

## Curriculum Vita

Professor Farkad A. Fattah Al-Rawi, PhD

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<u>Date &amp; Place of Birth</u>	Anbar, Iraq, 1949
<u>Nationality</u>	Iraqi
<u>Marital Status</u>	Married with Five Children
<u>Education</u>	Ph.D. , Biology, Simon Fraser University, B.C., Canada, 1983 M.Sc., Biology, University of Baghdad, Baghdad, Iraq, 1974 B.Sc., Botany, University of Baghdad, Baghdad, Iraq, 1971
<u>Positions Held</u>	
<u>2003 - Present</u>	Professor, Department of Plant Protection, College of Agriculture, University of Baghdad, Iraq
<u>2003 – 2003</u>	President, University of Wassit, Iraq
<u>2008 – 2009</u>	Vice President, The Syrian University for Science and Technology, Syria
<u>1998 – 2003</u>	Dean, College of Agriculture, University of Baghdad, Baghdad, Iraq
<u>1995 – 1998</u>	Head, Department of Biotechnology, Agriculture and Biology Research Center, Iraqi Atomic Energy Commission
<u>1993 – 1995</u>	Chief Scientific Researcher and Director of the Biological Control Project, Agriculture and Biology Research Center, Iraqi Atomic Energy Commission
<u>1990 – 1993</u>	Post Doctorate Fellow, International Center for Genetic Engineering and Biotechnology, New Delhi, India
<u>1988 – 1990</u>	Head, Section of Plant Pathology, Agriculture and Biology Research Center Iraqi Atomic Energy

	<b>Commission</b>
<u>1985 – 1988</u>	Senior Scientific Researcher, Agriculture and Biology Research Center, Iraqi Atomic Energy Commission
<u>1984-1986</u>	Scientific Researcher, Agriculture and Biology Research Center, Iraqi Atomic Energy Commission
<u>1984 – 1984</u>	Lecturer, Department of Plant Protection, College of Agriculture, University of Baghdad
<u>1976 – 1977</u>	Assistant Lecturer, Department of Plant Protection, College of Agriculture, University of Baghdad, Iraq
<u>1974 – 1976</u>	National Service
<u>Societies Memberships</u>	Society of Nematologists, USA Arab Plant Protection Society, Lebanon Iraqi Biological Society (Vice presidents) Iraqi Microbiological Society
<u>Editorial Committees</u>	Editor In Chief, Iraqi Journal of Agricultural Science, 1998-2003 Editor, IPA Journal of Agricultural Sciences, 1995 – 2003
<u>Courses Taught</u>	
<u>Graduate Courses</u>	Biological Electron Microscopy Advanced Nematology (Plant Parasitic) Physiological Plant Pathology Cell Biology Technical English for Agriculture Research Methods
<u>Undergraduate Courses</u>	Plant Pathology Plant Physiology Nematology (Plant Parasitic) Human Genetics Cell Biology
<u>Research &amp; Teaching Assistant</u>	RA & TA, Department of Biosciences, Simon Frazer University, 1977-1983 TA, Department of Biology, University of Baghdad, 1971-1974
<u>Graduate Theses Supervised</u>	15 M.Sc. and 14 Ph.D. Theses External Examiner of 20 M.Sc. and 15 Ph.D. Theses

## Research Interest

**Biological Control of Plant Pathogens  
Host Parasite Relationships of The Root - Knot  
Nematodes  
Biological Electron Microscopy  
Nematode –Fungus Interaction**

## Publications

1. **Fattah, F.A.** and J.M. Webster. 1983. Ultrastructural changes caused by *Fusarium oxysporum* f. sp. *Lycopersici* in *Meloidogyne javanica* induced giant cells in *Fusarium* resistant and susceptible tomato cultivars. Journal of Nematology 15: 128-135. **USA**
2. **Fattah, F.A.** and J.M. Webster. 1984. Fine structure of the giant cells induced by *Meloidogyne javanica* in lima bean. Canadian J. of Botany 62: 429-436. **Canada**
3. **Fattah, F.A.** 1988. Chitinolytic activity of fungi associated with females and eggs of the citrus nematode, *Tylenchulus semipenetrans* J. of Agric. and Wat. Reso. Res. 7: 1-9. **Iraq**
4. **Fattah, F.A.** 1988. Effects of inoculation methods on the incidence of ear-cockle and "tundu" on wheat under field conditions. Plant and Soil 109 : 195-198. **Netherland**
5. **Fattah, F.A.** 1986. Occurrence of spike blight (Tundu) disease on wheat in Iraq. Proc. of the 4<sup>th</sup> Scien. Conf. SRC 1: 1514-1519. **Iraq**
6. Sabri, A.W. and **F.A. Fattah**, 1986. Observations on nematoda population in river Tigris. J. of Biol. Sci. Res. 19: 109-116. **Iraq**
7. Al-Samarria, F.H, A.H. EL-Bahadli and **F.A. Fattah**. 1988. Comparison between effects of soil disinfestation methods on some pathogens of cucumber. Arab J. Pl. Prot. 6: 106-112. **Lebanon**
8. Al-Samarria, F.H., **F. A. Al-Rawi** and A.H. EL-Bahadli 1988. Reinfestation of soil after different disinfestation treatments. Arab J. of Pl. Prot. 6: 113-118. **Lebanon**
9. Al-Samarria, F.H., A.H. EL-Bahadli and **F.A. Al-Rawi**. 1987. Effects of soil disinfestation methods and biocontrol agents on reinfestation with plant pathogens. Proc. of the 5<sup>th</sup> Conf. SRC. **Iraq**
10. **Fattah, F.A.** 1989. Histopathology of nematode and bacteria colonized galls induced by *Anguina tritici* in wheat. J. of Biol. Sci. Res. **Iraq**
11. **Fattah, F.A.** 1989. Parasitism of citrus nematode, *Tylenchulus semipenetrans* by *Pasteuria penetrans* in Iraq. Journal of Nematology 21: 431-433. **USA**
12. **Fattah, F.A.** 1989. Occurrence of a bacterial parasite (*Bacillus penetrans*) on *Meloidogyne* spp. in Iraq. Iraqi J. of Agric. Sci. **Iraq**
13. Kgzal, M.A. and **F.A. Fattah**. 1989. The importance and possible causes of female sterility in sweet lemon trees in Iraq. J. of Agric. Sci. **Iraq**
14. Al-Tamimi, K.M., **F.A. Fattah** and M.A. Al-Hamdany. 1989. Shoot apex faciation in *Sesumum indicum* associated with mycoplasma like organisms. Plant Pathology 38: 300-304. **England**

15. **Fattah, F.A.** 1990. The role of *Fusarium solani* in citrus decline. Iraqi J. of Biology. Iraq
16. **Fattah, F.A.** 1989. The role of the root-knot nematode in date palm decline. Proc. 1<sup>st</sup> Int. Conf. on Palm and Palm Products, Nigeria. Nigeria
17. Aboud, H.M. and **F. A. Fattah.** 1989. The effect of *Trichoderma* isolates on some plant growth parameters and parasitism of nematode eggs. Proc. 1<sup>st</sup> Int. Conf. on Biological Control, Turkey. Turkey
18. **Fattah, F.A.** and J.M. Webster. 1989. Ultrastructural modifications of *Meloidogyne javanica* induced giant cells caused by fungal culture filtrates. Rev. de Nematol. 12: 197-210. France
19. **Al-Rawi, F.A.,** AL-Ani, R.A. and M.M. Jergice. 1990. Mycoplasma like organisms associated with *Lactuca serriola* L. phyllody. Arab J. Pl. Prot. 8: 45-48. Lebanon
20. Aboud, H.M, Saleh, H.M, **Fattah, F.A.** and H. A. Hadwan. 1992. *Trichoderma viride* as biocontrol agent of root-knot nematode. Iraq. J. Agric. Sci. 23: 1992. Iraq
21. **Fattah, F.A.,** H.M. Aboud and H.M. Saleh. 1992. The use of rooted leaves technique in the biological control of the citrus nematode, *Tylenchulus semipenetrans*. Proc. of the Sci. Soc. Conf. Baghdad, Iraq. Iraq
22. Saleh, H.M., Aboud, H.M. and **F. A. Fattah.** 1992. Biological and chemical control of the plant parasitic nematode, *Meloidogyne javanica*. Iraqi J. Agric. Sci. 23: 20-25. Iraq
23. Al-Jibouri, A.A.M, **F. A. Fattah,** I. S. Al-Sadawi, M. Selbi and M. Kgazal. 1990. Morphometrics and scanning electron microscopy of pollen of date palm (*Phoenix dactylifera* L.). Arab Gulf J. Sci. Res. 8: 109-117. KSA
24. Kagazal , A. M., **F. A. Fattah** and A.A.M. AL-Jibouri, 1990. Bisexuality in the date palm in Iraq. J. Islamic Acad. Sci. 3: 131-133. Turkey
25. **Al-Rawi, F.A.** and R. A. Al-Ani. 1991. Ultrastructural changes in tomato phloem cells caused by curly top virus infection. Arab. J. Pl. Prot. 9: 38-46. Lebanon
26. **Fattah, F.A.,** Saleh, H.M. Aboud, H. M. and M. A. Kgazal. 1989. Pathological effects of the root-knot nematode *Meloidogyne* spp. on date palm seedlings. Proc. Int. Conf. on Palm and Palm Prod., Nifor, Benin City. Nigeria. Nigeria
27. **Fattah, F.A.,** A. A. Al-Ammar and I. A. Al-Suhaily. 1991. Effects of *Septoria tritici* on the ultrastructure of leaf cells in susceptible and resistant wheat. Arab. J. Pl. Prot. 9: 32-37. Lebanon
28. **Fattah, F.A.,** Saleh, H. M. and Aboud, H. M. 1992. Efficiency of three host plants for mass production of *Pasteuria penetrans*. Iraqi J. Microbiol. Iraq
29. Saleh, H. M. and **F.A. Fattah.** 1990. Studies on wheat seed gall nematode. Nematol. Medit. 18: 59-62. Italy
30. Saleh, H. M. and **F.A. Fattah.** 1989. Reaction of wheat genotypes to infection by *Anguina tritici*. Rev. de Nematol. 12: 429-431. France

31. Aboud, H. M., Saleh, H. M. and **F.A. Fattah**. 1991. Interaction of some fungi and root-knot nematode, *Meloidogyne javanica* on date palm seedlings. **Iraq**
32. Saleh, H. M., H. M. Aboud and **F.A. Fattah**. 1991. Reaction of wheat variants to seed gall and spike blight (tundu). Rev. de Nematol. **France**
33. Al-Ani, R. A. and **F.A. Fattah**. 1991. Inclusion bodies in broadbean plants infected with leaf curl and roll disease and its role in the identification. Iraqi J. Agric. Res. **22: 180-186. Iraq**
34. Majumder, K., **F. A. Fattah**, A. Selvapandyan and R. K. Bhatnagar. 1995. Background-minimized cassette mutagenesis by PCR using cassette-specific selection marker: A useful general approach for studying structure-function relationships of multisubstrate enzymes. PCR Methods and Applications **4: 212-218. EUR**
35. Majumder, K., A. Selvapandyan, **F. A. Fattah**, N. Arora, S. Ahmad and R.K. Bhatnagar. 1995. 5- enolpyruvyl-shikimate-3- phosphate synthase of *Bacillus subtilis* is an allosteric enzyme. Analysis of Arg 24 → ASP, Pro 105 → Ser and His 385 → Lys mutations suggests a hidden phosphoenolpyruvate-binding site. Eur. J. Biochem. **229: 99-106. EUR**
36. Selvapandyan, A., K. Majumder, **F. A. Fattah**, S. Ahmed, N. Arora and R. K. Bhatnagar. 1995. Point mutation of a conserved arginine (104) to Lysine introduces hypersensitivity to inhibition by glyphosate in the 5-enolpyruvylshikimate-3- phosphate synthase of *Bacillus subtilis* . FEBS Letter **374: 251-256. EUR**
37. **Fattah, F. A.**, H. M. Aboud and H. M. Saleh. 1996. Encapsulation of three biocontrol fungi in alginate pellets for control of citrus nematode, *Tylenchulus semipenetrans*. IPA J. of Agric. Res. **6: 213-220. Iraq**
38. Aboud, H. M., H. M. Salih and **F. A. Fattah**. 1996. Induced benlat tolerant mutants of *Paecilomyces lilacinus*. Third Arab Conf. on the Peac. Uses of Atom. Energ., Damascus 9-13 Dec. AAEA. **Syria**
39. Ali, A. M., R. A. Al-Ani and **F. A. Fattah**. 1998. Purification and serological studies of fig mosaic and yellow vein banding viruses. Iraqi J. Agric. Sci. **30: Iraq**
40. Saleh, H. M., **F. A. Fattah** and R. A. Al-Ani. 1999. Threshold level of the bacterium *Pasteuria penetrans* on *Meloidoyne javanica* juveniles on tomato. Arab. J. Pl. Prot. **17: 88-91. Lebanon**
41. Juber, K. S., R. A. AL-Ani and **F. A. Fattah**. 1999. Effect of the interaction between root-knot nematode *Meloidoyne javanica* and the fungus *Fusarium solani* on eggplant (*Solanum melongena* L.). Iraq J. Agr. Sci. **30: 407-420. Iraq**
42. Yousef S. A. and **F. A. Fattah**. 1999. Propagation of neem plant (*Azadirachta indica* L.) by tissue culture (Research Note). Derasat Agric. Sci. **26: 287-291. Jordan**
43. Juber, K. S., R. A. AL-Ani and **F. A. Fattah**. 2000. Biological control of the root-knot nematode, *Meloidoyne javanica* and *Fusarium solani* disease complex on eggplant. Almustansria J. of Sci. **11: 29-41. Iraq**

44. Juber, K. S., R. A. AL-Ani and **F. A. Fattah**. 1998. Effect of root and stalk rot pathogens on eggplants (*Solanum melongena*). Arab J. Agric. Res. 2: 171-188. **Sudan**
45. **Fattah, F. A.** 2000. Biological control of weeds by microorganisms. First Nat. Workshop on Biol. Cont. of Agric. Pests. Iraqi Atomic Energy Commission, Baghdad. Iraq
46. Al-Fadhil, F. A., R. A. AL-Ani, A. N. Al-Shamri and **F. A. Fattah**. 2000. Cultivation and growing of suada witch's broom phytoplasma in synthetic media. Arab J. Agric. Res. 5: 260-274. **Sudan**
47. Al-Ani, R. A., F. A. Al-Fadhil, **F. A. Al-Rawi** and A. N. Al-Shamri. 2001. Serological relationship between suada witch's broom phytoplasma and those infecting some crops and weed plants in Iraq. Arab J. Pl. Prot. 19: 59-64. **Lebanon**
48. **Al-Rawi, F. A.**, F. A. AL-Fadhil and R. A. Al-Ani. 2001. Histological methods for detection and monitoring distribution of phytoplasma in some crops and weed plants in central Iraq. Arab. J. Pl. Prot. 19: 3-11. **Lebanon**
49. Yosef, S. A. and **F. A. Fattah**. 2001. Neem propagation. J. of Tikrit Univ. for Agric. Sci., Special Issue 1: 218-227. **Iraq**
50. Aboud, H. M., A. A. Al-Heeti, **F. A. Fattah** and H. M. Saleh. 2002. Effect of chitosan on some biological activities of *Fusarium oxysporum* f. sp. *lycopersici* Snyder & Hans. Arab J. Pl. Prot. 20: 29-33. **Lebanon**
51. Jbara, I. M., **F. A. Al-Rawi** and Z. A. Stephan. 2003. Determining the best application of the biopesticides Tahadi and Sumod for controlling tomato infection from root-knot nematode. Iraqi J. Agric. (Special Issue). 8: 24-34. **Iraq**
52. Stephan, Z. A., I. M. Jbara and **F. A. Al-Rawi**. 2003. Effect of soil moisture content and thermal treatment on the activity of bioagent fungi *Trichoderma harzianum* Rifai and *Paecilomyces lilacinus* (Thom) Samson on some tomato plant growth parameters. Arab J. Pl. Prot. 21: 1-5. **Lebanon**
53. Jbara, I. M., Z. A. Stephan and **F. A. Al-Rawi**. 2003. Ability of biopesticides Tahadi and Sumud to survive in the soil and the effect of pasteurization on their efficacy under green house conditions. Iraqi J. Agric. (Special Issue) 8: 111-120. **Iraq**
54. Al-Zawbaili, I. A., **F. A. Fattah** and A. I. Al-Meshedani. Pathogenecity study of some *Fusarium* species and succceptibility of some potato cultivars. Arab J. Pl. Protec. Lebanon
55. **Fattah, F. A.** 2004. Breeding tomato, *Lycopersicon esculentum* Mill., for resistance to root-knot nematodes in Iraq. Iraqi J. Agric. Sci. Iraq
56. **Fattah, F. A.** and K. Al-Assas. 2010. Histopathological comparison of galls iguced by *Anguina tritici* with galls subsequently colonized by *Ratheyibacter tritici* in wheat. Nematol. medit. 38: 173-177. **Italy**
57. Fayadh, A. H., Al-Maarroof, E. M. and **F. A. Fattah**. 2013. Induced resistance to wheat yellow rust by chemical inducers. J. Biol. Agric. and Healthcare. 3: 56-63.
58. Muttar, S. and **F. A. Fattah**. 2013. Induced systemic resistance to *Meloidogyne* Spp by  $\beta$ , amino butyric acid in tomato. Agricultural Resaearch. 4: 608-613. **China**

59. Muttar,S.and **F.A.Fattah**. 2013. Red light-induced systemic resistance to root knot nematodes in tomato J.Biol.Agric.and Healthcare.3:110-114. **China**
60. Muttar,S.and **F.A.Fattah**. 2013.Induced systemic resistance in tomato to *Meloidogyne* Spp by seed treatment with  $\beta$ ,amino butyric and Benzothiazol. J.Biol.Agric.and Healthcare.3: 49-55. **China**
61. Muttar,S.and **F.A.Fattah**. 2014. Induced systemic resistance in tomato,*Solanum lycopersicon* to root knot nematodes by Benzothiazol. J.Biotech.Cent.(in press). **Iraq**
62. **Fattah, F.A.** and A.Alton. 2014. Host-parasite relationship of *Pasteuria penetrans* and *Meloidogyne* Spp at the molecular level. The Iraqi J.Agric.Scie. (in press). **Iraq**
63. Saleh, H.M., H.M. Aboud , M.A. Kgzal and **F.A. Fattah**. 2014. Histopathology of root knot nematodes and interaction of *Meloidogyne javanica* with *Fusarium* sp. and *Thelaviopsis paradoxa* on date palm, *Phoinex dactylifera* seedlings. Date Palm Journal. **Iraq**