Mansoor Karimi-Jashni, *Curriculum vitae*

(Updated 05-12-2024)

1. Biography

Name: Mansoor Karimi-Jashni

Title: Assistant Professor at Tarbiat Modares University, PhD

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E-mail: mkjashni@modares.ac.ir, mkjashni@gmail.com

Address: Department of Plant Pathology, Tarbiat Modares University, Tehran, Iran

2. Education:

Type of certificate	year	University
B.Sc. (Plant Protection)	2001	Shiraz University Shiraz, Iran
M.Sc. (Plant Pathology)	2005	University of Tehran Tehran, Iran
PhD (Molecular Plant pathology) Plant-Microbe Interaction	2015	Wageningen University Wageningen, The Netherlands

3. Language skills: Persian, English, Dutch,

4. Publications/presentations:

4.1. Full papers

2024

1. **M. Karimi-Jashni**, F. Khanboluki and M. Nasrollahi. 2024. Allelic variation of the AvrSr50 effector increased virulence of the *Puccinia graminis* f. sp. *tritici* on Sr50-carrying wheat lines. Journal of Advances in Plant Protection. In press.

2. **M. Karimi-Jashni**. 2024. Glycosylation Analysis of Avr9 Effector of *Cladosporium fulvum*, the Fungal Pathogen of *Solanum lycopersicum*. Agrotechniques in Industrial Crops 4 (4), 180-188.

3. F. Khanboluki, M. Nasrollahi and **M. Karimi-Jashni**. 2024. Virulence analysis of wheat stem rust pathogen (*Puccinia graminis* f. sp. *tritici*) in Iran using differential lines. Journal of General Plant Pathology 90 (5), 267-272.

4. H. Golafrouz, N. Safaie, S. M. Zamani, D. Safaee and **M. Karimi-Jashni**. 2024. Identification and evaluation of the prevalence of fungi associated with charcoal disease in oak forests of Iran. Iranian Journal of Plant Pathology. 59 (3), 235-251.

2023

5. H. Samavatian, B. Soltani, F. Yousefi, **M. Karimi-Jashni** and R. Mehrabi. 2023. Susceptible and resistant wheat cultivars show different miRNAs expression patterns in response to *Zymoseptoria tritici*. Journal of Plant Pathology, 1-11 (IF: 1.10 Q2).

6. **M. Karimi-Jashni**, Farzaneh Yazdanpanah. 2023. Mycorrhizal Networks: A Secret Interplant Communication System in "Plant Mycobiome: Diversity, Interactions and Uses". 447-467. Springer International Publishing.

2022

7. Zhang Y, Wu X, Wang W, Xu Y, Sun H, Cao Y, Li T, **Karimi-Jashni M**., 2022. Virulence characteristics of Blumeria graminis f. sp. tritici and its genetic diversity by EST-SSR analyses. PeerJ 10: e14118 (IF 3.2 Q1).

8. **Karimi-Jashni M.,** Maeda K, Yazdanpanah F, de Wit PJ, Iida Y., 2022. An Integrated Omics Approach Uncovers the Novel Effector Ecp20-2 Required for Full Virulence of *Cladosporium fulvum* on Tomato. Frontiers in microbiology 13: 919809 (IF 6.1 Q1).

2020

9. **Karimi Jashni M.**, van der Burgt A., Battaglia E., Mehrabi R., Collemare J., and de Wit P.J.G.M. 2019. Transcriptome and proteome analyses of proteases in biotroph fungal pathogen *Cladosporium fulvum.* Journal of Plant Pathology. 102: 377-386. (IF: 1.10 Q2).

2019

10. Yazdanpanah F., Veronica M., Tabea M. Gonda B., Marlene B., **Karimi Jashni M.,** Lidiya S., Loïc R., Hilhorst, H., Bentsink, L. 2018. NADP−MALIC ENZYME 1 affects germination after seed storage in *Arabidopsis thaliana*. Plant and Cell Physiology. 60(2): 318–328 (IF: 4.4- Q1 JCR 7.66%).

2018

11. Mesarich Carl H., Okmen B., Rovenich H., Griffiths S.A., Wang C., **Karimi Jashni M.** Mihajlovski A., Collemare J., Hunziker L., Deng C. H., van der Burgt A., Beenen H.G., D. Templeton M., Bradshaw R. E., and de Wit P. J.G.M. 2018. Specific hypersensitive response-associated recognition of new apoplastic effectors from *Cladosporium fulvum* in wild tomato. Molecular Plant-Microbe interaction 31: 145-162. (IF: 3.8 Q1 JCR 8.74%).

2016

12. Mesarich, C.H., Stergiopoulos I., Beenen H.G., Cordovez V., Guo Y., **Karimi Jashni M.,** Bradshaw R.E. and de Wit, P.J.G.M. 2016. A conserved proline residue within Dothideomycete Avr4 effector proteins

is required to trigger a Cf-4–dependent hypersensitive response. Molecular Plant Pathology. 17(1): 84-95. DOI: 10.1111/mpp.12265. (IF: 4.7 Q1 JCR 6.6%).

2015

13. **Karimi Jashni M.,** Mehrabi R., Collemare J., Mesarich C. H., and de Wit P.J.G.M. 2015. The battle in the apoplast: further insights into the roles of proteases and their inhibitors in plant-pathogen interactions. Frontiers in plant Science. 6:584. (IF: 4.3 Q1 JCR 7.28%).

14. **Karimi Jashni M.,** Dols I., Iida Y., Boeren S. Mehrabi, R., Collemare J., and de Wit P.J.G.M. 2015. Synergistic action of a metalloprotease and a serine protease from *Fusarium oxysporum* f. sp. *lycopersici* cleaves chitin-binding tomato chitinases, reduces their antifungal activity, and enhances fungal virulence. Molecular Plant-Microbe interaction. 28(9):996-1008. (IF: 3.8 Q1 JCR 8.74%- **Highly cited 3%**).

2014

15. Collemare J., Griffiths S., Iida Y., **Karimi Jashni M.,** Battaglia E., Cox R.J. and de Wit, P.J.G.M. 2014. Secondary Metabolism and Biotrophic Lifestyle in the Tomato Pathogen *Cladosporium fulvum*. PLoS ONE 9, e85877. (IF:2.7 Q1 JCR 13.16%).

16. van der Burgt A., **Karimi Jashni M**., Bahkali A.H. and de Wit, P.J.G.M. 2014. Pseudogenization in pathogenic fungi with different host plants and lifestyles might reflect their evolutionary past. Molecular Plant Pathology 15: 133-144. (IF:4.7 Q1 JCR 6.6%).

2012

17. de Wit, P.J.G.M., van der Burgt, A., Ökmen, B., Stergiopoulos, I., Abd-Elsalam, K.A., Aerts, A.L., Bahkali, A.H., Beenen, H.G., Chettri, P., Cox, M.P., Datema, E., de Vries, R.P., Dhillon, B., Ganley, A.R., Griffiths, S.A., Guo, Y., Hamelin, R.C., Henrissat, B., Kabir, M.S**., Karimi Jashni, M.,** Kema, G., Klaubauf, S., Lapidus, A., Levasseur, A., Lindquist, E., Mehrabi, R., Ohm, R.A., Owen, T.J., Salamov, A., Schwelm, A., Schijlen, E., Sun, H., van den Burg, H.A., van Ham, R.C.H.J., Zhang, S., Goodwin, S.B., Grigoriev, I.V., Collemare, J. and Bradshaw, R.E. 2012. The genomes of the fungal plant pathogens *Cladosporium fulvum* and *Dothistroma septosporum* reveal adaptation to different hosts and lifestyles but also signatures of common ancestry. PLoS Genetics 8, e1003088. (IF: 5.5 Q1 JCR 6.49%, **Highly cited 3%**).

2011

18. Mehrabi, R., Bahkali, A.H., Abd-Elsalam, K.A., Moslem, M., Ben M'Barek, S., Gohari, A.M., **Karimi Jashni, M.**, Stergiopoulos, I., and Kema, G.H.J., de Wit P.J.G.M. 2011. Horizontal gene and chromosome transfer in plant pathogenic fungi affecting host range. FEMS Microbiology Reviews: 35:542-54. (IF: 13.90 Q1 JCR 3.25%).

2010

19. Razavi, M., **Karimi Jashni, M**., Dehgan, M. A., Safavi, S. A. and Barari, H. 2010. Study on the variability for virulence in *Blumeria graminis* f. sp. *tritici* cause of wheat powdery mildew using trap nursery in Iran. Applied Entomology and Phytopathology 78:96-106.

2009

20. **Karimi Jashni, M.**, Torabi, M., Roustaie. A., Etebarian, H.R., and Okhovat, S.M. 2009. Study on some components of resistance and development of *Blumeria graminis* f.sp. *tritici*, in six wheat Lines. Seed and Plant 25:245-262.

21. Razavi, M., Dehgan, M. A., Safavi, S. A., Barari, H., Torabi, M., **Karimi Jashni, M.,** and Kazemi H. 2009. Evaluation of the field and seedling resistance of some advanced and elite lines of wheat to *Blumeria graminis* f. sp. *tritici* cause of powdery mildew of wheat in Iran. Applied Entomology and Phytopathology 77:133-150.

22. Yazdanpanah, F., Tohidfar, M., Esna Ashari, M., Ghareyazi, B., **Karimi Jashni, M.,** and Mosavi, M. 2009. Enhanced insect resistance to bollworm (*Helicoverpa armigera*) in cotton containing a synthetic cry1Ab gene. Indian Journal of Biotechnology 8: 72-77.

2006

23. **Karimi Jashni, M.**, Torabi, M., Roustaie, A., Etebarian, H.R., Okhovat, S.M., Razavi, M., and Yazdanpanah, F. 2006. Pathotypes of *Blumeria graminis* (Dc. Ex Merat) Speer f. sp. *tritici*, the causal agent of wheat powdery mildew from some regions of Iran. Seed and Plant 22:257-271.

2005

24. **Karimi Jashni, M.**, Torabi, M., Rustaee, A., Etebarian, H.R., Okhovat, M., Razavi, M., and Yazdanpanah, F. 2005. Evaluation of resistance of some wheat commercial cultivars and advanced lines to pathotypes of *Blumeria graminis* (Dc. Ex Mert) Speer f.sp. *tritici*, in greenhouse. Seed and Plant 21:411-423.

4.2. Oral Presentations:

1. T. Rajabi, F. Dolatabadi and **M. Karimi-Jashni**. Allelic variation of AvrSr50-encoding gene and its impact on the virulence of Puccinia graminis f. sp. tritici on wheat. 25th Iranian Plant Protection congress. 7-10 Sep 2024. Tehran. Iran.
2. F. Dolatabadi and **M. Karimi-Jashni**. Amino acid polymorphism in solanaceous Rcr3 and its impact on recognition of Cladosporium fulvum Avr2; *In silico* study. 25th Iranian Plant Protection congress. 7-10 Sep 2024. Tehran. Iran.

3. H. Ghasemi, M. Sadeghi, R. Rooh-Parvar and **M. Karimi-Jashni.** Genetic of pathogenicity of wheat stem rust pathogen (*Puccinia graminis* f. sp. *tritici*) using differential lines. Proceeding of the 5th Iranian Mycological Congress. 26-28 August 2023, Tabriz, Iran.

4. F. Khanboluki, M. Nasrollahi and **Karimi-Jashni, M**. Evaluation of AvrSr35 and AvrSr50 effectors in isolates of *Puccinia graminis* f. sp. *tritici* the causal agent of wheat stem rust. Proceeding of the 2st Iranian Plant Pathology Congress. 3-6th Sep 2022, Tehran, Iran.

5. F. Khanboluki, Mahmoud Nasrollahi and **Karimi-Jashni, M**. Virulence variability of *Puccinia graminis* f. sp. *tritici* the causal agent of wheat stem rust in Iran. Proceeding of the 24st Iranian Plant protection Congress. 3-6th Sep 2022, Tehran, Iran.

6. **Karimi Jashni, M.** and Iida, Y. A novel *Cladosporium fulvum* candidate effector binds to tomato *β-glucanase*. Proceeding of the 1st Iranian Plant Pathology Congress. 31st Aug-1st Sep 2019, Karaj, Ian.

7. **Karimi Jashni, M.** and Razavi M. Prevalence of Alternaria disease on leaf and spike of wheat in Iran. proceeding of the 1st Iranian Plant Pathology Congress. 31st Aug-1st Sep 2019, Karaj, Iran.

8. **Karimi Jashni, M.** Mahdavi, M. and Razavi M. Study on the virulence variability of *Puccinia graminis* f. sp. *tritici* the causal agent of wheat stem rust in Iran. Proceeding of the 1st Iranian Plant Pathology Congress. 31st Aug-1st Sep 2019, Karaj, Iran.

9. **Karimi Jashni, M.** Importance of plant chitinase cleavage in virulence of tomato fungal pathogens. Proceeding of the 22nd Iranian Plant Protection Congress. 27nd -30th Aug 2016, Karaj, Iran.

10. **Karimi Jashni, M.**, Collemare, J., Mehrabi, R., and de Wit, P.J.G.M. Identification of fungal proteases responsible for proteolytic cleavage of tomato chitinases. 16th Molecular plant microbe interaction Conference (MPMI XVI), 6th-10th July 2014, Rhodos, Greece.

11. **Karimi Jashni, M.**, Collemare, J., Mehrabi, R., and de Wit, P.J.G.M. Proteases secreted by plant fungal pathogens cleave host chitinases. 5th European plant science retreat for PhD students, 23rd – 26th July 2013, Ghent, Belgium.

12. Razavi, M., Torabi, M., **Karimi Jashni, M.,** and Kazemi H. Physiological races of *Blumeria graminis* f.sp. *tritici* the causal agent of wheat powdery mildew in Iran. Proceeding of the 18th Iranian Plant Protection Congress. 25th -28th August 2008, Hamadan, Iran.

13. Razavi, M., Torabi, M., **Karimi Jashni, M.,** and Kazemi, H. Virulence variability among isolates of *Blumeria graminis* f. sp. *tritici* from wheat in Iran. Proceeding of the APS.CPS. MCA Joint Meeting. (Phytopathology 96:S96). 29th July – 2nd August, 2006.

14. **Karimi Jashni, M.**, Torabi, M., Rustaee, A., Etebarian, H.R, and Okhovvat, M. Investigation of the resistance components and histopathologicl resistance mechanism in some wheat advanced lines to *Blumeria graminis* f. sp. *tritici*. Proceeding of the 17th Iranian Plant Protection Congress. 2nd -5th September 2006, Karaj, Iran.

15. Razavi, M., Torabi, M., **Karimi Jashni, M.** and Kazemi, H. Pathogenic diversity among isolates of *Blumeria graminis* f. sp. *tritici* from wheat in Iran. Proceeding of the APS.CPS. MCA Joint Meeting. (Phytopathology 95:S87). 30th July – 3rd August, 2005. Austin, Texas.

16. **Karimi Jashni, M.,** Torabi, M, Rustaee, A., Etebarian, H.R, and Okhovvat, M. Determination of Virulence factors in the population of *Blumeria graminis* f. sp. *tritici* in north of Iran. Proceeding of the 16th Iranian Plant Protection Congress. 28th – Sep 1st August 2004, Tabriz, Iran.

4.3. Poster presentations:

1. Hadi Ghasemi, N. Safaie and **M. Karimi-Jashni**. Evaluation of genetic diversity among isolates of Puccinia graminis f. sp. tritici using SSR molecular markers. Proceeding of the 5th Iranian Mycological Congress. 26-28 August 2023, Tabriz, Iran.

2. Jafar Fathi Qarachal, Youbert Ghosta, **Mansoor Karimi-Jashni**. First report of pathogenicity of *Alternaria tenuissima* on spider plant (*Chlorophytum comosum* (Thunb.) Jacques) from Iran. Proceeding of the 5th Iranian Mycological Congress. 26-28 August 2023, Tabriz, Iran.

3. Mesarich, C. H., Okmen B., Rovenich H., **Karimi Jashni M.,** Wang C., Griffiths S., Collemare, J., Deng C., and de Wit, P.J.G.M. Novel effectors identified in the apoplast of *Cladosporium fulvum*-infected tomato. 17th Molecular plant microbe interaction Conference (MPMI XVII). 17th-21th July 2016, Portland, Oregon, U.S.A.

4. **Karimi Jashni, M**., Mehrabi, R., Collemare, J., and de Wit, P.J.G.M. Identification of proteases from *Fusarium oxysporum* f. sp. *lycopersici* responsible for proteolytic cleavage of tomato chitinases. Workshop on structure-guided investigation of effector function, action and recognition. 10th -12th September 2014, Bucharest, Romania.

5. Iida, Y., Ökmen, B., **Karimi Jashni, M.,** Mesarich, C., Ikeda, K., Collemare, J., and de Wit P.J.G.M. Role of effector proteins secreted by *Cladosporium fulvum* against the mycoparasitic invasion. 16th Molecular plant microbe interaction Conference (MPMI XVI), 6th-10th July 2014, Rhodos, Greece.

6. Van der Burgt, A., van den Burg H., Stergiopoulos, I., Ökmen, B., Mehrabi, R., **Karimi Jashni, M**., Collemare J., Beenen, H.G., Bradshaw, R.E. Bahkali, A.H., Kema G., and de Wit, P. Comparison of the secretome of *Cladosporium fulvum* with that of other Dothideomycete fungi. 15-20/03/2011, 26th Fungal Genetics Conference, Asilomar, Pacific Grove, California, USA.

7. **Karimi Jashni**, M., van der Burgt, A., Mehrabi, R., van den Burg H., and de Wit, P.J.G.M. High level of Pseudogenization of protease genes in the fungal tomato pathogen *Cladosporium fulvum might* explain its biotrophic lifestyle. Plant proteases conference. 10th -14th April 2011, Sweden.

8. **Karimi Jashni, M**., Mehrabi, R., van den Burg H., and P.J.G.M. De Wit. Dissecting the role of *Cladosporium fulvum* secreted proteases. Fungal genetic conference (ECFG10). 29th March -01st April 2010, The Netherlands.

9. Razavi, M., Dehgan, M.A., Safavi, S.A., Barari, H., Torabi, M., **Karimi Jashni, M.,** Kazemi H. Evaluation of the field and seedling resistance of some advanced and elite lines of wheat to *Blumeria graminis* f.sp*. tritici* the causal agent of wheat powdery mildew in Iran. Proceeding of the 18th Iranian Plant Protection Congress. 25th -28th August 2008, Hamadan, Iran.

10. **Karimi Jashni M.,** Torabi M, Rustaee A, Etebarian H.R, Okhovvat M, and Razavi M. 2006. Evaluation of pathotypes of *Blumeria graminis* f.sp*. tritici* the causal agent of wheat powdery mildew in Mazandaran,

Golestan and Fars Provinces of Iran in greenhouse. 58th International Symposium on Crop Protection (ISCP). 23rd May 2006, Gent University, Belgium.

4.4. Books:

1. **Mansoor Karimi-Jashni**, Farzaneh Yazdanpanah. 2023. Mycorrhizal Networks: A Secret Interplant Communication System; in Plant Mycobiome. Pages 447-467. 10.1007/978-3-031-28307-9.

2. Ralph A. Dean, Ann Lichens-Park, Chittaranjan Kole (eds.) - Genomics of Plant-Associated Fungi: Monocot Pathogens (Springer) 2014. **Mansoor Karimi-Jashni**, Jafar fathi-gharchal and Hadi Ghasemi (Translated to Farsi, 2023).338 pages.

5. Research projects

1. Identify core effector candidates by comparative transcriptomics and proteomics in *Puccinia graminis* f.sp*. tritici* -wheat pathosystem (current).

2. Study the effector candidates by comparative transcriptomics and proteomics in *Cladosporium fulvum*-tomato (Current).

3. The possibility of using SSR markers for detection of *Puccinia graminis* f.sp. *tritici* in Iran (2016-2018).

4. Identification and functional analysis of proteases and protease inhibitors of tomato fungal pathogens (2009-2015, Wageningen University, The Netherlands).

5. Study on the genetic diversity of *Fusarium* Species, causal agents of wheat root and crown rot (2008-2012, Plant Protection institute, Tehran, Iran).

6. Comparison of root colonization ability for different genotypes of Pseudomonas species producing 2, 4-DAPG. 2008-2012, Plant Protection institute, Tehran, Iran).

7. Preparation of strategic research plan for wheat disease management in Iran. (2009, Plant Protection institute, Tehran, Iran).

8. Awards & achievements:

1. BMN: Young academic welcome grant. 2020 (IRAN, TMU)

2. BMN: Shahid Shahryari award, 2018 (IRAN).

3. BMN Kazem Ashtiani Award, 2017 (IRIPP, IRAN).

4. Johanna Westerdijk Foundation Travel Fund 2014 (Utrecht University)

5. Johanna Westerdijk Foundation Travel Fund 2010 (Utrecht University)

6. Cost Conference Foundation 2014 (INRA, France)

7. Scholarship: MSRT Doctoral Scholarship 2009 (Wageningen University)

9. Passed Courses/workshops

1. Spring School RNAi Silencing

2. Comparative proteomics

3. Bioinformatics: a user approach

4. Molecular phylogeny
5. Host-Microbe interactomics
6. The power of RNA seq
7. Time and project management

10. Teaching experiences:

1. Teaching PhD courses (Bioinformatics, Genetic of Pathogenicity of Plant Pathogens, Plant Resistance to Plant Disease), and MSc course (Molecular Methods in Plant Pathology, Mycology, Research Methodology) in TMU University, Tehran, Iran. 2019-Now.
2. Teaching Real Time-PCR course in IRIPP, IRAN. 2018
3. Assistance for courses in Molecular Plant pathology in Wageningen University in 2010-2011.
4. Teaching of toxicology in Zanjan and Shahed Universities in 2006 and 2007.

11. Supervision of students:

1. Supervision of PhD thesis for 3 PhD students. 2019-now.
2. Supervision of thesis for 7 MSc students, TMU. 2019-Now.
3. Supervision of thesis for 2 MSc students, Wageningen, 2014.
4. Supervision of MABI mini projects for 4 master students, Wageningen, 2013.

12. Experienced molecular techniques:

1. Genomics:

DNA and RNA isolation, cDNA synthesis, PCR, RT-PCR and qRT-PCR, Cloning (User friendly, Gateway, digestion ligation and plasmid construction), fungal, bacterial and plant transformation, Agarose gel electrophoresis, gel purification, overlapping PCR, Microsatellite and SSR studies, …

2. Proteomics:

Protein gel electrophoresis (SDS gel, native gel, low pH gels), protein synthesis and purification for normal and tagged-proteins on beads and columns, Immuno-detection, western blotting, far-western blotting, Mass spectrometry (sample preparation, HPLC, data analysis), pull down assay, Immuno-precipitation, Co-IP, folding and un-folding proteins, protease profiling, Enzyme activity assay, ...

3. Bioinformatics:

Bioinformatics activities including RNAseq seq analysis, Structural biology including 3-D models of protein structures, protein docking, designing plasmid maps, analysis of Mass-spectrometry data, designing primers, analyzing DNA and protein sequences in databases, Bioinformatic pipelines for analysis of localization, secretion and function of proteins,…

4. Greenhouse works:

Plant cultivation, Bioassays including inoculation of plant with different types of microbes, disease evaluation, working with the highest level of genetically modified organisms, isolation of Extracellular fluid from plants, …

13. <u>Inventions and innovations:</u>

1. Drip-drain irrigation system for trees and shrubs