



TAGEM
R&D AND INNOVATION

PLANT PROTECTION CENTRAL
RESEARCH INSTITUTE / ANKARA

Ali Ferhan MORCA

Agricultural Engineer

EDUCATION

PhD

MSc
2014

Ondokuz Mayıs University
Graduate School of Natural

Bachelor's Degree
2005-2009

Ondokuz Mayıs University
Faculty of Agriculture

LANGUAGE

English

CAREER

2014- continued Plant Protection Central Research Institute-ANKARA, Researcher

2006-2014 Plant Protection Central Research Institute-ANKARA, Laboratory technician,

ABOUT ME

He graduated from Hacettepe University, Department of Health Services, in 2007. He completed his undergraduate education at Ondokuz Mayıs University, Faculty of Agriculture, Department of Agricultural Machinery, in 2014 and his master's degree at Ondokuz Mayıs University of Graduate School of Natural in 2019.

He started his career in 2006 as Laboratory Technician at the Plant Protection Central Research Institute Virology Unit. He continued her duty by taking the position of agricultural engineer in the same Institute and department in 2014.

CONTACT

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■ **PROJECTS**

■ **Completed Projects**

1. Sharka Disease Surveillance and Eradication Project in Kayseri Province. (TAGEM, GKGM, Kayseri Directorate of Provincial Agriculture and Forestry, 2013-2015, Project Leader).
2. The determination of natural enemies with the detection of disease, pest and weeds in kiwi fruit orchard in Western Black Sea Region, (TAGEM, 2014-2016, Researcher).
3. Investigations on the Determination of Disease, Harmful and Useful Species in Garlic and Onion Sowing Areas, and Population Monitoring of the Important Species in the Province of Ankara and Kastamonu (TAGEM, 2015-2017, Researcher).
4. Research on Forming Viruses-Free Polycross Parcels in Alfalfa (TAGEM, 2015-2018, Project Leader).
5. Detection, Prevalence, Molecular Characterization of Tomato spotted wilt virus (TSWV) in Central Anatolia Region Tomato, Pepper, Lettuce Growing Areas's and Determination of TSWV resistance of some Tomato Genetic Resources by Molecular Markers (TAGEM, 2015-2018, Project Leader).
6. Creation of plant pathogenic bacteria, fungi and virus collections and preparations of their catalogues-I, (TAGEM, 2015-2018, Researcher).
7. Characterization of genomic regions in relation to the pathogenicity of "The isolate TR-180" of *Bean common mosaic virus* (TAGEM, 2016-2019, Project Leader).
8. Sharka Disease (*Plum pox virus*) on the Establishment of resistant Gene Resources and Genetic Diversity of Populations with PPV isolates collection (TAGEM, 2015-2019, Project Leader).
9. The studies on the detection and control of diseases and pests of leafy vegetables in Middle Anatolian region (TAGEM, 2016-2019, Researcher).
10. Sharka Disease Surveillance and Eradication Project in Ankara (TAGEM, GKGM, Kayseri Directorate of Provincial Agriculture and Forestry, and Ankara Metropolitan Municipality, 2015-2019, Project Leader).
11. Sharka Disease Pest Free Area Project in Zonguldak Province Center, Çaycuma, Gökçebey, Devrek, Alaplı, Kdz Ereğli, Kilimli and Kozlu Districts. (TAGEM, GKGM, Zonguldak Directorate of Provincial Agriculture and Forestry, 2019-2022, , Project Leader).
12. Geçit region Bean Breeding Studies. (TAGEM, 2018-2022, Researcher).
13. Domestic RNA isolation kit production. ("TAGEM 2007/1" DİSES company - Plant Protection Central Research Institute, 2021-2022, Project Leader).
14. Obtaining Preliminary Production Material by Meristem Culture from New Hazelnut Varieties. (TAGEM, 2020-2022, Researcher).
15. Molecular Diagnosis of Soilborne Diseases in Potatoes (TAGEM, 2018-2022, Researcher).



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▪ Ongoing Projects

1. Bolu Province (Center, Seben, Göynük, Gerede, Mudurnu, Mengen, Yeniçağa, Dörtdivan and Kırıcık Districts) Sharka Disease (Plum pox virus - PPV) Pest Free Area Project (TAGEM, GKGM, Bolu Directorate of Provincial Agriculture and Forestry, 2020-2024, Project Leader).
2. Burdur Province Ağlasun District Sharka Disease (Plum pox virus - PPV) Free Area Creation Project (TAGEM, GKGM, Burdur Directorate of Provincial Agriculture and Forestry, 2021-2023, Project Leader).
3. Inventory and validation of quality control procedures for the extraction of nucleic acid used for diagnosis (AB- Eupresco, 2023, Researcher).
4. Investigation of Tomato brown rugose fruit virus (ToBRFV) on Greenhouse Tomato and Pepper Crops in Central Anatolia and Black Sea Region of Turkey, Development of Molecular Diagnostic Protocols (TAGEM, 2021-2023, Researcher).
5. Afyonkarahisar Province (Center, Sandıklı, Çobanlar) Tomato brown rugose fruit virus (ToBRFV) Survey/Free Field Creation Project (TAGEM, GKGM, Afyonkarahisar Directorate of Provincial Agriculture and Forestry, 2021-2023, Researcher).
6. Pepino mosaic virus (PepMV) Tomato brown rugose fruit virus (ToBRFV) Tomato spotted wilt virus (TSWV) Pest Free Area Project in Zonguldak Province Center, Çaycuma, Gökçebey, Devrek, Alaplı, Kdz Ereğli, and Kozlu Districts (TAGEM, GKGM, Zonguldak Directorate of Provincial Agriculture and Forestry, 2022-2024, Researcher).
7. Creation of plant pathogenic bacteria, fungi and virus collections and preparations of their catalogues-II, (TAGEM, 2021-2025, Researcher).
8. Research on the Determination of Diseases and Pests in Alfalfa seed Fields of the Central Anatolia Region and control of the Important ones (TAGEM, 2022-2026, Researcher).
9. Creation of diagnostic kits of plant viruses and viroids with real-time LAMP PCR master mix ("TAGEM 2007/1" DOSA Information and Science Technologies, 2022-2023, Project Leader).



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■ **PUBLICATIONS**

■ **INTERNATIONAL ARTICLES AND PAPERS**

■ **Articles Published in International Journals**

1. Çelik A., **Morca A.F.** 2021. Development of colorimetric and real time loop-mediated isothermal amplification (cr-LAMP) assay for rapid detection of Wheat dwarf virus (WDV). *Crop Protection*, 149, 105786. <https://doi.org/10.1016/j.cropro.2021.105786>
2. **Morca A.F.**, Coskan S., Akbas B. 2021. Phylogenetic diversity of barley- and wheat-specific forms of Wheat dwarf virus in Turkey. *Cereal Research Communications*, 50:1029–1036. <https://doi.org/10.1007/s42976-021-00219-0>
3. **Morca A.F.**, Çelik A., Coskan S., Santosa A. I., Akbas B. 2022. Population analysis on tomato spotted wilt virus isolates inducing various symptoms on tomato, pepper, and *Chenopodium album* in Turkey. *Physiological and Molecular Plant Pathology*, 118 101786. <https://doi.org/10.1016/j.pmpp.2022.101786>
4. Coşkan S., **Morca A.F.**, Akbaş B., Çelik A., Santosa A. I. 2022. Comprehensive surveillance and population study on plum pox virus in Ankara Province of Turkey. *Journal of Plant Diseases and Protection*, 129: 981–991. <https://doi.org/10.1007/s41348-022-00597-5>
5. **Morca, A.F.**, Coskan, S., Akbas, B., Karahan, A. 2022. First report of alfalfa mosaic virus on *Petroselinum crispum* in Turkey. *Journal of Plant Pathology*, 104, (881-882). <https://doi.org/10.1007/s42161-022-01082-6>
6. Çelik, A., Coşkan, S., **Morca, A.F.**, Santosa, A. I., and Koolivand, D. 2022. Insight into Population Structure and Evolutionary Analysis of the Emerging Tomato Brown Rugose Fruit Virus. *Plants*, 11(23), 3279. <https://doi.org/10.3390/plants11233279>

■ **International Papers, Seminars, etc.**

1. Değirmenci K., **Morca A.F.**, Umar S. 2016. New Infection Areas of Plum pox virus (PPV) in Turkey. 3rd International Symposium on Plum pox virus, 9-13 May 2016 Antalya-Turkey. 37 p.
2. Değirmenci K., **Morca A.F.**, Akbaş B., Umar S. 2016. Current situation, prevalence and control strategies of Sharka disease in Turkey. Turkey 6th Plant Protection Congress with International Participation September 5-8, 2016 Konya, Turkey. 570 p.
3. Değirmenci K., **Morca A.F.**, Barış A., Elibüyük EA. 2016. Prevalence and epidemiology of *Tomato spotted wilt virus*-TSWV in some provinces of Turkey. Turkey 6th Plant Protection Congress with International Participation September 5-8, 2016 Konya, Turkey. 558 p.
4. **Morca A. F.**, Değirmenci K., Umar S. 2016. Diagnosis of Virus Diseases of The Leaves Eaten Vegetables in Central Anatolia Region of Turkey. Turkey 6th Plant Protection Congress with International Participation September 5-8, 2016 Konya, Turkey. (Poster)
5. Değirmenci K., **Morca A.F.**, Baş M. 2016. Molecular analysis of some apricot hybrids for Plum pox potyvirus (PPV) resistance. 33rd International Symposium on Plum pox virus, 9-13 May 2016 Antalya-Turkey. 13 p.
6. Coşkan S., **Morca A. F.**, Barış A., Tunç İ. 2019. Characterization of Thrips species as a vector of Tomato spotted wilt tospovirus (TSWV) in host plants in Turkey. 1. International Molecular Plant Protection Congress, 10-13 April ADANA, Program and Abstract Book, 64 p.



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▪ International Papers, Seminars, etc. (continue)

7. Duman K., Soylu S., **Morca A. F.** 2019. Genetic Characterization of *Pseudomonas syringae* pv. *phaseolicola* Strains Isolated from Common Bean Production Areas in Turkey. 1. International Molecular Plant Protection Congress, 10-13 April ADANA, Program and Abstract Book.
8. **Morca A. F.**, Coskan S., Değirmenci K., Sönmez İ., 2019. The Assessment of tomato genetic sources resistance to Tomato spotted wilt tospovirus (TSWV) and its distribution and genetic diversity in Turkey. 1. International Molecular Plant Protection Congress, 10-13 April ADANA, 73 p.
9. Barış A., Yücel C., **Morca A. F.**, Atakan E. 2019. Identification and Determination of Thrips Species in Alfalfa Plantations of Aksaray Province. 1. International Molecular Plant Protection Congress, 10-13 April ADANA, Poster presentation, Program and Abstract Book, 82 p.

▪ NATIONAL ARTICLES AND PAPERS

▪ Articles Published in National Journals

1. **Morca A. F.**, Coskan S., Öncü F. 2020. Determination and partial molecular characterization of Plum pox virus in Bolu province. *Plant Protection Bulletin*, 60.4: 59-68.
2. **Morca A. F.**, Coskan S., Çelik A. 2021. Determination of Plum pox virus and Molecular Characterization of Partial Coat Protein Gene in Burdur Province. *KSU J. Agric Nat* 24 (4): 805-814. <https://doi.org/10.18016/ksutarimdogavi.767409>
3. Akbas B., **Morca A. F.**, Coskan S. 2021. Determination of Virus Diseases in Lettuce Production Areas of Ankara, Eskisehir, and Konya Provinces of Turkey. *YYU Journal of Agricultural Science* 31 (2): 387-395. <https://doi.org/10.29133/yyutbd.818644>
4. Birişik N., **Morca A. F.**, Erilmez S., Çiftçi O., Yurtmen M., Uzunogulları N., Deligöz I., Sahin M., Öntepeli M L. 2021. Assessment of a six-year national survey and eradication program for Plum pox virus in Turkey *Plant Protection Bulletin*, 61 (2) : 19-32. <https://doi.org/10.16955/bitkorb.793804>
5. Akbas B., **Morca A. F.**, Coskan S. 2021. Historical Development and Importance of Grapevine Viruses for Turkish Vineyards. *Bahçe*, 50(2): 155-165.
6. Akbas B., **Morca A. F.**, Coskan S. 2022. Impact of Climate Change on Cereal Virus Diseases. *Ziraat Mühendisliği*, (374), 4-14. <https://doi.org/10.33724/zm.972677>
7. **Morca A.F.**, Coşkan S., Akbaş, B. 2022. Detection, Characterization, and Monitoring of Plum pox virus in Zonguldak Province. *KSU J. Agric Nat* 25(6), 1369-1377. <https://doi.org/10.18016/ksutarimdogavi.1015786>
8. **Morca A.F.**, Yücel C., Barış A., Atakan E., Çelik, A. 2022. A novel capillary gel electrophoresis based fragment analysis method for the rapid detection of important thrips species on alfalfa in Turkey. *Plant Protection Bulletin*, 62(3), 5-11. <https://doi.org/10.16955/bitkorb.1078737>



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▪ National Papers, Seminars, etc.

1. Türktemel İ., Koca E., **Morca A. F.** 2017. Response of Sunflower, Safflower and Cotton to Sublethal Glufosinate Rates at Seedling Stage. Abstract in Proceeding Book of ICAFOF Conference, Ürgüp/Nevşehir-Turkey. 1072 p.
2. Türktemel İ., **Morca A. F.**, Serim A. T. 2017. Effect of Low Doses of Glyphosate, Glufosinate and 2,4-D amine on Salicylic Acid Synthesis in Cotton Seedlings. 4th National Agriculture Congress, Afyonkarahisar-Turkey.

▪ OTHER PUBLICATIONS

▪ **Ph.D. Thesis, Master Thesis, Reports, Books etc.**

1. Coşkan, S and Morca, A.F. 2022. Maize Viral Diseases (In: Corn; Breeding Techniques and Breeding. Ed: Cengiz, R. 758 s.), 315-336 p. İksad Yayınevi, Ankara, Turkey. ISBN: 978-625-8377-26-2
2. Characterization of genomic regions in relation to the pathogenicity of "The isolate TR-180" of *Bean common mosaic virus* (Master Thesis, 2019)

▪ **Membership, Training, Course, Meeting, Congress, Symposium and Other Activities**

1. Interlaboratory Comparison Studies (ICS) PPCRI, 2014
2. 3rd International Symposium on Plum pox virus Antalya, (Sertifikalı), 2016
3. Turkey 6th Plant Protection Congress with International Participation, 2016
4. 6th entomopathogens and microbial control congress, 2017
5. Workshop on Establishment of Protected Zones from Plum Pox Potyvirus-TAIEX, 2018
6. 1. International Molecular Plant Protection Congress, 2019
7. Technical and scientific review procedures for plant protection products files based on preparations of micro-organisms or viruses, semiochemicals and botanical active substances (TAIEX, 2021)
8. Interlaboratory Comparison Studies (ICS) PPCRI, 2014