

LIST OF PUBLICATIONS

Marks:

- X* Equal contribution as the first author
 X** Corresponding Author (in cases where the researcher is the Corresponding Author)

Marks (only for the first author):

- X^S Student under my supervision
 X^T Technician or research engineer working in my research team
 X^{PD}, X^{VS} Post-Doc or Visiting Scientist working in my research team

1. Articles in Reviewed Journals

1. Lichtenzveig, J., Gamliel, E., **Frenkel, O.**, Michaelido, S., Abbo, S., Sherman, A. and Shtienberg, D. (2005). Distribution of mating types and diversity in virulence of *Didymella rabiei* in Israel. *Eur. J. Plant Pathol.* 113: 15-24.
2. **Frenkel, O.**, Shtienberg, D., Abbo, S. and Sherman, A. (2007). The sympatric Ascochyta complex of wild *Cicer judaicum* and domesticated chickpea. *Plant Pathol.* 56: 464-471.
3. **Frenkel, O.**, Sherman, A., Abbo, S. and Shtienberg, D. (2008). Differential aggressiveness among *Didymella rabiei* isolates from domesticated chickpea and its sympatric wild relative *Cicer judaicum*. *Phytopathology* 98: 600-608.
4. **Frenkel, O.**, Peever, TL., Chilvers, MI., Ozkilinc, H., Can, C., Abbo S., Shtienberg, D. and Sherman, A. (2010). Ecological Genetic Divergence of the Fungal Pathogen *Didymella rabiei* on Sympatric Wild and Domesticated *Cicer* spp. *App. Environ. Microbiol.* 76: 30-39.
5. Ozkilinc, H., **Frenkel, O.**, Abbo, S., Eshed, R., Sherman, A., Shtienberg, D., Ophir, R. and Can, C. (2010). A comparative study of Turkish and Israeli populations of *Didymella rabiei*, the Ascochyta blight pathogen of chickpea. *Plant Pathol.* 59: 492-503.
6. **Frenkel, O.**, Yermiyahu, U., Forbes, GA., Fry, WE. and Shtienberg, D. (2010). Boron induces systemic acquired resistance against *Phytophthora infestans*. *Plant Pathol.* 59: 626-633.
7. **Frenkel, O.**, Brewer, MT. and Milgroom, MG. (2010). Variation in aggressiveness of *Erysiphe necator* from different *Vitis* species and geographic origins in the eastern United States. *Phytopathology* 100: 1185-1193.
8. Spanu, PD., Abbott, JC., Burgis, TA., Ahmadinejad, N., Ametz, C., Amselem, J., Barton, GR., Benjdia, M., Bidzinski, P., Bindschedler, LV., Both, M., Brewer, MT., Brown, JKM., Butcher, SA., Cadle-Davidson, L., Cadle-Davidson, M., Collemare, J., Cramer, R., Fransisco, LR., **Frenkel, O.**, Godfrey, D., Gurr, SJ., Harriman, J., Hoede, C., King, BC., Klages, S., Kleemann, J., Knoll, D., Koti, PS., Kreplak, J., Lebrun, MH., Lu, X., Maekawa, T., Mahanil, S., Milgroom, MG., Montana, G., Noir, S., O'Connell, RJ., Oberhänsli, S., Parlange, F., Pedersen, C., Quesneville, H., Reinhardt, R., Ridout, CJ., Rott, M., Sacristán, S., Schmidt, SM., Schön, M., Schulze-Lefert, P., Skamnioti, P., Soanes, DM., Sommer, H., Stüber, K., Takahara, H., Talbot, NJ., Thordal-Christensen, H., Vigouroux, M., Weßling, R., Wicker, T. and Panstruga, R. (2010). Genome expansion and gene loss in powdery mildew fungi reveal functional tradeoffs in extreme parasitism. *Science* 330: 1543-1546.
9. **Frenkel, O.**, Portillo, I., Brewer, MT., Peros, JP., Cadle-Davidson, L. and Milgroom, MG. (2011).

Development of microsatellite markers from the transcriptome of *Erysiphe necator* for analyzing population structure in North America and Europe. *Plant Pathol.* 61: 106-119.

10. Ozkilinc, H., **Frenkel, O.**, Shtienberg, D., Abbo, S., Sherman, A., Kahraman, A. and Can, C. (2011). Aggressiveness of eight *Didymella rabiei* isolates from domesticated and wild chickpea native to Turkey and Israel, a case study. *Eur. J. Plant Pathol.* 131: 529-537.
11. Ramming, DW., Gabler, F., Smilanick, JL., Margosan, DA., Cadle Davidson, M., Barba, P., Mahanil, S., **Frenkel, O.**, Milgroom, MG. and Cadle-Davidson, L. (2012). Identification of race specific resistance in North American *Vitis* spp. limiting *Erysiphe necator* hyphal growth. *Phytopathology* 102: 83-93.
12. Brewer, MT., **Frenkel, O.** and Milgroom, MG. (2012). Linkage disequilibrium and spatial aggregation of genotypes in sexually reproducing populations of *Erysiphe necator*. *Phytopathology* 102: 997-1005.
13. Jaiswal^S, AK., Elad, Y., Graber, ER. and **Frenkel****, **O.** (2014). *Rhizoctonia solani* suppression and plant growth promotion in cucumber as affected by biochar pyrolysis temperature, feedstock and concentration. *Soil Biol. Biochem.* 69: 110-118.
14. Sharabani, G., Manulis-Sasson, S., Chalupowitz, L., Borenstein, M., Shulhani, R., Lofthaus, M., Sofer, M., **Frenkel, O.**, Dror, O. and Shtienberg, D. (2014). Temperature at early stages of *Clavibacter michiganensis* subsp. *michiganensis* infection affects bacterial canker development and virulence-gene expression. *Plant Pathol.* 63: 1119-1129.
15. Kolton, M., **Frenkel, O.**, Elad, Y. and Cytrin, E. (2014). Potential role of flavobacterial gliding-motility/type IX secretion system complex in root colonization and plant defense. *MPMI* 27: 1005-1013.
16. **Frenkel, O.**, Cadle-Davidson, L*, Wilcox, W.F. and Milgroom, M.G. (2015). Mechanisms of resistance to an azole fungicide in the grapevine powdery mildew, *Erysiphe necator*. *Phytopathology* 105: 370-377.
17. Jaiswal, AK^S, **Frenkel****, **O.**, Lew, B., Graber, E.R. and Elad, Y. (2015). Non-monotonic influence of biochar dose on bean seedling growth and susceptibility to *Rhizoctonia solani*: The Shifted R_{max}-Effect. *Plant Soil* 395: 125-140.
18. Gur, Y^T. and **Frenkel****, **O.** (2015). First report of Leaf spot on blue lupin (*Lupinus pilosus*) caused by *Pleiochaeta setosa*. *Plant Dis.* 100: 325.
19. **Frenkel, O.**, Bornestein, M., Shulhani, R., Sharabani, G., Sofer, M., Abu-Moch, F., Lofthaus, M., Manulis-Sasson, S. and Shtienberg, D. (2016). Secondary spread of *Clavibacter michiganensis* subsp. *michiganensis* in nurseries and the conditions leading to infection of tomato seedlings. *Eur. J. Plant Pathol.* 144: 569-579.
20. Golani, M., Abbo, S., Sherman, A., **Frenkel, O.** and Shtienberg, D. (2016). The temperature response and aggressiveness of *Peyronellaea pinodes* isolates originating from wild and domesticated *Pisum* sp. in Israel. *Phytopathology* 106: 324-332.
21. Golani, M., **Frenkel, O.**, Borenstein, M., Shulhani, R., Abbo, S. and Shtienberg, D. (2016). Prevalence, development and significance of ascochyta blight caused by *Didymella pinodes* in *Pisum elatius* populations growing in natural ecosystems. *Phytopathology* 106: 333-341.

22. Jaiswal, AK^S., Elad, Y., Paudel, I., Graber, E.R., Cytrin, E., and **Frenkel^{**}, O.** (2017). Linking the belowground microbial composition, diversity and activity to soilborne disease suppression and growth promotion of tomato amended with biochar. *Scientific Rep.* 7. doi:10.1038/srep44382.
23. Raviv, B., Aghajanyan, L., Granot, G., Makover, V., **Frenkel, O.**, Gutterman, Y., and Grafi, G. (2017). The dead seed coat functions as a long-term storage for active hydrolytic enzymes. *PLoS ONE* 12(7): e0181102.
24. Jaiswal, A.K^S., Elad, Y., Cytryn, E., Graber, E. R., and **Frenkel, O^{**}.** (2018). Activating biochar by manipulating the bacterial and fungal microbiome through pre-conditioning. *New Phytol.* 219: 363-377.
25. Kumar, A., Tsechansky, L., Lew, B., Raveh, E., **Frenkel, O.** and Graber, E. R. (2018). Biochar alleviates phytotoxicity in *Ficus elastica* grown in Zn-contaminated soil. *Sci. Total Environ.* 618: 188-198.
26. Jaiswal, A.K^S., **Frenkel, O.**, Tsechansky, L., Elad, Y. and Graber, E. R. (2018). Immobilization and deactivation of pathogenic enzymes and toxic metabolites by biochar: A possible mechanism involved in soilborne disease suppression. *Soil Biol. Biochem.* 121: 59-66.
27. Philosoph, A.M^S., Dombrovsky, A., Elad, Y., Jaiswal, A.K., Koren, A., Lachman, O. and **Frenkel, O.^{**}** (2018). Combined infection with *Cucumber green mottle mosaic virus* and *Pythium* species causes extensive collapse in cucumber plants. *Plant Dis.* 102: 753-759.
28. Jaiswal, A. K^S., Graber, E. R., Elad, Y., and **Frenkel, O^{**}.** (2019). Biochar as a management tool for soilborne diseases affecting early stage nursery seedling production. *Crop Prot.* 120: 34-42
29. Philosoph, A.M^S., Dombrovsky, A., Elad, Y., Koren, A., and **Frenkel, O.^{**}** (2019). Insight into late wilting disease of cucumber demonstrates the complexity of the phenomenon in fluctuating environments. *Plant Dis.* 103: 2877-2883.
30. Meparishvili, G., Gur, L., **Frenkel, O.**, Gorgiladze, L., Meparishvili, S., Muradashvili, M., Koiava, L., Dumbadze, R., Reuveni, M. and Jabnidze, R., (2019). First report of powdery mildew caused by *Erysiphe corylacearum* on hazelnuts in Georgis. *Plant Dis.* 103: 2952-2953.
31. Pandaranayaka, E. P., **Frenkel, O.**, Elad, Y., Prusky, D., and Harel, A. (2019). Network analysis exposes core functions in major lifestyles of fungal and oomycete plant pathogens. *BMC Genomics*: 20: 1-15.
32. Pickel, B., Dai, N., Maymon, M., Elazar, M., Tanami, Z., **Frenkel, O.**, Abu-Toami, M., and Freeman, S. (2020). Development of a reliable screening technique for determining tolerance to *Macrophomina phaseolina* in strawberry. *Eur. J. Plant Pathol.* 157: 707-718.
33. Arya, G.C^{P.D.}., Srivastava, D.A., Pandaranayaka, E.P., Manasherova, E., Prusky, D.B., Elad, Y., **Frenkel, O.**, Dvir, H. and Harel, A., 2020. Characterization of the role of a Non-GPCR Membrane-Bound CFEM protein in the pathogenicity and germination of *Botrytis cinerea*. *Microorganisms* 8: 1043.
34. Srivastava, D. A., Arya, G. C., Pandaranayaka, E. P., Manasherova, E., Prusky, D., Elad, Y., **Frenkel, O.**, Hai, D., and Harel, A. (2020). Transcriptome profiling data of *Botrytis cinerea* infection on whole plant *Solanum lycopersicum*. *MPMI* 33: 1103-1107.
35. Csikós, A., Németh, M. Z., **Frenkel, O.**, Kiss, L., & Váczy, K. Z. (2020). A fresh look at grape powdery mildew (*Erysiphe necator*) A and B genotypes revealed frequent mixed infections and only B genotypes in flag shoot samples. *Plants* 9: 1156.
36. Jaiswal, A. K^S., Alkan, N., Sela, N., Philosoph, A.M., Graber, E. R., Elad, Y., and **Frenkel, O^{**}.** (2020).

Molecular insights into biochar-mediated plant growth promotion and systemic resistance in tomato against Fusarium crown and root Rot disease. *Scientific Rep.* 10: 1-15.

37. Darzi, E., Lachman, O., Smith, E., Koren, A., Klein, E., **Frenkel, O.**, and Dombrovsky, A. (2020). Paths of cucumber green mottle mosaic virus disease spread and disinfectant based management. *Ann. Appl. Biol.* 177: 374-384.
38. Geiser, D. M., Al-Hatmi, A., Aoki, T., Arie, T., Balmas, V., Barnes, I.,...**Frenkel, O.**,..... & Viljoen, A. (2020). Phylogenomic analysis of a 55.1 kb 19-gene dataset resolves a monophyletic Fusarium that includes the *Fusarium solani* Species Complex. *Phytopathology* (ja). <https://doi.org/10.1094/PHYTO-08-20-0330-LE>.
39. Gur, L^s., Reuveni, M., Cohen, Y., Cadle-Davidson, L., Kisselstein, B., Ovadia S., and **Frenkel, O****. (2021). Population structure of *Erysiphe necator* on domesticated and wild vines in the Middle East raises questions on the origin of the grapevine powdery mildew pathogen. *Environ. Microbiol.* 1462–2920.15401. doi:10.1111/1462-2920.15401.
40. Gur, L^s., Levy, K., Farber, A., **Frenkel, O.**, Cohen, Y., and Reuveni, M. (2021). Delayed development of resistance to QoI fungicide in *Venturia inaequalis* in Israeli apple orchards and improved apple scab management using fungicide ixtures. *Agronomy* 11: 396.
41. Bautista-Jalón, L. S., **Frenkel, O.**, Tsrer, L., Malcolm, G. M., Gugino, B. K., Lebiush, S., Milgroom, M.G., and del Mar Jiménez-Gasco, M. (2021). Genetic differentiation of *Verticillium dahliae* populations recovered from symptomatic and asymptomatic hosts. *Phytopathology* 111: 149-159.
42. Arya, G. C., Srivastava, D. A., Manasherova, E., Prusky, D. B., Elad, Y., **Frenkel, O^{P.D.}**, and Harel, A. (2021). BcHnm1, a predicted choline transporter, modulates conidial germination and virulence in Botrytis cinerea. *Fungal Genetics and Biology*, 103653. <https://doi.org/10.1016/j.fgb.2021.103653>
43. Gur, L^s., Cohen, Y., **Frenkel, O.**, Schweitzer, R., Shlissel, M., and Reuveni, M. (2022). Mixtures of macro and micronutrients control grape powdery mildew and alter berry metabolites. *Plants* 11, 978.
44. Dror, B., Amutuhair, H., **Frenkel, O.**, Jurkevitch, E., and Cytryn, E. (2022). Identification of bacterial populations and functional mechanisms potentially involved in biochar-facilitated antagonism of the soilborne pathogen Fusarium oxysporum. *Phytobiomes Journal* 6: 139-150.
45. Lalzar, M., Zeevi, A., **Frenkel, O.**, Gamliel, A., Abbo, S., and Iasur Kruh, L. (2022). Seed-derived microbial community of wild cicer seedlings: Composition and augmentation to domesticated cicer. *Microbiology Spectrum*, 10, e02785-21.
46. Moshe, M^s., Gupta, C. L., Jain, R. M., Sela, N., Minz, D., Banin, E., **Frenkel, O^s**., and Cytryn, E. (2023). Comparative genomics of Bacillus cereus sensu lato spp. biocontrol strains in correlation to in-vitro phenotypes and plant pathogen antagonistic capacity. *Frontiers in Microbiology*, 14, 996287.
47. Philosoph, A.M^s., Dombrovsky, A., Luria, N., Sela, N., Elad, Y., & **Frenkel, O****. (2023). Rapid defense mechanism suppression during viral-oomycete disease complex formation. *Frontiers in Plant Science*, 14, 1124911.1
48. Sudakov, K., Yasur, H., Jaiswal, A. K., Mordukhovich, G., Buchshtab, O., Minz, D., and **Frenkel, O****. (2024). Incorporating culture-independent methods to identify net syndrome-associated Fusarium species in peanuts. *Phytobiomes Journal* 8:318-326.
49. Kraut-Cohen, J., **Frenkel, O.**, Covo, S., Marcos-Hadad, E., Carmeli, S., Belausov, E and Cytryn, E. (2024). A pipeline for rapidly evaluating activity and inferring mechanisms of action of prospective antifungal compounds. *Pest Management Science*, 80: 2804-2816.

50. Song, T., Gupta, S., Sorokin, Y., **Frenkel, O.**, Cytryn, E., and Friedman, J. (2024). A Burkholderia cenocepacia-like environmental isolate strongly inhibits the plant fungal pathogen Zymoseptoria tritici. *Applied and Environmental Microbiology*, 90(5), e02222-23.
51. Moshe, M^s, **Frenkel, O.**, Sela, N., Davidovich, C., Amutuhare, H., Banin, E., & Cytryn, E. (2024). Persistence and microbiome modification in Rhizoctonia solani inoculated rhizosphere following amendment of a Bacillus biocontrol agent. *Phytobiomes Journal*, <https://apsjournals.apsnet.org/doi/full/10.1094/PBIOMES-01-24-0006-R>
52. Chaimovitsh, D., Kahane-Achinoam, T., Nuriel, O., Meller Harel, Y., Silverman, D., Nitzan, N., **Frenkel, O.**, and Gonda, I. (2024). Fusarium Wilt of Coriander: Root Cause Analysis and Varietal Tolerance Development. *Plants*, 13(15), 2135.
53. Quinn, E., Ben-Simchon, E., Gorelick, J., Oka, Y., **Frenkel, O.**, Sionov, E., ... and Shelef, O. (2024). Examination of genetic lines of Myrtus communis as potential sources of organic agricultural pest control agents. *Heliyon*, 10(15).

2. Books and Invited Reviews

1. Abbo, S., **Frenkel, O.**, Sherman, A. and Shtienberg, D. (2007). The sympatric Ascochyta pathosystems of near eastern legumes, a key for better understanding of pathogen biology. *Eur. J. Plant Pathol.* 119: 111-118.
2. Graber, E.R., **Frenkel, O.**, Jaiswal, A.K^s. and Elad, Y. (2014). How may biochar influence severity of diseases caused by soilborne pathogens? *Carbon Manage.* 5: 169-183.
3. **Frenkel, O**.**, Jaiswal, A.K., Elad, Y., Lew, B., Kammann, C., and Graber, E. R. (2017). The effect of biochar on plant diseases: what should we learn while designing biochar substrates? *J. Environ. Engin. Landscape Manag.* 25: 105-113.
4. Le May, C., Montarry, J., Morris, C. E., **Frenkel, O.**, and Ravigné, V. (2019). Plant pathogen life-history traits and adaptation to environmental constraints. *Front. Plant Sci.* 10: 1730.

3. Book Chapters

1. Jaiswal, A. K., Frenkel, O., Debode, J., & Graber, E. R. (2024). How does biochar influence plant biotic stress?. In *Biochar for Environmental Management* (pp. 589-612). Routledge.

4. Articles in Non-Reviewed Journals in Hebrew and English

1. **Frenkel, O.**, Yermiyahu, U and Shtienberg, D. (2002). The influence of Boron in treated water on the development of Early Blight and Late Blight in tomatoes and potatoes. Water and irrigation (Hebrew) 488: 22-29.
2. Dombrovsky, A., **Frenkel, O.**, Cohen, R., Kanitzky-Goldstein, R., Gamliel, A and Aharon, E. (2015). CGMMV initiative: Management for controlling CGMMV damage in infected plots and avoiding the dispersal to new areas, part I.. Sade Vayerek (Hebrew) 280: 37-48.
3. Dombrovsky, A., **Frenkel, O.**, Cohen, R., Kanitzky-Goldstein, R., Gamliel, A and Aharon, E. (2015). CGMMV initiative: Management for controlling CGMMV damage in infected plots and avoiding the dispersal to new areas, part II.

Sade Vayerek (Hebrew) 281: 32-38.

4. **Frenkel, O.**, Shulhani, R., Bornstein, M., Sharabani, G., Abu-Moch, F., Manulis-Sasson, S., Shtienberg, D., Sofer, M., and Lofthaus, M (2015). Development of bacterial canker epidemic in the nurseries. Sade Vayerek (Hebrew) 282: 40-46.
5. Dombrovsky, A., **Frenkel, O.**, Cohen, R., Kamenetsky Goldstein, R., Gamliel, A., et al., (2016). New information obtained by the Israeli Khosen CGMMV initiative - Dealing with the *Cucumber green mottle mosaic virus* (CGMMV). Part 1. Sadeh Vayerek, 293: 38-46 (Hebrew).
6. Dombrovsky, A., **Frenkel, O.**, Cohen, R., Kamenetsky Goldstein, R., Gamliel, A., et al., (2016). New information obtained by the Israeli Khosen CGMMV initiative - Dealing with the *Cucumber green mottle mosaic virus* (CGMMV). Part 2. Sadeh Vayerek, 294: 41-51 (Hebrew).
7. Keren, L., Burg, D., Reuveni, M., **Frenkel, O.**, Lior, G., et al., (2016). Strobilurin resistance of *Venturia inequalis*, causal agent of apple scab. Alon Hanotea, 70: September: 36-40 (Hebrew).
8. Regev, R., Manulis-Sasson, S., Ben-Yephet, Y., **Frenkel, O.**, Buchshtab, O. and Rabinovich, O. (2017). The role of steaming on peanuts infection with *Talaromyces sayulitensis*. Nir Vatelem 72:36-39.
9. Gantz, S., Mor, N., Abraham, L., **Frenkel, O.**, et al., (2018). Warning of tomato wilting diseases. Mivzak Yerakot, 313: February: 26-29 (Hebrew).

5. Articles in Symposia Proceedings

1. **Frenkel, O.**, et al. (2016). "Bacterial canker severity during the nursery stage is affected by fertigation." *V International Symposium on Tomato Diseases: Perspectives and Future Directions in Tomato Protection* 1207: 269-274.
2. Jaiswal, A.K^S., Elad, Y., Graber, E.R., Cytryn, E. and **Frenkel, O.** (2016). "Soil-borne disease suppression and plant growth promotion by biochar soil amendments and possible mode of action." *V International Symposium on Tomato Diseases: Perspectives and Future Directions in Tomato Protection* 1207: 69-76.
3. Smith, E., Loria, N., Ringold, V., Frenkel, O., Koren, A., Klein, E., Bekelman, H., Lachman, O., & Dombrovsky, A. (2019). Aspects in Tobamovirus management in modern agriculture: *Cucumber Green Mottle Mosaic Virus*. *Acta Hort.* 1257. DOI 10.17660/ActaHortic.2019.