

**DR. TABASSUM ARA KHANUM**

- FATHER'S NAME:** Mohammad Salman Uddin Khan (late)
- DATE OF BIRTH:** 3<sup>rd</sup> March 1970
- MARITAL STATUS:** Married
- RELIGION:** Islam
- NATIONALITY:** Pakistani
- N.I.C No.:** 42201-9222992-2
- DOMICILE:** Sindh
- HOME ADDRESS:** F1, C-204 Royal Homes Block 6, near crown bakery,  
Gulshan-e-Iqbal Karachi  
Contact # 02134983317, 03322278012
- OFFICIAL ADDRESS:** National Nematological Research Centre,  
University of Karachi, Karachi-75270, Pakistan.  
Contact # 9261387
- EDUCATION/DEGREE:**
1. Ph. D. Nematology: Thesis topic: "Taxonomy of plant and soil nematodes of sugarcane fields with special reference of entomopathogenic nematodes.
  2. M. Sc Ist Division in Zoology (1994) from Jinnah Post Graduate College for Women.
  3. B. Sc IInd Division (1991) from Jinnah Post Graduate College for Women.
  4. Intermediate IInd Division (1987) from Karachi Board.
  5. Matriculation Ist Division (1984) from Karachi Board.
- Ph. D. SUPERVISOR:** Dr. Shahina Fayyaz Director, NNRC, University of Karachi, Karachi.
- RESEARCH EXPERIENCE:**
- 17 years research experience in plant, soil and entomopathogenic nematodes taxonomy, identification, control of insect and nematodes by using entomopathogenic nematodes as bio-pesticides and bio-fertilizer.

## **EXPERIENCE:**

- Served as research fellow in the PSF Project No. SKU/AGR (217), entitled “Studies on the Entomopathogenic nematodes in Sindh” 1<sup>st</sup> July 1997 to 30<sup>th</sup> June 2000 at National Nematological Research Centre, University of Karachi, Karachi.
- Served as -"Research Associate" in the PSF Project No. S-KU/AGR (285), entitled “Studies on the Field Efficacy of the Entomopathogenic Nematodes” 1<sup>st</sup> July 2002 to 30<sup>th</sup> June 2005 at National Nematological Research Centre, University of Karachi, Karachi.
- Appointed as – Lab Assistant BS-07 in NNRC 12 July 2006 to 12 Dec 2010.
- Upgraded as lab Assistant BS-17 (after completion of Ph.D.) in NNRC from Dec 2010.
- Adjust the post Lab Technician (but the grade due to Ph.D is BS-17) 12 Aug, 2012.
- Appointed Research Officer BPS- 17 from 13 November, 2014 till to date.

## **Awards:**

- Granted the “Productivity allowance” by Pakistan Council of Science and Technology for the year 2012.
- Awarded shield from Karachi University Officers welfare Association for 2011-2013.
- Awarded a shield on the occasion of 3<sup>rd</sup> International Conference of Pakistan phytopathological society January, 23-25, 2014.

**Impact Factor: 55**

## **CONFERENCE AND WORKSHOP ATTENDED:**

### **In Foreign**

- Attended the “International Symposium on the Research and Development of Entomopathogenic Nematodes” held at Sanya, China, April 9 – 13, 2009.
- Attended Bio –EDU International Seminar on Advances in Molecular Genetics and Biotechnology for Public Education held at Jakarta, Indonesia, 6-8 June, 2012.
- Attended 2013 China Modern Agriculture Expo 17-19 September, at Shanghai, China.
- Attended 6<sup>th</sup> International Congress on Nematology at Cape town South Africa, 4-9 May, 2014.

### **In Pakistan**

- Workshop on the Use of Bioassay Techniques for new Drug Development, 8<sup>th</sup> July 1997, at H.E.J. Research Institute for Chemistry, University of Karachi.
- 3<sup>rd</sup> National Conference of Plant Pathology 1-3 October 2001, at National Agricultural Research Centre, Islamabad, Pakistan.
- National Symposium on Nematology 7-9 January, 2002, at National Nematological Research Centre, University of Karachi, Pakistan.
- 8<sup>th</sup> National Meeting of Plant Scientists, February, 24-28, 2003, Department of Botany, University of Karachi, Karachi, Pakistan.

- Marine Environment Resource, Pollution & Management, February, 21-22 2004 Organized by Centre of Excellence in Marine Biology, University of Karachi & the British Council Karachi at A.Q. Khan Institute of Biotechnology, University of Karachi, Karachi.
- Symposium on Biochemistry in Post Genomic Era Jointly organized PSBMB & Department of Biochemistry, University of Karachi. July 17, 2004.
- Workshop on PCR application in Research and Diagnosis jointly organized by Department of Biochemistry, University of Karachi & PSBMB- Rahila Research & Reference Laboratories, October 16-18 2004, Karachi, Pakistan.
- International Symposium on Biodiversity of Nematode Fauna of Pakistan 17-19 May 2004, at Karachi, Pakistan.
- Workshop of Real Time PCR held on 15<sup>th</sup> August 2005, at Dept. of Genetics, University of Karachi, Pakistan.
- Higher Education Commission – Digital Library Program a workshop on “Introduction to Digital Library Resources and their Effective Usage”. October 6, 2005 University of Karachi, Karachi.
- 5<sup>th</sup> Meeting of Pakistan Phytopathological Society, International Symposium on Plant Disease Management (20-22 December, 2005), University of Karachi, Karachi
- 9<sup>th</sup> National Conference of Plant Scientists. 13-15 February, 2006, at the Institute of Botany, University of Sindh, Jamshoro, Sindh, Pakistan.
- 6<sup>th</sup> National Nematological Conference in Pakistan & Workshop on “Integrated Nematode Disease Management (INDM) in some cereals, fruit and vegetables of Pakistan” held at National Nematological Research Centre, University of Karachi, Karachi on 25-27 April, 2006.
- An International Training Workshop on Nematode Identification. 22 Oct.– 3 November, 2007 at National Nematological Research Centre, University of Karachi.
- 35<sup>th</sup> all Pakistan Science Conference, “10<sup>th</sup> Nematological Event: International Conference on Nematology in Pakistan”, at University of Karachi (December 20-23, 2008).
- 11<sup>th</sup> Nematological Event: One-day Seminar” on “Molecular Techniques used in Nematology with emphasis on genetic diversity of wheat germ plasm” at KIBGE, University of Karachi (April 17, 2010).
- International conference of chemistry and its role in science (ICCRS-1), “CHEMISTRY: THE PANACEA OF ALL PROBLEMS”, department of chemistry Jinnah University for Women, Karachi. (January 3<sup>rd</sup> - 5<sup>th</sup>, 2011).
- Training course on Apiculture “ in Arts Auditorium, University of Karachi (May, 12<sup>th</sup> 2011).
- Symposium on Biodiversity of Pakistan June 7-9 2011 at Islamabad.
- One day seminar entitled “Indigenous commercialization potential of academic research”, June 27<sup>th</sup>, 2011 at Karachi Chamber of Commerce and Industry (KCCI)
- Fifth National Seminar on “Intellectual Property Rights” in PCSIR Laboratories Complex, Karachi, October 29, 2011.
- “Workshop on Patent Protection for R&D” jointly organized by PASTIC, PSF and HEJ held at Karachi University, February 01, 2012.

- “Workshop on Patent Protection for R&D” jointly organized by PASTIC, PSF and HEJ held at Karachi University, February 01, 2012.
- Seminar on EU Seventh Frame work Programme (FP7, 2007-2013) September 12, 2012, held at Islamabad.
- 9<sup>th</sup> Biennial International Conference of Pakistan for Microbiology organized by the Department of Microbiology, University of Karachi on January 28-31, 2013.
- 33<sup>rd</sup> Pakistan Congress of Zoology international 2-4 April, 2013, organized by the PMNH, PSF and PMAS Islamabad.
- Organic product certification four days workshop organized by National Productivity Organization, Ministry of Industries and Production Government of Pakistan. 9-12 April, 2013 University of Karachi, Karachi.
- 3<sup>rd</sup> International Conference of Pakistan phytopathological society organized by Pakistan phytopathological society and Department of Agriculture and Agribusiness and Management on 23-25 January, 2014.
- 13th Nematological Event on Prospective of Nematology in Pakistan at Sheikh Zaid Research Institute University of Karachi (23-25 January, 2014)

#### **MEMBERSHIP:**

- Pakistan Society of Nematologists"
- Pakistan Society of Phytopathology (Life member)

#### **INTERNATIONAL PATENT**

1. F. Shahina, **K.A. Tabassum** and M.H.Soomro, Entomopathogenic nematodes and their storage Filed **8-02-2010US 0197289**

#### **NATNATIONAL PATENTS**

1. **Pak patent 140579:** Shahina Fayyaz, Asim Rehan Kazmi, **Tabassum Ara Khanum**, Mahreen Gulsher and Salma Javed A process for preparation of bio-pesticides using *Xenorhabdus nematophila* (strain HAM,-10) against wax moth larvae and vine mealy bug in Pakistan.
2. **Pak patent 140580:** Shahina Fayyaz, **Tabassum Ara Khanum**, Salma Javed and Mahreen Gulsher. Pathogenicity of *Photorhabdus luminescens* against *Galleria mellonella* larvae and subteranean termite (Termitidae: *Macrotermis*).
3. **Pak patent 140622:** Shahina Fayyaz, M.H.Soomro, **Tabassum Ara Khanum**, and Erum Iqbal. Process of using Entomopathogenic nematodes as a bio-pesticides in Management of cotton bollworms in Pakistan”.
4. **Pak patent 141035:** Shahina Fayyaz, **Tabassum Ara Khanum**, M.H.Soomro and Ismail Bhatti Improved and cheaper diet for rearing *Galleria mellonella* larvae, used for Isolation and Mass Production of Beneficial Organisms.

5. **Pak patent 141095:** Shahina Fayyaz, **Tabassum Ara Khanum** and Asim Rehan Use of three entomopathogenic nematodes against subteranean termite *Microtermis* spp. (Isoptera: Rhinonematidae).
6. **Pak patent 141515:** Shahina Fayyaz and **Tabassum Ara Khanum**. Method For Suppression of Plant Parasitic Nematode through Entomopathogenic Nematodes *Steinernema* and *Heterorabditis*.
7. **Pak patent 141641:** Shahina Fayyaz and **Tabassum Ara Khanum**. A process of preparation of a bio-pesticide from *Oscheius andrasyii*, an entomopathogenic nematodes from Pakistan.
8. **Pak patent 141630:** Shahina Fayyaz, **Tabassum Ara Khanum** and M.H.Soomro. Method for Biological Control of insect pests by *Phasmarhabditis pakistanensis* n.sp. a new entomopathogenic nematode.
9. **Pak patent 141837:**Shahina Fayyaz and **Tabassum Ara Khanum**. Process for controlling plant parasitic nematode through *Oscheius niazii*, an entomopathogenic nematodes.

### **IN PROCESS**

10. Pak patent (26/2011):Shahina Fayyaz and **Tabassum Ara Khanum**. A process of preparation of a bio-pesticide from *Oscheius niazii*, a new entomopathogenic nematodes from Pakistan.
11. Pak patent (163/2012): Shahina Fayyaz,**Tabassum Ara Khanum** and M.H.Soomro. A Process of preparation of a bio-fertilizer “Pak Nema 1” of *Oscheius*.
12. Pak patent (363/2013): Zafar Saeed Saify\*, Shazia Haider\*, Shahina Fayyaz, and **Tabassum Ara Khanum** Process for use of noval compounds of chloro - trifloromethyle phenyl as nematicide.

### **Book**

1. Shahina, F., **K.A. Tabassum** and M.H.Soomro (2013). Entomopathogenic nematodes and their bacterial symbionts from Pakistan. 352pp. Lambert Publisher Germany.

### **Chapter**

2. Shahina, F., Firoza, K. and **K.A. Tabassum** (2014). Nematode Fauna of Pakistan. pp. 117-128. In: *Biodiversity of Pakistan*(EDs.) M. Rafique, I.A. Khalil, S.A. Hasan and K. Mahmood.Pakistan Museum of Natural History, Pakistan Science Foundation and Ministry of Science and Technology pp 509.

## **RESEARCH PUBLICATION**

### **International**

3. Siddiqi, M.R., Bilgrami, A.L. and **Tabassum, K.A.** (2004). Description and biology of *Mononchoides gaugleri* sp. n. (Nematoda: Diplogasterida) from New Jersey, USA. *Int. J. Nematol.*, 14: 129-134.
4. **Tabassum, K.A.**, F. Shahina & M.R., Siddiqi (2005). Description of *Lordellonema subannulatum* sp. n., *Poronemella divulgata* sp. n. and *Moshajia teres* sp. n. (Dorylamida: Lordellonematinae). *Int. J. Nematol.*, 15:163-168.
5. Shahina, F., K.B. Nguyen, A.R. Kazmi, **K.A. Tabassum** & K. Firoza (2007). Morphometrics and comments on *Steinernema abbasi* Elawad Ahmad & Reid, 1997 and *Heterorhabditis bacteriophora* Poinar 1976 isolates found in Pakistan. *Int. J. Nematol.*, 213-216.
6. **Tabassum, K.A.**, A.R. Kazmi & F. Shahina (2007). A re-description of *Steinernema simkayai* Stock *et al.*, 1998 (Rhabditida: Steinernematidae) from Pakistan. *Int. J. Nematol.*, 217-224.
7. Shahina, F., G., Mahreen, J., Salma, **K.A., Tabassum** & M.I., Bhatti (2009). Susceptibility of different life stages of red palm weevil, *Rhynchophorus ferrugineus* (OLIV.) to entomopathogenic nematodes. *Int. J. Nematol.*, 19: 232-240.
8. **Tabassum, K.A.** & F. Shahina (2010). *Oscheius siddiqii* and *O. niazii*, two new entomopathogenic nematode species from Pakistan, with observations on *O. shamimi*. *Int. J. Nematol.*, 20: 75-84.
9. Shahina, F., A. R. Kazmi, **A. K. Tabassum**, G. Mehreen & J. Salma. (2010). Evaluation of *Xenorhabdus nematophila* from *Steinernema asiaticum* against wax moth larvae and vine mealy bug. *Int. J. Nematol.*, 20(2): 203-210.
10. Shahina, F., **K.A. Tabassum**, J. Salma & G. Mehreen (2012). Re-description of *Steinernema litorale* Yoshida, 2004 (Nematoda: Steinernematidae) from Pakistan on the basis of morphometric, ITS1-5.8S-ITS2; 28S rDNA (D2/D3) and mitochondrial rDNA region. *Int. J. Nematol.*, 22 (1): 12-29.
11. Shahina, F., **K.A. Tabassum**, G. Mehreen and J. Salma (2013). *Steinernema maqbooli* n. sp. (Rhabditida: Steinernematidae:) a species of the 'bicornutum' group from Pakistan. *Int. J. Nematol.*, 23: 59-72.

12. Shahina Fayyaz\*, Richou Han\*\*, (Qiu L / Juan Ma) Mehreen Gulsher\*, **Tabassum Ara Khanum\*** and Salma Javed\* (2014). A new entomopathogenic nematode, *Steinernema mohammadi* n. sp. (Rhabditida: Steinernematidae) from Punjab, Pakistan. *Nematology* 821-836.
13. Shahina, F., **Tabassum, K.A.** Shaukat, A., G. S. Solangi, Mehreen Gulsher and Salma Javed (2015) A new entomopathogenic nematode, *Steinernema blaochiense* n.sp. (Rhabditida: Steinernematidae) from Pakistan. *Zootaxa* 3904: 387-402.

### National

14. Shahina, F., **Tabassum, K.A.** and Maqbool, M.A. (2001). Description of *Plectus karachiensis* n. sp. (Nematoda: Plectidae) with observation on *P. raabei* Brzeski, 1963 from Pakistan. *Pak. J. Nematol.*, 19: 33-40.
15. **Tabassum, K.A.**, Shahina, F. and Shaukat, S.S. (2001). Three new records of the order Mononchida (Enoplida: Nematoda) from Pakistan. *Pak. J. Nematol.*, 19: 41-47.
16. **Tabassum, K.A.** and Shahina, F. (2002). Distribution of some species of free-living soil nematodes in Pakistan. pp. 21-24. In: *Proceeding of National Symposium on Nematology*. (Eds). Shahina, F. Firoza, K. and Shahzad, S. NNRC University of Karachi, Karachi. 151pp.
17. **Tabassum, K.A.** and Shahina, F. (2002). *Osheius maqbooli* n.sp. and observation on three known *Rhabditis* species (Nemata: Rhabditida) from sugarcane fields of Balochistan, Pakistan. *Pak. J. Nematol.*, 20: 1-21.
18. Shahina, F. and **Tabassum, K.A.** (2002). Description of *Cephalobus sacchari* n.sp. and re-description of *C. nanus* de Man, 1880 (Nematoda: Cephalobidae) from Pakistan. *Pak. J. Nematol.*, 20: (2) 17-24.
19. **Tabassum, K.A.** and Shahina, F. (2002). Re-description of four known cephalobids (Nemata: Cephalobidae) from Pakistan. *Pak. J. Nematol.*, 20: (2) 25-37.
20. **Tabassum, K.A.** and Shahina, F. (2003). New records and morphological observations on three known species of Plectidae and Ironidae (Nematoda: Adenophora) from Sindh, Pakistan. *Pak. J. Nematol.*, 21: 11-17.
21. **Tabassum, K.A.** and Shahina, F. (2003). Five new records of the order Rhabditida (Nemata: Rhabditida) from Pakistan. *Pak. J. Nematol.*, 21: 73-9.

22. **Tabassum, K.A.** and Shahina, F. (2004). Re-description of *Steinernema feltiae* Filipjev 1934 (Nematoda: Steinernematidae) from Pakistan. *Pak. J. Nematol.*, 22: 1-8.
23. **Tabassum, K.A.**, Shahina, F. and Musarrat, A.R. (2004). Re-description of *Mesorhabditis cranganorensis* (Khera, 1968) and *Acrobeles geraerti* (Rashid *et al.*, 1990) (Nemata: Rhabditida) from Pakistan. *Pak. J. Nematol.*, 22: 9-16.
24. **Tabassum, K.A.** and Shahina, F. (2004). In vitro mass rearing of different species of entomopathogenic nematodes in monoxenic solid culture. *Pak. J. Nematol.*, 22: 167-175.
25. Shahina, F., Manzar, H. and **Tabassum, K.A.** (2004). Symbiotic bacteria *Xenorhabdus* and *Photorhabdus* associated with entomopathogenic nematodes in Pakistan. *Pak. J. Nematol.*, 22: 117-128.
26. **Tabassum, K.A.**, Shahina, F., Firoza, K. and Siddiqi, M.R. (2005). Description and embryonic development of *Distolabrellus pakistanensis* n. sp. (Rhabditida: Mesorhabditinae), a new insect parasitic nematode from Pakistan. *Pak. J. Nematol.*, 23: 9-20.
27. **Tabassum, K.A.**, Shahina, F. and Abid, B. (2005). Occurrence of entomopathogenic (EPN) nematodes in Pakistan. *Pak. J. Nematol.*, 23: 99-102
28. **K.A. Tabassum**, F. Shahina and K. Nasira (2006). *Laimydorus wirisi* n. sp. with notes on *Aporcelaimellus obtusicaudatus* (Bastian, 1865) Altherr, 1968 and *Allodorylaimus americanus* andrassy, 1968 (Nematoda: Dorylaimida) from Pakistan. *Pak. J. Nematol.*, 24: 129-138.
29. F. Shahina and **K.A. Tabassum** (2006). Nematode problem of Date Palm in Pakistan. In: *Proceedings of Third International Date Palm Conference (TIDPC)*. 19-21 February, 2006.
30. **Tabassum, K.A.** & F. Shahina (2008). *Oscheius andrassyi* n. sp. (Nematoda: Rhabditidae) with its key and embryonic and post-embryonic development from Jhang, Pakistan. *Pak. J. Nematol.*, 26: 125-140
31. Shahina, F. & **K.A. Tabassum** (2009). Suppression of plant parasitic nematodes in bermuda grass using live or dead entomopathogenic nematodes *Steinernema pakistanense* *Pak. J. Nematol.*, 27: 167-178.



32. Shahina, F., J., Salma, G., Mahreen, M. I., Bhatti & **K.A., Tabassum** (2009). Rearing of *Rhynchophorus ferrugineus* in laboratory and field conditions for carrying out efficacy studies using EPN. *Pak. J. Nematol.*, 27: 219-228.
33. **Tabassum, K.A.** (2010). Taxonomy of plant and soil nematodes of sugarcane fields with special reference of entomopathogenic nematodes. Ph.D. thesis pp. 304.
34. Shahina, F. & **K.A. Tabassum** (2010). *Steinernema carpocapsae* (Nematoda: Steinernematidae) a new entomopathogenic nematode isolate from Pakistan. *Pak. J. Nematol.*, 28(1): 59-64.
35. Shahina, F. & **K.A. Tabassum** (2010). Virulence of *Steinernema pakistanense* against different insect species in laboratory condition. *Pak. J. Nematol.*, 28(2): 279-284.
36. Shahina, F. A.R. Kazmi, **K.A. Tabassum**, J. Salma & G. Mehreen (2011). Pathogenicity of *Xenorhabdus nematophila* (strain ham-10) against wax moth larvae and vine mealy bug in Pakistan. *Pak. J. Nematol.*, 29: 15-23.
37. Shahina, F. **K.A. Tabassum**, J. Salma & G. Mehreen (2011). Biopesticidal effect of *Photorhabditis luminescens* against *Galleria mellonella* larvae and subterranean termite (Termitidae: *macrotermise*). *Pak. J. Nematol.*, 29: 35-43.
38. Bhatti, M.I. **K.A., Tabassum**, & K. Firoza (2011). New records of Mesorhabditidae from different habitats of Sindh, Pakistan. *Pak. J. Nematol.*, 29: 119-137.
39. Kazmi A. R., **K. A. Tabassum** and F. Shahina (2013). Characterization of symbiotic bacteria associated with *Steinernema abbasi* strain (507), *S. siamkayai* strain (157) and *Heterorhabditis bacteriophora* strain (1743). *Pak. J. Nematol.*, 31: 11-19.
40. Shahina, F., **K.A. Tabassum** and M.A. Habib (2014). Potential of EPN in management of cotton bollworms in Pakistan. *Pak. J. Nematol.*, 32: 85-90.
41. Shahina Fayyaz, Firoza Kazi and **Tabassum Ara Khanum** (2014). Nematode Fauna of Pakistan. pp. 117-128. In: *Biodiversity of Pakistan* (Eds.) M. Rafique, I.A. Khalil, S.A. Hasan and K. Mahmood. Pakistan Museum of Natural History, Pakistan Science Foundation and Ministry of Science and Technology. pp 509.