

C. V.

PERSONAL BIODATA

Name: Babak

Family Name: Pakdaman Sardrood

Date of Birth: March 30, 1974

Place of Birth: Tabriz

Country of Permanent Residence: Iran

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Marital state: Married with Behnaz Aftabi (with an 8 month baby, Sepehr)

DEGREES

Type of Certificate	Year	School/ University	Cumulative GPA (total score is 20.00)
Diploma (Empirical Science)	1988-1992	Ferdowsi High School, Tabriz	18.47
B. Sc. (Plant Protection)	1992-1996	Azarabadegan University, Tabriz	17.38
M. Sc. (Plant Pathology)	1996-1999	Tarbiat Modares University, Tehran	18.47
Ph. D.	2008-2013	Tarbiat Modares University, Tehran	18.47

M. Sc. Thesis Title: Application of semi-purified phytotoxins of *Fusarium graminearum* for evaluation of head blight resistance in wheat- *The dissertation includes a globally new finding and precedes the finding of the Austrian Group published by CIMMYT.*

Ph. D. Thesis Title: Study on the Entomopathogenicity of *Trichoderma* Species and the Generation of a Transgenic *Trichoderma* for the Effective Biocontrol of Insect and Fungal Pests- *The dissertation includes 11 globally new findings from molecular and non-molecular methodologies to new discoveries in the fields of Molecular Biology, Medicinal Plants, and Mycology.*

Scientific Interest: Plant Pathology, Fungal Plant Diseases, Biological Control, Fungal Genetics and Mycotechnology, Agrobiotechnology

HONOURS AND AWARDS

- 1- Various gifts awarded along all my studies till my high school course termination because of being the first or the second top student
- 2- Being the first top student among the students of Empirical Science, in Ferdowsi high school, in 1992
- 3- An appreciation letter for a seminar about the fungal cell walls and membranes at Tabriz University
- 4- Being the second top student among Plant Protection students of Tabriz University in 1996
- 5- Extension of academic studies as an M. Sc. exhibitioner financially supported by the Iranian Ministry of Agriculture
- 6- An appreciation letter because of being the first top student among other Plant Pathology M. Sc. students in Tarbiat Modarres University, in 1999
- 7- 400, 000 rials rewarded by the Iranian Ministry of Agriculture in 1999
- 8- The first global introduction of the antifungal activities of the herbicides Ethalfuralin, Diclofop-methyl, Cycloxydim, Haloxyfop ethoxy ethyl and Clodinafop
- 9- Ph. D. Exhibitioner financially supported by Ramin Agricultural and Natural Resources University, Ahwaz, Iran

WORK EXPERIENCE

- 1- Translation and edition of academic articles in Tarbiat Modarres University, Tehran, Iran
- 2- Edition of the book, “Complementary Mycology” written by Mr. Dr. Peighami at Tabriz University, Tabriz, Iran

- 3- Preparation of academic and educational charts about fungal biology at Tabriz University, Tabriz, Iran
- 4- Working as a researcher in the Plant Pathology Department in Agricultural and Natural Resources Research Center of Moghan (4 months)
- 5- Working as a researcher in Plant Pest and Disease Research Institute (PPDRI), Tehran, Iran (2 years)
- 6- Working as a visiting researcher in the Institute for Plant Breeding and Plant Protection , Martin-Luther-University, Halle-Wittenberg, Halle, Germany (17 months)
- 7- Working as a researcher in Agricultural Biotechnology Research Institute of Iran (ABRII), Karaj, Tehran, Iran (2 years)
- 8- Working as a research assistant in the Group for Gene Technology and Applied Biochemistry, Institute of Chemical Engineering, Vienna University of Technology, Vienna, Austria (2 months)
- 9- Working as a researcher in the Department of Plant Protection, West Azerbaijan Agricultural and Natural Resources Research Center, Urmia, Iran (2 years)
- 10- Working as an academic lecturer in the Department of Plant Protection, Agricultural Faculty, Ramin Agricultural and Natural Resources University, Ahwaz, Iran (since 4 years ago till now)

RESEARCH EXPERIENCE

- 1- Study on the possibility of *Fusarium graminearum* semi-purified phytotoxins application for valuation of the wheat cultivar resistance to fusarium head blight disease
- 2- Study on the efficacy of various fungicides in rapeseed sclerotinal stem rot control through plant shoot sprayings
- 3- Investigation on the possibility of rapeseed sclerotinal stem rot biological control by *Trichoderma* genus belonged antagonistic microorganisms under field conditions
- 4- Antifungal activity of *Bacillus thuringiensis* bacteria isolated from the rhizosphere of tomato plants
- 5- Antifungal activity of *Sternbergia* bulb extract

MEMBERSHIP IN SCIENTIFIC SOCIETIES

- 1- The Iranian Phytopathological Society
- 2- Research Scientist in the Scientific Society of the Plant Pest and Disease Research Institute, Tehran, Iran
- 3- The Iranian Bio-Safety Society

LIST OF PUBLICATIONS

A. RESEACH PAPERS IN INTERNATIONAL JOURNALS

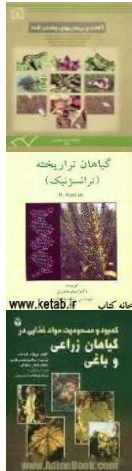
- 1- **Pakdaman, B. S.**, Goltapeh, E. M., Alizadeh, A., Allameh, A. A. (2006). Effects of *Fusarium graminearum* semi-purified phytotoxins on wheat germinating seeds and tissue in relation to fusarium head blight resistance of wheat. *Journal of Indian Phytopathology* 59: 26-31.
- 2- **Pakdaman, B. S.**, Khabbaz, H., Goltapeh, E. M., and Afshari, H. A. (2002). *In vitro* studies on the effects of sugar beet field prevalent herbicides on the beneficial and deleterious fungal species. *Pakistan Journal of Plant Pathology* 1: 23-24.
- 3- **Pakdaman, B. S.**, and Goltapeh, E. M. (2006). An *in vitro* study on the possibility of rapeseed white stem rot disease control through the application of prevalent herbicides and *Trichoderma* species. *Pakistan Journal of Biological Sciences* 10:7-12.
- 4- Fazeli Sabzvar, Mirabdulbaghi, M., Zarghami, R., and **Pakdaman, B. S.** (2006). Minituber production as affected by planting bed composition and node position in tissue cultured plantlet in two potato cultivars. *Pakistan Journal of Biological Sciences* 9: 416-418.
- 5- Mohammadi Goltapeh, E., Aggarwal, R., **Pakdaman, B. S.**, and Renu (2007). Molecular characterization of *Aspergillus* species through amplicon length polymorphism (ALP) using universal rice primers. *Intenational Journal of Agricultural Technology* 3: 29-37.
- 6- Chaloushi, B., Zarghami, R., Abd-Mishani, C., Omid, M., Agayev, Y. M., and **Pakdaman, B. S.** (2007). Effects of different hormonal treatments on the callus production and plantlet regeneration in saffron (*Crocus sativus* L.). *Pakistan Journal of Biological Sciences* 10: 1625-1631.
- 7- Seiboth, B., **Pakdaman, B. S.**, Hartl, L., and Kubicek, C. P. (2007). Lactose metabolism in filamentous fungi: how to deal with an unknown substrate. *Fungal Biology Reviews* 21: 42-48.

- 8- **Pakdaman, B. S.**, Mohammadi Goltapeh, E., Sepehrifar, R., Pouriesa, M., Rahimi Fard, M., Moradi, F., and Modarres, S. A. M. (2007). Cellular membranes as the sites for the antifungal activity of the herbicide sethoxydim. *Pakistan Journal of Biological Sciences* 10: 2480-2484.
- 9- Mohammadi Goltapeh, E., Shams-Bakhsh, M., and **Pakdaman, B. S.** (2008). Sensitivity of the nematophagous fungus *Arthrospora oligospora* to fungicides, insecticides and crop supplements used in the commercial cultivation of *Agaricus bisporus*. *Journal of Agricultural Research and Technology* 10: 383-389.
- 10- Zarghami, R., Pirseyedi, M., Hasrak, S., and **Pakdaman, B. S.** (2008). Evaluation of genetic stability in cryopreserved *Solanum tuberosum*. *African Journal of Biotechnology* 7: 2798-2802.
- 11- Ghafarokhy, M. R., Goltapeh, E. M., Pourjam, E., **Pakdaman, B. S.**, Modarres Sanavy, S. A. M., and Varma, A. (2011). Potential of mycorrhizal-like fungi and *Trichoderma* species in biocontrol of take-all disease of wheat under greenhouse condition. *Journal of Agricultural Technology* 7: 185-195.
- 12- Kari, H. D., Mohammadi Goltapeh, E., Moieni, A., Jaimand, K., **Pakdaman, B. S.**, and Varma, A. (2011). Effect of *Piriformospora indica* and *Sebacina vermifera* on plant growth and essential oil yield in *Thymus vulgaris*. *Symbiosis* 53: 29-35.
- 13- Mohammadi, N., Puralibaba, H., Goltapeh, E. M., Babaie Ahari, A., and **Pakdaman, B. S.** (2012). Advanced lentil lines screened for resistance to *Fusarium oxysporum* f. sp. *lentis* under greenhouse and field conditions. *Phytoparasitica* 40: 69-76.
- 14- **Pakdaman, B. S.**, Mohammadi Goltapeh, E., Allameh, A. A., and Alizadeh, A. (2013). Production of deoxynivalenol by *Fusarium graminearum* Schwabe in culture and its toxicity to wheat germings in relation to virulence. *African Journal of Agricultural Research* 8: 3598-3603.
- 15- **Pakdaman, B. S.**, Goltapeh, E. M., Soltani, B. M., Talebi, A. A., Naderpoor, M., Kruszezwska, J. S., Pilsyk, S., Sarrocco, S., and Vannacci, G. (2013). Toward the quantification of confrontation (dual culture) test: a case study on the biological control of *Pythium aphanidermatum* with *Trichoderma asperelloides*. *Journal of Biofertilizers & Biopesticides* 4: 137. doi: 10.4172/ 2155-6202.1000137
- 16- Osdaghi, E., **Pakdaman, B. S.**, Bavi, M., Akbari, N. O., Kimiaei, S., and Hadian, S. (2014). First report of *Curtobacterium flaccumfaciens* pv. *flaccumfaciens* causing cowpea bacterial wilt in Iran. *Journal of Phytopathology*, DOI: 10.1111/jph.12300

B. RESEARCH PAPERS IN NATIONAL JOURNAL

- 1- **Pakdaman, B. S.**, Goltapeh, E. M., Alizadeh, A., Allameh, A. A., (2003). Application of *Fusarium graminearum* semi-purified phytotoxins in the evaluation of various wheat cultivars partial resistance to head blight disease. *Journal of Agricultural Science and Natural Resources* 10: 137-147.

C. BOOKS and BOOK CHAPTERS



1. “Compendium of Beet Diseases and Insects” translated by Dr. E. M. Goltapeh, **B. S. Pakdaman**, and Y. Rezaei Danesh. Published by Tarbiat Modarres University Publication Center in 1999

2. “Transgenic Plants” translated by Dr. A. Heydari, and **B. S. Pakdaman**. Published by Sabzandishan Publishing Co. in 2003

3. “Nutrient Deficiencies & Toxicities in Crop Plants” translated by Dr. E. M. Goltapeh, Dr. E. Purjam, Dr. M. J. Malakuti, and **B. S. Pakdaman**. Published by Avaye Noor Co. in 2010

4. “Soil & Seed Fungi” translated by **B. S. Pakdaman.**, Dr. E. M. Goltapeh, and Dr. N. Mohammadi. Publication Center (in press)

5. “An Introduction to Bioremediation” by **B. S. Pakdaman**, E. M. Goltapeh, A. Varma in “Fungi as Bioremediators, Soil Biology, Vol. 32” edited by E. M. Goltapeh, Y. D. Rezaei, and A. Varma. Published by Springer Co. in 2013



6. “Fusarium Blight Disease of Wheat Head- Extensional Publication” by G. Khalilzadeh, **B. S. Pakdaman**, and P. Agazadeh. Published by Agricultural Extension Management, West Azerbaijan Agricultural Organization in 2010

D. CONTRIBUTIONS TO FOREIGN CONFERENCES AND CONGRESSES

- 1- **Pakdaman, B. S.**, Komijani, S., Afshari, H. A., and Goltapeh, E. M. (2002). An *in vitro* study on the possibility of rapeseed white stem rot disease control through the application of prevalent herbicides and *Trichoderma* species. p. 91. 53. Deutsche Pflanzenschutztagung (53. DPST), Bonn, Germany.
- 2- **Pakdaman, B. S.**, Khabbaz, H. J., Goltapeh, E. M., and Afshari, H. A. (2002). *In vitro* studies on the effects of sugar beet field prevalent herbicides on the

- beneficial and deleterious fungal species. p. 103. 53. Deutsche Pflanzenschutztagung (53. DPST), Bonn, Germany.
- 3- **Pakdaman, B. S.**, Goltapeh, E. M., and Afshari, H. A. (2003). Production of Indole and its derivatives by various pathogenic, ectomycorrhizal fungi and plant disease biocontrol agents. The 6th International PGPR (Plant Growth Promoting Rhizobacteria) Workshop, Kozhikoda (Calicut), India.
 - 4- **Pakdaman, B. S.**, Sepehrifar, R., Pouriesa, M., Rahimi Fard, M., Moradi, F., and Goltapeh, E. M. (2006). Plasma membrane as the target site for the antifungal activity of the herbicide sethoxydim. p. 93. 8th Conference of European Foundation for Plant Pathology & British Society of Plant Pathology Presidential Meeting, Copenhagen, Denmark.
 - 5- **Pakdaman, B. S.**, and Kariman, K. (2006). Sethoxydim, a herbicide with potentially increasing effects on the virulence of fusarium head blight causal *Fusarium* species. p. 99. 8th Conference of European Foundation for Plant Pathology & British Society of Plant Pathology Presidential Meeting, Copenhagen, Denmark.
 - 6- Kariman, K., Goltapeh, E. M., Minasian, V., **Pakdaman, B. S.**, and Danesh, Y. R. (2006). Evidences on mycoparasitism in spores of AM fungi isolated from sugar cane fields of Iran. p. 125. The 5th International Symbiosis Symposium, Vienna, Austria.
 - 7- **Pakdaman, B. S.**, Goltapeh, E. M., Kruszewska, J. S., Mohammad Soltani, B., Pilzyk, S., Komon-Zelazowska, M., Druzhinina, I., Pajhoohandeh, M., Sarrocco, S., Vannacci, G., Kubicek, C. P., and Deising, H. B. (2012). Insect-specific sodium ion pump targeting μ -Agatoxin IV peptide inhibits *Trichoderma asperellum* conidiation. p. 21. 2012 International Congress on Invertebrate Pathology and Microbial Control and 45th Annual Meeting of the Society for Invertebrate Pathology Program and Abstracts. Centro de Convenciones de la UCA Puerto Madreo, Buenos Aires, Argentina.

E. CONTRIBUTIONS TO THE NATIONAL CONFERENCES AND CONGRESSES

- 1- **Pakdaman, B. S.**, Goltapeh, E. M., Alizadeh, A., and Allameh, A. A. (2000). Comparison of deoxynivalenol production potential in different isolates of *Fusarium graminearum* and evaluation of its inhibitory effect on wheat seed germination. The 14th Iranian Plant Protection Congress.
- 2- **Pakdaman, B. S.**, Goltapeh, E. M., Alizadeh, A., and Allameh, A. A. (2000). Effects of *Fusarium graminearum* semi-purified phytotoxins on wheat

- germinating seeds and tissues in relation to fusarium head blight resistance of wheat. The 14th Iranian Plant Protection Congress.
- 3- **Pakdaman, B. S.**, Goltapeh, E. M., Alizadeh, A., and Allameh, A. A. (2002). Effect of light on the reaction of wheat coleoptiles to the various concentrations of semi-purified phytotoxins of *Fusarium graminearum*, head blight pathogen. The 15th Iranian Plant Protection Congress.
 - 4- **Pakdaman, B. S.**, Khabbaz, H. J., Afshari, H. A., and Goltapeh, E. M. (2002). Study on the effects of various metal ions on the growth of the pathogenic fungi, *Fusarium oxysporum*, *Macrophomina phaseolina*, *Ceratocystis radicola*, and the fungus *Trichoderma* sp. The 15th Iranian Plant Protection Congress.
 - 5- **Pakdaman, B. S.**, Khabbaz, H. J., Goltapeh, E. M., and Afshari, H. A. (2002). The estimation of ecotoxicological effects of sugar beet field prevalent herbicides residues on the various fungal populations. The 15th Iranian Plant Protection Congress.
 - 6- Naderpour, M., Safaie, N., and **Pakdaman, B. S.** (2013). Morphological, virulence and genetic diversity of *Macrophomina phaseolina* isolates from sesame plants in Iran. 1st Iranian Mycological Congress, University of Guilan, Rasht, Iran.
 - 7- Monjezi, Z. A. S., Meratan, A. A., Farkhari, M., Babaeizad, V., and **Pakdaman, B. S.** (2015). Effect of endophyte fungus, *Piriformospora indica*, to increase resistance of *Zea mays* to salinity stress. 1st International and 9th National Biotechnology Congress of Islamic Republic of Iran. Shahid Beheshti University, Tehran, Iran.
 - 8- Monjezi, Z. A. S., Farkhari, M., Meratan, A. A., **Pakdaman, B. S.**, and Babaeizad, V. (2015). Study the effect of *Piriformospora indica* fungus on the antioxidant enzymes activity of *Zea mays* under salinity stress. 1st International and 9th National Biotechnology Congress of Islamic Republic of Iran. Shahid Beheshti University, Tehran, Iran.

LIST OF THESES AND DISSERTATIONS SUPERVISED OR ADVISED

F. MSc THESES SUPERVISED

G. MSc THESES ADVISED

1. Akbari, Z. 2015. The Interaction Effect of Mycorrhizal Fungus *Rhizophagus irregularis* and *Trichoderma asperelloides* on Absorption of Some Nutrients and

- Growth Parameters of Clover under Drought. Thesis for Master of Science (M. Sc.) in Chemistry and Soil Fertility. Department of Soil Science, College of Agriculture, Ramin Agriculture and Natural Resources University of Khuzestan, Sep. 2015.
2. Tahmasebi, M.K.A. 2015. Study on the Effect of Endophytic Fungus *Piriformospora indica* on Growth and Salt Tolerance in *Rosa damascena* Mill. Thesis for Master of Science (M. Sc.) in Ornamental Plant Science. Department of Horticulture, College of Agriculture, Ramin Agriculture and Natural Resources University of Khuzestan, Nov. 2015.
 3. Mohammadpoor, F.S.A. 2015. Study on Thermostable Secretion of the Fungus *Piriformospora indica* on Growth and Some of the Biochemical and Physiological Parameters of *Brassica napus* Plant under *In Vitro* Conditions. Thesis for Master of Science (M. Sc.) in Plant Breeding. Department of Agronomy and Plant Breeding, College of Agriculture, Ramin Agriculture and Natural Resources University of Khuzestan, Oct. 2015.
 4. Sayyadian, I. 2017. Morphological, Physiological and Biochemical Assessment of Different Corn Hybrids under the Influence of the Endosymbiotic Fungus *Piriformospora indica* in Response to Heat Stress. Thesis for Master of Science (M. Sc.) in Plant Breeding. Department of Agronomy and Plant Breeding, College of Agriculture, Ramin Agriculture and Natural Resources University of Khuzestan, Jan. 2017.

H. PhD DISSERTATIONS SUPERVISED

I. PhD DISSERTATIONS ADVISED

J. AQUAINTANCE WITH SCIENTIFIC TECHNIQUES

- 1- Isolation and cultivation of fungi and bacteria (Practically worked)
- 2- Identification of fungi through microscopy (Practically worked)
- 3- ED₅₀ determination and calculation (Practically worked)
- 4- Thin Layer Chromatography (TLC) (Practically worked)
- 5- Extraction of *Fusarium* mycotoxins (trichothecenes and zearalenone) (Practically worked but with simple facilities)
- 6- DNA extraction and purification (Practically worked)
- 7- Polymerase Chain Reaction (PCR) (Practically worked)
- 8- DNA electrophoresis (Practically worked)
- 9- Cloning of PCR amplified DNA fragments on vector plasmids (Practically worked)
- 10- Electroporation of *Escherichia coli* (Practically worked)

- 11- Transformation of *Escherichia coli* through cold shock (Practically worked)
- 12- Southern blotting (not independently worked)
- 13- Non-radioactive digoxigenin- and PCR-based probe synthesis (Not independently worked)
- 14- Fluorescent microscopy (Not independently worked)
- 15- Double-Joint-PCR (Practically worked)
- 16- Preparation of yeast competent cells and electroporation of *Pichia pastoris* (Practically worked)
- 17- RNA extraction and cDNA synthesis (Practically worked)
- 18- Transformation of *Trichoderma asperelloides* protoplasts (Practically worked)
- 19- Working on activity of secreted enzymes like chitinases, and proteases (Practically worked)

K. Referees

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