of subterranean termites of Pakistan awarded under National Research program for universities (HEC), dated 06-04.2009 (1,6 6820/). (1.8 Million) **Completed.**
- The Baseline Surveys of Butterflies in Punjab, Pakistan funding agency World Wide Fund for Nature – PAKISTAN. (0.3 Million) **Completed.**
  - Testing the efficacy of Exterra bait in Pakistan by Ensystem, Australia. (0.5 M). **Completed.**
  - Development of Food irradiation manual for fresh fruits, frozen and other food products for extending shelf life in conformance with International standards. Approved by Atomic Energy Commission of Pakistan ((1.5 Million) as Co-supervisor **Ongoing.**
  - Baseline Survey of the Status of Butterflies in and Around Lahore Punjab, Pakistan funding agency World Wide Fund for Nature – PAKISTAN. (0.6 Million). **Completed**
  - Production of all female population in Silver carp ( *Hypophthalmichthys Molitrix*) by 17a- Methyltestosterone Immersion and Dietary Treatment to improve its production and Harvesting period” awarded by HEC No: 21-426/SRGP/ R & D/HEC/2014, ON May 2015 (0.5 M). Co-PI
  - Natural/Synthetic pesticides Induced Hepatic Toxicity & Variations In Iron Metabolism Regulatory Genes In *Rattus Norvegicus* 2015 (0.5 M). Co-PI
  - Enhancement of the activity of two synergistic *Bacillus thuringiensis* proteins against cotton bollworms *Earias vitella*, & *Spodoptera litura*. 2015 (Approved by HEC as Co-PI 5.9 M).
  - Study of the Innate Immune system and expression profiles of Immune responsive genes in major Carps, *Labeo rohita*, *Catla catla* and *Cirrhinus mrigala* with microbial infections. 2015 (Approved by HEC as Co-PI 7.4 M).
  - Himalayan honey bee, *Apis cerana* gene cloning and expression in *E. coli* for the production of antibacterial compounds 2016. (Approved by HEC as Co-PI 0.41 M).

### ***Submitted Projects:***

- Detection of Clinical and Subclinical Malaria in Non-Endemic Areas of Punjab Pakistan. (Submitted to HEC as Co-PI).

- Community-Based Randomized Controlled Trial for Assessing Adult Mosquito Traps in Pakistan. (\$100000) By: Submitted Grand Challenges (Oct 2014)

***Collaborations:***

- CEMB, Lahore, NIBGE, Faisalabad.
- Dr. Berhan Ahmed Senior Research Fellow - Department of Forest and Ecosystem Science, The University of Melbourne, Burnley Campus, 500 Yarra Boulevard Richmond Vic 3121 Australia.
- Dr. Behzad Habibpour. Department of Entomology, College of Agriculture, Shahid-Chairman University, Ahwaz, Iran.
- Dr. Bina Siddique. H.E.J Karachi.
- Chow-Yang-Lee Professor of Entomology, Malaysia Higher Education Professor of Entomology, and Acting Dean at University Sains Malaya, Malaysia.
- The Lahore Chamber of Commerce and Industry member Biotechnology committee)

***REVIEWER OF JOURNALS:***

- Associate Editor, the “Environ monitor” a magazine on Environment.
- Global Research journal of Microbiology (GRJM).
- African Journal of Plant Sciences
- Journal of Animal and plant sciences, UVAS.

***Additional Skills***

- Have excellent oral, written and Interpersonal skill, Able to establish, operate and run independent research project and train human resource.
- Time management to get maximize output.
- Efficacy testing of chemical, microbial and biochemical insecticides and residue analysis
- Repellent dose range, efficacy and duration testing
- Public outreach (e.g., tours, presentations, internships, extension publications
- Mosquito surveillance, ecology and control,
- Continuing education training for environmental health and public health programs
- Organizational and other important office skills.

***Information Technology***

- Certificates Courses in Microsoft Windows; Fully proficient in Microsoft Word, PowerPoint, and Excel and internet skills –from Office of Information Technology, The Ohio State University, USA.

***Program Development:***

- Developed BS, MS and PhD Program in Entomology, Vector Biology Biosecurity and Biosafety at Zoology Department, LCWU since 2005
- Developed Entomology Research Laboratory at Zoology Department, LCWU by generating funds since 2006 from HEC and other Companies.
- Developed MS program at MS and Ph.D. Level in Vector Biology since 2012.
- Upgraded the Museum of Zoology Department in 2014

- Vector Biology, Biosecurity and Biosafety at Zoology Department, LCWU 2015

**Countries Visited:** America, United Kingdom, France, Germany, Netherland, India, Switzerland, Sweden, Malaysia, Thailand, Singapore, China, Veitnam, Oman, Dubai

Selected as member Aquaculture Trade Team to visit USA for “FEEDing Pakistan (Promoting Aquaculture Sector) is a Program of American Soybean Association/World Initiative for Soy in Human Health, funded by United States Department of Agriculture (USDA) Foreign Agricultural Service (FAS) and supplemented funds by Kansas Soybean Commission. February 14 – February 27, 2016

**Patents Filed:**

1. A novel process to control Mosquitoes in Pakistan. Gazette No 241/2015
2. A process for preparation of anti-cancer remedy against cervical Carcinoma (HeLa) cell lines. Gazette No 242/2015
3. A process to evaluate toxicity of metal contaminated sediments in fish tissues of commercially important Carps. Gazette No 290/2015
4. Development of New Mobile Phase and Extraction Solvent System for the Easy and Rapid Detection of Termiticide Residues in Soil Samples. Gazette No: 352/2015
5. A Process to Attract mosquitoes and ovitraps Gazette No: 603/2015.