

Dr. Javaid Iqbal

Assistant Professor (Entomology)
PhD (Germany), Postdoc (France)
Department of Plant Protection
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Academics and jobs:

11 th April, 2016 - continued	Assistant Professor, Department of Plant Protection, King Saud University, Riyadh, Saudi Arabia
Dec. 2015- April, 2016	Associate Professor, Department of Entomology, University of Agriculture. Multan, Pakistan
Dec. 2011- Dec. 2015	Assistant Professor/ Head, Department of Entomology, College of Agriculture & Environmental Sciences, Islamia University of Bahawalpur (IUB), Pakistan
March 2011- Dec. 2011	Assistant Professor (Entomology), Institute of Agricultural Sciences, University of Punjab, Lahore, Pakistan
March 2010- March 2011	Assistant Professor, Department of Entomology, PMAS-Arid Agriculture University, Rawalpindi, Pakistan
July 2009- Dec 2009	Post-doctoral Research Fellow, French Institute of Agricultural Research (INRA) Versailles, France (Pheromone guided behaviour)
2005-2009	PhD; Saarland University, Germany; Grade= Summa cum laude (Excellent) Insect Neurobiology/Physiology German Academic Exchange Service (DAAD): Doctoral scholarship, Germany.
2003-2004	Agriculture Research officer; Plant Protection Institute, Faisalabad, Pakistan
2000-2002	M.Sc. (Hons.) Entomology, University of Agriculture, Faisalabad, Pakistan
1996-2000	B.Sc. (Hons.) Entomology, University of Agriculture, Faisalabad, Pakistan

Research and teaching interests:

Insect Chemical Ecology, Neurobiology, Apiculture, Olfactory Behavior & Physiology, Molecular Entomology, Insect Pests Control, Pollinator Health

Post-doctorate research:

Neurobiological mechanism involved in the effects of pre-exposure on pheromone guided behaviour in noctuid pest insect, *Spodoptera littoralis* (INRA, Versailles, France),

PhD research:

Stress activated protein kinase: Central mediator of stress-and infection- induced changes in sensory processing, learning and memory in honeybee (*Apis mellifera* L.). (Saarland University, Germany)

Current Research activities:

- Honeybee biology, diversity, behavior and physiology, King Saud University, Saudi Arabia.
- External heat stress and modification in heat shock proteins expression
- Characterization and manipulation of gut bacteria in honey bees
- Insecticides induced cognitive behavioral changes in honey bees
- Hypopharyngeal glands in relation to season and behavioral activity of honey bees
- Agrochemicals and plant based extracts for agricultural and urban insect control

Technical skills /Trainings:

- Calcium imaging (mushroom body neurons), molecular techniques (ELISA, immunoprecipitation, immunohistochemistry, Western-blotting, SDS-page, PCR, RT-PCR)
- Electrophysiology; Neuronal Intra cellular recordings
- Viral infection and Toxicological manipulations in insects
- Brain dissection, behavioral analysis (Honeybee, Moths, *Drosophila*), and insect control (mosquito, butterflies, insect pests).

- Microscopic training: (light microscopy, transmission & scanning electron microscopy, microphotography and digital photography).
- Rearing of bio-control agents

Distinctions:

- Postdoctoral fellowship, INRA Versailles, France
- German Academic Exchange Service (DAAD): Doctoral scholarship, Saarland University, Germany
- PhD (grade= Summa cum laude (Excellent))
- Distinction in graduate and postgraduate studies (1996-2002)
- Distinctive ranked teacher by Quality Enhancement Cell, Islamia University Bahawalpur.

Memberships/ Administrative services:

- Secretary, National Course Curriculum Review Committee for Entomology, Higher Education Commission (HEC), Pakistan (2014-15)
- German neuroscience society, Germany (2007-2008)
- Association of top achiever scouts (ATAS), Asia-Pacific region
- Member of Association of top achiever scouts (ATAS), Asia-Pacific region
- Director Students Affairs & University focal person for HEC Accreditation, University of Agriculture Multan, Pakistan.
- Head, Department of Entomology & Convener (Board of Studies), Islamia University of Bahawalpur (IUB), Pakistan
- Reviewer for Journals (Pakistan Journal of Zoology, Pakistan Journal of Agricultural Sciences, Pakistan Entomologist)

Languages: English, Urdu, Punjabi, and German

Ambitions: 'Teaching is the profession that teaches all the other professions'

Publications

2019:

1. Awad M. A., A.A. Owayss, H.S.A. Raweh, **J. Iqbal** and A. S. Alqarni. 2018. GIS approach for determining the optimum spatiotemporal plan for beekeeping and honey production in hot-arid subtropical ecosystems. Journal of Economic Entomology. doi: 10.1093/jee/toz002 **(IF.1.936)**
2. Alqarni, A. S., H. Ali, **J. Iqbal**, A. A. Owayss, H. S. Raweh and B. H. Smith. 2018. Effect of season and behavioral activity on the hypopharyngeal glands of three honeybee *Apis mellifera* L. races under stressful climatic conditions of central Saudi Arabia. Journal of Hymenoptera Research (Accepted: Under Production) **(IF. 0.902)**

2018:

3. **Iqbal, J.**, A.S. Alqarni, H. S.A. Raweh. 2018. Effect of Sub-Lethal Doses of Imidacloprid on learning and memory formation of indigenous Arabian bee (*Apis mellifera jemenitica*) adult foragers. Neotropical Entomology. doi: 10.1007/s13744-018-0651-2). **(IF. 0.886)**
4. Anwar, A., E. Gould, R. Tinson, **J. Iqbal**, C. Hamilton. 2018. Redox modulation at work: Natural phytoprotective polysulfanes from Alliums based on redox active sulphur. Current Pharmacology Reports. <https://doi.org/10.1007/s40495-018-0153-2>.
5. **Iqbal, J.**, H. Ali, A. A. Owyass, H.S.A. Raweh, M. S. Engel, A. S. Alqarni, B. H. Smith. 2018. Olfactory associative behavioral differences in three honey bee *Apis mellifera* L. races under the arid zone ecosystem of central Saudi Arabia. Saudi J. Biol. Sci. (doi:10.1016/j.sjbs.2018.08.002). **(IF. 3.138)**.
6. **Iqbal, J.**, F. Istiaq, A.S. Alqarni, A. A. Owyass. 2018. Evaluation of larvicidal efficacy of indigenous plant extracts against *Culex quinquefasciatus* (Say) under laboratory conditions. Turkish Journal of Agriculture and Forestry. 42. 1-9. **(IF 1.434)**
7. Ajmal, M.S, **J. Iqbal**, M.A. Qayyum, M.A. Saleem, M. Tayyab, M. Sajjad. 2018. Preferential influence of wheat varieties (*Triticum aestivum* L.) on population build-up of aphid (Homoptera: Aphididae) and its natural enemies. Journal of Entomology and Zoology Studies 6 (1), 609-612.
8. **Iqbal, J.**, S. A. Bhutta, A.S. Alqarni, A.A. Owayss, M. J. Ansari. 2018. Seasonal population dynamics of dusky cotton bug (*Oxycarenus* spp.) in transgenic cotton varieties under field conditions. Saudi J. Biol. Sci. 25:1122-1127. doi:<https://doi.org/10.1016/j.sjbs.2017.05.004>. **(IF. 3.138)**
9. Waqar, M.H., **J. Iqbal**, M. Jamil. 2018. Comparative Study of *Tribolium castaneum* H. (Coleoptera: Tenebrionidae) occurred on different wheat varieties in Pakistan. Pak. J. Sci. Res. Ser. B: Biol. Sci. 61B(1):47-51.

2017:

10. Engel, M.S., A.S. Alqarni, M.A. Shebl, **J. Iqbal** and I.A. Hinojosa-Díaz. 2017. A new species of the carpenter bee genus *Xylocopa* from the Sarawat Mountains in southwestern Saudi Arabia (Hymenoptera, Apidae). ZooKeys. 716: 29-41. **(IF.1.079)**

11. Khan, K.A., M. J. Ansari, A. Al-Ghamdi, A. Nuru, S. Harakeh and **J. Iqbal**. 2017. Investigation of gut microbial communities associated with indigenous honey bee (*Apis mellifera jemenitica*) from two different eco-regions of Saudi Arabia. Saudi J. Biol. Sci. 24 (2017):1061–1068. **(IF: 3.138)**
 12. **Iqbal, J.**, S. U. Farooq, A.S. Alqarni, H. Ali, A. Zeshan, M. J. Ansari. 2017. Management of maize stem borer (*Chilo partellus*) with insecticides of three formulations under field conditions. Indian J. Agri. Sci. 87(12): 1720-4. **(IF 0.231)**
- 2016:**
13. Anton. S., M. A. Chabaud, D. Schmidt-Büsser, B. Gadenne, **J. Iqbal**, M. Juchaux, O. List, C. Gaertner and J. M. Devaud. 2016. Brief sensory experience differentially affects the volume of olfactory brain centres in a moth. Cell Tissue Res. 364(1):59-65. doi: 10.1007/s00441-015-2299-0. **(IF: 3.043)**
 14. Ahmad, T., Hassan, M. W., Jamil, M. and Iqbal, J. 2016. Population Dynamics of Aphids (Hemiptera: Aphididae) on Wheat Varieties (*Triticum aestivum* L.) as Affected by Abiotic Conditions in Bahawalpur, Pakistan. Pakistan J. Zool. 48(4), 1039-1044. **(IF: 0.547)**
 15. Ali, L., M. W. Hassan, M. Jamil, **J. Iqbal**, M. S. Yaqub, M. Akram, I. Ahmed, and A. Hussain. 2016. Effect of nursery bulb size and planting density on thrips population, plant height and yield of onion (Phulkara variety) in Bahawalpur, Pakistan. Pak. J. life Soc. Sci. 14(2): 96-103.
- 2015:**
16. **Iqbal, J.**, H. Ali, M.W. Hassan and M. Jamil. 2015. Evaluation of indigenous plant extracts against sucking insect pests of okra crop. Pak. Entomol., 37(1):39-44.
 17. Tanveer, A., M. Aslam, M. W. Hassan and **J. Iqbal**. 2015. Aphids (*Schizaphis graminum* R.) population density on different wheat varieties (*Triticum estivum* L.) and their comparative yield. J. Agri. Res. 53(2): 209-216.
 18. Khan, H. A., W. Akram, **J. Iqbal** and U. Naeem-Ullah. 2015. Thiamethoxam resistance in the House Fly, *Musca domestica* L.: current status, resistance slection, cross resistance potential and possible biochemical mechanism. Plos One. 10 (5): e0125850, doi: 10.1371/journal.pone.0125850. **(IF: 2.766)**
- 2014:**
19. **Iqbal, J.**, N. I. Jajja, M. Jamil, M.W. Hassan. 2014. Field evaluation for efficacy of conventional insecticides and insect growth regulators against spotted bollworms, *Earias* Spp. of cotton. Pak. Entomol. 36(2):97-104.
 20. **Iqbal, J.**, S. U. Farooq, M. Jamil, H. A. A. Khan and M. Younis. 2014. Relative efficacy of selective insecticides against gram pod borer (*Helicovera armigera* H.) of chickpea. Mycopath. 12(2):119-122.
 21. **Iqbal, J.**, M. Jamil, A. Aziz, A. Ghaffar, H. Ali, S. U. Faoq, S. Ahmad and A. Zahid. 2014. Response of different wheat varieties/advanced lines to wheat aphids (Aphididae: Homoptera) and population trend of their natural predators. J. Pure Appl. Sci. 24-33(1-2): 1-6.
 22. Hassan, M. W., M. U. Qasim, **J. Iqbal** and M. Jamil. 2014. Study of penetration ability by *Tribolium castaneum* (Herbst.) (Coleoptera: Tenebrionidae) through different loose plastic packaging. J. Pure Appl. Sci. 24-33(1-2): 17-20.
 23. Javed, H., **J. Iqbal** and Z. Mateen. 2014. Response of different cultivars of groundnut, *Aarachis hypogaea* L. (Fabaceae: Fabales) to Aphids, *Aphis craccivora* K. (Aphididae: Homoptera) in interaction with local weather factors. Pak. J. Zool. 46 (1):75-81. **(IF: 0.547)**
- 2013:**
24. Javed, H., **J. Iqbal** and T. M. Khan. 2013. Studies on population dynamics of insect pest of Safflower (*Carthamus tinctorius* L.). Pak. J. Zool. 45(1): 213-217. **(IF: 0.547)**
 25. Suhail, A., **J. Iqbal**, M. Arshad, M.D. Gogi, M.J. Arif and T. Shafait. 2013. Comparative efficacy of insecticides as seed treatment against wheat aphid and its coccinellid predator. Pak. Entomol. 35(1):17-22.
 26. Hassan, M. W., M. Jamil, **J. Iqbal**, T. Hussain, M. Iqbal, M. A. Khan, I. Ahmed and L. Ali. 2013. Comparative infestation of some date fruit varieties by red flour beetle *Tribolium castaneum* (Coleoptera: Tenebrionidae) as a storage pest. World Applied Sci. J. 25(8):1130-1133.
 27. Qasim, M.U., M. W.Hassan, Jin-Jun Wang, M.Jamil, **J.Iqbal** and M.U.Hasan. 2013. Management of *Tribolium castaneum* (Coleoptera: Tenebrionidae) with Phosphine fumigation in relation to packaging materials and food types. Pak. J. Zool.45(6):1639-1645. **(IF: 0.547)**
- 2010:**
28. **Iqbal, J** 2010. Stress activated protein kinase mediates the cognitive behaviour. VDM Verlag Germany Vol: ISBN 978-3639268379 pp: 1-152 **(Book)**
- 2007:**
29. **Iqbal, J.** and U. Mueller. 2007. Virus infection causes specific learning deficits in honeybee foragers. Proc. R. Soc. B. 274(1617): 1517-1521. **(IF: 4.847)**
- 2003:**

30. Zahoor, K.M., A. Suhail, Z. Zulfqar, **J. Iqbal** and M. Anwar. 2003. Biodiversity of Scarab beetles (Scarabaeidae: Coleoptera) in agro-forest area of Faisalabad. Pak. Entomol. 25(2): 119-126.
 31. Zulfqar, Z., A. Suhail, M. K. Zahoor, **J. Iqbal** and Z. Abdin. 2003. Insect biodiversity in organic (low input) and conventional (high input) wheat (*Triticum aestivum*) fields. Pak. Entomol. 25(1): 49-58.
 32. Zahoor, K.M., A. Suhail, **J. Iqbal**, Z. Zulfqar and M. Anwar. 2003. Biodiversity of predaceous Coccinellids and their role as bioindicators in an agro-ecosystem. Int. J. Agr. Bio. 5(4): 555-559. **(IF: 0.869)**
 33. Zahoor, K.M., A. Suhail, **J. Iqbal**, Z. Zulfqar and M. Anwar. 2003. Biodiversity of Noctuidae (Lepidoptera) in agro-forest area of Faisalabad. Int. J. Agr. Bio. 5(4): 560-563. **(IF: 0.869)**
- 2002:**
34. **Iqbal, J.**, A. Suhail, Z. Abdin, and A.H. Anjum. 2002. Toxicity of Tracer 240SC on the haemocytes of last larval instar of brinjal fruit borer, *Leucinodes orbonalis* (Guen.). Pak. Entomol. 24(2): 115-119.
 35. Abdin, Z., A. Suhail, **J. Iqbal**, U. Waseem and A. Nawaz. 2002. Toxicity of bio-insecticides Nimbokill (Azadirachtin) to the haemocytes of Green Lacewing, *Chrysoperla carnea* (STEPH.) (Chrysopidae: Neuroptera). Pak. Entomol. 24(2): 143-146.
- 2001:**
36. Suhail, A., Z. Abdin, **J. Iqbal**, M. Iqbal, U. Waseem, R.B. Shahid and I. Haq. 2001. Insecticidal mortality and pollination role of honeybee (*Apis mellifera* L.) on cucumber (*Cucumis sativus* L.) crop. Int. J. Agr. Bio. 3(4): 501-502. **(IF: 0.869)**
 37. Suhail, A., M. Ahmed, T. Farid, **J. Iqbal** and M. Iqbal. 2001. Insecticidal mortality and pollination role of honeybee (*Apis mellifera* L.) on some Solanaceous crop. Pak. J. Biol. Sci. 4(6): 565-566.
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Conferences/ workshops/ seminars/ exhibitions:

2016-2018:

1. Participation in Saudi Agricultural Exhibition, 7-10 October, 2018, Riyadh, Saudi Arabia.
2. Participation in King Saud University Agricultural Exhibition, 2-4 April, 2018, Riyadh, Saudi Arabia
3. Participation in Saudi Agricultural Exhibition, 7-12 October, 2017, Riyadh, Saudi Arabia
4. Participation in 13th Asian Apicultural Association Conference), 24th – 26th April 2016, Jeddah, Saudi Arabia
5. Participation in Workshop on "The Role Of Intellectual Property Rights (IPRs) in Promotion of Science and Technology" 22nd March, 2016. MNS-University of Agriculture, Multan.

2015-2014:

6. International conference on Citriculture: Challenges and Management." Seasonal abundance of Lemon Butterfly (*Papilio demoleus* L.) in citrus orchard in relation to local weather factors. Bahauddin Zakariya University Multan, Pakistan (11/02/2015-13/02/2015).
7. Symposium Ecological Pest Management: Key for Sustainable Agricultural Production. Entomological Society of America: Community IPM of mealybugs in Himalayan region of Pakistan. 15 November, 2015
8. Conference on "A survey of mango orchards in Bahawalpur area and factors limiting their yield" World Mango Conference, The Islamia University of Bahawalpur (6/24/2014-6/25/2014)
9. Conference on "Field efficacy of conventional insecticides and insect growth regulators against spotted bollworms, *Earias* spp. of cotton " 5th Int. conference on Agriculture, Food Security and Climate Change, University of Poonch, Rawalakot (9/9/2014-9/11/2014)
10. Conference on "Comparison of five wheat varieties from Pakistan for their role to support *Tribolium castaneum* (Coleoptera: Tenebrionidae) population as a storage pest." 5th Int. conference on Agriculture, Food Security and Climate Change, University of Poonch, Rawalakot (9/9/2014-9/11/2014).
11. Conference on "Toxicity of Different Insecticide Formulations against Maize Stem Borer, *Chilo Partellus* Swinhoe (Lepidoptera: Pyralidae) " 5th Int. conference on Agriculture, Food Security and Climate Change, University of Poonch, Rawalakot (9/9/2014-9/11/2014).
12. Conference on "Discovery of resistance to penetration by red flour beetles *Tribolium castaneum* (Coleoptera: Tenebrionidae) in loose plastic packaging" 5th Int. conference on Agriculture, Food Security and Climate Change, University of Poonch, Rawalakot (9/9/2014-9/11/2014)
13. Workshop on "Sustainable and Integrated Management of Insect Pests and Diseases of Crops" Institute for Agriculture & Biology (NIAB) Faisalabad (9/23/2014-9/25/2014)
14. Participation in 3rd Agri. Business Exhibition in The Islamia University of Bahawalpur

2010-2013:

15. Conference on "Prospects and application of IPM for date palm insect pests in Pakistan" First International conference on date palm. The Islamia University of Bahawalpur: present status & future aspects. (9/2/2013-9/3/2013).
16. Participation in Live Radio FM program at IUB on "Pesticides and their importance in agriculture.
17. Participation in national conference on "Harvesting Good Returns from Soils of South Punjab" February 06-07, 2013, Bahawalnagar-Pakistan.
18. Participation in Seminar on "Mango Export and Value Addition" organized by UCA&ES, The Islamia University of Bahawalpur, July 03, 2013, Bahawalpur-Pakistan.
19. Participation in one-day capacity building workshop on "Reference/ Bibliographic Management Using Endnote Software" organized by Quality Enhancement Cell, The Islamia University of Bahawalpur, July 16, 2013, Bahawalpur-Pakistan
20. Workshop on "Sustainable & Integrated Management of Insect Pests and Diseases of Crops" NIAB, Faisalabad. (9/25/2012-9/27/2012).
21. Workshop on Advanced teaching rhetorics and research methodologies. The Islamia University of Bahawalpur in collaboration with SES Germany, (6/20/2012-7/20/2012).
22. Conference: Insect brain: The dynamic research perspective. DAAD Alumni life science Conference, September 19-21, 2011, NARC, Islamabad.
23. Conference: Neurobiology of learning and memory: Insects as model system. Conference on "Sustainable Agriculture in Changing Climate", July 07-09, 2011, Peshawar University campus Bara Gali distt. Abbottabad.
24. Symposium: National Symposium on Biodiversity of Pakistan, Islamabad: 'Population dynamics of Safflower Insects'. Organized by Pakistan Museum of Natural History Islamabad (7-9th June, 2011).
25. Seminar 2011, Stress activated protein kinase mediates the infection and stress induced changes in cognitive behaviour. National University of Science and Technology (NUST) Islamabad, Pakistan.
26. Workshop on "Sustainable management of insect pests of fruits with special reference to citrus through modern protection and post-harvest losses reduction techniques" University of Agriculture, Faisalabad, Pakistan (9/1/2010-9/4/2010).

2006-2009:

27. 8th German Neuroscience society meeting, Georg-August-Universität Göttingen, Germany 2009: Stress activated protein kinase in learning and memory of honeybee: Implications for a role in sleep.
28. 6th FENS forum of European Neuroscience Geneva, Switzerland, July 2008. Involvement of stress activated protein kinase in learning and memory of honeybee.
29. 19th Neurobiologischer Doktoranden Workshop, University of Saarland, Germany, April 2008. Stress activated protein kinase: Role in learning and memory of honeybee.
30. 7th German Neuroscience Society Meeting, Georg-August-Universität Göttingen, Germany 2007. Impact of viral infection on learning, memory and the immune system of honeybee.
31. 18th Neurobiologischer Doktoranden Workshop, University of Konstanz Germany 2007. Virus infection and ultraviolet light induced stress causes deficits in learning and memory of honeybee.
32. 17th Neurobiologischer Doktoranden Workshop, Freie Universität Berlin, Germany 2006: Molecular diagnosis of viral infections and its impact on learning and memory in honeybees.

2002-2004:

33. 4th International conference of Entomological science, University of Agriculture Faisalabad: Assessment of genetic diversity among Scarab beetles (Scarabaeidae: Coleoptera) from Faisalabad based on RAPD-PCR analysis.
 34. 4th International conference of Entomological science, University of Agriculture Faisalabad: Description of morphological variation in three species of genus *Sphingonotus* (Fieber).
 35. 33rd All Pakistan Science Conference, University of Agriculture Faisalabad: Effect of Chylorpyrifos, Chylorpyrifos-Methyl and Microbial insecticide on the haemocytes of the last larval instar of American bollworm, *Helicoverpa armigera* (Hub.) of cotton.
 36. 33rd All Pakistan Science Conference, University of Agriculture Faisalabad: Effect of Chylorpyrifos, Chylorpyrifos-Methyl and Microbial insecticide on the haemocytes of the last larval instar of Spotted bollworm, *Earias* spp. of cotton.
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