

Dr. Ibrahim Ahmed Abdel Aziz Adss

Professor of Genetics & Molecular Plant Pathology

Faculty of Agriculture, Damanhour University, Egypt

Email: adssibrahim@agr.dmu.edu.eg | Mobile: +20 1001125762

ORCID: 0000-0002-7775-1895 | Scopus ID: 57194899875

Professional Summary

Professor of Molecular Plant Pathology (genetics) with more than 23 years of academic, teaching and research experience in molecular plant pathology, plant biotechnology, molecular diagnostics, gene expression, plant-pathogen interactions and sustainable crop protection. Author/co-author of more than 34 peer-reviewed publications including Scientific Reports, Plant Physiology and Biochemistry, Molecular Biology Reports, BMC biotechnology and other international journals.

Core Competencies

- Molecular Plant Pathology
- Plant Genetics
- Plant Biotechnology
- Gene Expression
- PCR, RT-PCR, qRT-PCR
- Bioinformatics
- Plant Disease Resistance
- Nematology
- Molecular Diagnostics

Academic Experience

Professor of plant pathology, Genetics branch, Damanhour University (2022–Present)

Associate Professor (2017–2022)

Lecturer (2012–2017)

Assistant Lecturer (2007–2012)

Teaching Assistant (2002–2007)

Education

Ph.D. plant pathology, Genetics branch, Damanhour University (2012)

M.Sc. plant pathology, Genetics branch (2007)

B.Sc. Agricultural Sciences (2002)

Selected Publications

- Adss IA et al. Scientific Reports (2026). Organic acids induce plant defense responses...
- Adss IA et al. Molecular Biology Reports (2025).

- Adss IA et al. Plant Physiology and Biochemistry (2024).
- Elzakey EM et al. Environmental Monitoring and Assessment (2023).
- El-Habashy DE et al. International Journal of Pest Management (2022).

Technical Skills

PCR • qRT-PCR • RAPD • ISSR • DNA/RNA Extraction • MEGA • SAS • SPSS • GraphPad Prism

Languages

Arabic (Native)

English (Fluent)

TRAINING COURSES and WORKSHOP

- Communication Skills Training Course, Faculty of leadership development center (FLDC), Alexandria University, Egypt, February 6-8, 2007.
- Effective Teaching Training Course, Faculty of leadership development center (FLDC), Alexandria University, Egypt, February 3-6, 2007.
- Research Methodology Training Course, Faculty of leadership development center (FLDC), Alexandria University, Egypt, January 27-30, 2007.
- Effective Presentation Training Course, Faculty of leadership development center (FLDC), Alexandria University, Egypt, August 2-4, 2011.
- Decision-making and problem-solving, Faculty of Leadership Development Center (FLDC), Damanhour University, Egypt, August 31- 1september, 2016.
- Funded Research Implementation and Research Team Management, Faculty of leadership development center (FLDC), Alexandria University, Egypt, 18-19 May, 2020.
- Executive Director, Faculty of leadership development center (FLDC), Alexandria University, Egypt, 20-21 May, 2020.
- Quality Standards in the Process of Learning(On Line), Faculty of Leadership Development Center (FLDC), Damanhour University, Egypt, 31 May- 1 June, 2020.
- Strategic Planning, Faculty of Leadership Development Center (FLDC), Damanhour University, Egypt, 28-29 July , 2021
- Anti-Corruption, Faculty of Leadership Development Center (FLDC), Damanhour University, Egypt, 23-24 August , 2021.
- Conference Organization Training Course, Faculty of leadership development center (FLDC), Alexandria University, Egypt, March 19-20, 2012.
- Crisis and Diaster Managment, Faculty of Leadership Development Center (FLDC), Damanhour University, Egypt, August 22-23, 2016.
- Research Ethics Training Course, Faculty of leadership development center (FLDC), Alexandria University, Egypt, July 5-7, 2011.
- The Credit Hour System Training Course, Faculty of leadership development center (FLDC), Alexandria University, Egypt, February 6-7, 2012.
- Thinking skills, Faculty of leadership development center (FLDC), Alexandria University, Egypt, January 30-1 February, 2010.

- Quality standards in teaching, Faculty of leadership development center (FLDC), Alexandria University, Egypt, February 8-9, 2012.
- E-Learning, Faculty of Leadership Development Center (FLDC), Damanhour University, Egypt, November 9nd – 10rd, 2016.
- Competing for Research Funds Training Course, Faculty of Leadership Development Center (FLDC), Damanhour University, Egypt, February 17th -18th, 2016.
- International Publishing of Scientific Research Training Course, Faculty of Leadership Development Center (FLDC), Damanhour University, Egypt, August 10th -11th, 2016.
- Adopting An Academic Program, Faculty of Leadership Development Center (FLDC), Damanhour University, Egypt, 5-6 September, 2018.

List of Publications

- HamzH. A,E.E.Hafez,Manal M.AbdEl-Rahman,Samia A.Madkour, Hayda A. Heikal and I. A. Adss. RAPD analysis of some local *R. solanacearum* isolates and study the relationship between polygalacturonase activity and infection of different potato cultivars.Minufiya J.Agric.RES 39 (6):1611-1625 (2011)
- Adss.I.A.(2013). Different gene expression of Polygalacturonase (*pehC*) and its relationship to the pathogenicity of different *R. solanacearum* isolates. J.Agric&Env.Sci. DAM. Univ., Egypt12(3) :82-103.
- Adss.I.A , E. Abdelraouf and M.Z. Dakroury. (2015). Effects of Salt Stress on Gene Expression and Activities of POD and PPO in of Broad Bean (*Vicia faba* L.) Cultivars. Alex. J. Agric. Res. 60(2) : 65 - 75.
- Abdelraouf. E, Adss.I.A, Dakroury. M.Z. (2016). A.G. Effect of Salinity on Growth and Genetic Diversity of Broad Bean (*Vicia faba* L.) Cultivars. ALEXANDRIA SCIENCE EXCHANGE JOURNAL, 37(3) :467-479
- Esmail A. E. Genaidy, Amira K. G. Atteya and I. A.A. Adss(2016). Increase the economic value of the jojoba (*Simmondsia chinensis*) yield using evaluation of distinctive clones grown under the Egyptian environmental conditions. Journal of Agricultural Technology . 12(1):145-165.
- El-Argawy.E, Adss.I. A (2016). Quantitative Gene Expression of Peroxidase, Polyphenoloxidase and Catalase as Molecular Markers for Resistance against *Ralstonia solanacearum*. American Journal of Molecular Biology, 6:88-100.
- Tabikha. R. M. and I. A. Adss (2016). Genetic and morphological variations among geographical populations of *Rhopalosiphum padi* (L.) (Hemiptera: Aphididae) in egypt, using rapid and issr markers. Mun. Ent. Zool. 11(2): 695: 708.
- Nassar.A. M. K, I. A.A. Adss (2016). 2,4 Dichlorophenoxy acetic acid, abscisic acid, and hydrogen peroxide induced resistance-related components against potato early blight (*Alternaria solani*, Sorauer). Annals of Agricultural Science. 61(1): 15–23
- Adss.I. A and R. M. Tabikha. (2016).Relatedness among Geographical Populations of *Sitobion avenae* (Hemiptera: Aphididae) in Egypt, Based on Screening of Some Morphological Characters and Mitochondrial-DNA COI Analysis J. Plant. Prot. And Path., Mansoura Univ.,7(7):417-426.

- Adss. I. A, M. A. Abdel-Gayed, W. Botros and E. E. Hafez (2017). Multilocus Genetic Techniques, RAPD and ISSR Markers, and Polygalacturonase Activity as Tools for Differentiation among *Alternaria solani* Isolates on Tomato Fruits and Relation to Their Pathogenicity in Egypt. *Asian Journal of Plant Pathology*, 11(1) :18-27.
- Adss.I. A , H. A. Hamza, E. E. Hafez and H. M. Heikal. (2017). Enhancing tomato fruits post harvest resistance by salicylic acid and hydrogen peroxide elicitors against rot caused by *Alternaria solani* . *Journal of Agriculture Chemistry and Biotechnology*, 8(1):1-8.
- EL-Argaw y.E, Adss. I. A and Bayoumi, S. R. (2017). DIFFERENTIAL EXPRESSION OF INDUCED RESISTANCE GENES BY ABSCISIC ACID (ABA) AGAINST POTATO EARLY BLIGHT DISEASE. *Potato Journal* 44 (1), 16-27.
- Ghareeb, R. Y, I. A. Adss, S. R. Bayoumi and D. E. El-Habashy (2019). The nematicidal potentiality of some algal extracts and their role in enhancement the tomato defense genes against root knot – nematodes. *Egyptian Journal of Biological Pest Control*: 29:1-10.
- Adss, A. A. I, E. A Baddr and S. S. EL-Shamy (2020). Effect of Drainage Water Mixed with Untreated Sewage Water on Susceptibility of *Vicia faba* to Infection by *Botrytis fabae*. *Plant Pathology Journal*, 19(1): 42-53.
- Tabikha, R. M. and I. A. Adss (2021). Morphologic and genetic analysis for geographic populations of greenbug *Schizaphis graminum* (Hemiptera: Aphididae) in Egypt. *Biologia*, 76:77–89
- Attia, S.M and I.A. Adss (2021). Effect of preharvest applied brassinosteroid on "Anna" apple fruit retention, coloration and quality. *Bioscience Research*, 18(2): 1416-1425.
- Adss, I. A.A, S. A. Soliman, S. M. El-Ganbihiy and N T. Elazab (2021). Control of *Fusarium* Tomato Wilt Disease by using MgO and TiO₂ Nanoparticles. *Wulfenia Journal*, 28(5):61-83.
- Adss, I.A, G. M. Amer, S. R. Bayoumy and A. R. Eid (2021). Effect of Absciscic Acid, Salicylic Acid, Potassium Silicate, and *Trichoderma harzianum* As Biocontrol Agent to Induce the Tomato Resistance Against Early Blight Disease Caused by *Alternaria solani*. *ALEXANDRIA SCIENCE EXCHANGE JOURNAL*, 42(3): 773- 788.
- Bayoumi, S. R, I. A. Adss, M. H. Ghozlan and A. R. Eid (2021). Differential Gene Expression of Two Potato Cultivars in Response To Infection With *Ralstonia Solanacearum*. *Journal of the Advances in Agricultural Researches (JAAR)*, 26 (4) :424-439.
- Adss, I. A and R. M. Tabikha (2022). Identification and Reconsidering Phylogeny of Some Aphid Species, (Hemiptera: Aphididae), Based on Molecular DNA Markers Using ISSRs-PCR Technique. *Arab Universities Journal of Agricultural Sciences*, 29 (3) 873-886.
- El-Habashy, D, I. I. Adss, M. A. Abelasoul., S. A. Abdelgaleil. (2022). Efficacy of six essential oils for the management of *Meloidogyne incognita* in eggplants and their effect on the expression of plant defense genes. *International Journal of Pest Management*. 1-10.
- Elzakey, E. M · S. M. El-Sabbagh , E. E. N.Eldeen , I. A.A. Adss and A. M.K. Nassar. 2023. Bioremediation of chlorpyrifos residues using some indigenous species of bacteria and fungi in wastewater. *Environ Monit Assess* 195:779

- Adss. I. A., A. A. Al-Huqail , F. Khan , S. S. EL-Shamy, G. M. Amer, E. E. Hafez, O. M. Ibrahim , S. E. Sobhy, A. A. Saleh. (2024). Physio-molecular responses of tomato cultivars to biotic stress: Exploring the interplay between *Alternaria alternata* OP881811 infection and plant defence mechanisms. *Plant Physiology and Biochemistry*. Volum 207:1-11
- El Shamy.S; Adss,I ; Mashaheet, A.(2024).AGGRESSIVENESS VARIATIONS AMONG ISOLATES OF *FUSARIUM OXYSPORIUM* F.SP. *LYCOPERSICI* BASED ON THE PATHOGENICITY TEST, HOST DEFENSE RESPONSE, AND ISOLATES GENETIC VARIABILITY. *Journal of Agricultural and Environmental Science*,23(2): 221-249.
- Ahmed, M., Eid, K., Adss, I., & Abou-Shaara, H. (2024). SCREENING SUBSPECIES STATUS OF HONEY BEE WORKERS COLLECTED FROM SOME QUEEN REARING STATIONS UTILIZING GEOMETRIC MORPHOMETRICS. *Journal of Agricultural and Environmental Sciences*, 23(3), 197-212.
- Shahin, O.S, Adss, I.A; Elgwely, S.I. (2024). The knowledge and implementation gap of potato farmers to control of potato brown rot disease and their attitude towards exporting in the countryside of Behiera Governorate. *Assiut Journal of Agricultural Sciences*, 55(3): 264-284
- Adss, I.A., R. Bayoumi, S., Heikal, H.M. (2025). Impact of Trichoderma, abscisic acid and polyamines on resistance tomato cultivars against *M. incognita* infection. *Mol Biol Rep* 52, 625 (2025). <https://doi.org/10.1007/s11033-025-10728-4>
- Heikal, H. M., Adss, I. A., & El-Habashy, D. E. (2025). The effect of high salt stress on the severity of root-knot nematode in tomato. *Journal of the Advances in Agricultural Researches (JAAR)*, 30(3). <https://doi.org/10.21608/JALEXU.2025.406758.1275>
- Adss, I. A, Ahmed, M.E., Eid, K.S. (2025). Genetic Diversity of Honey Bee Queens and Workers from Some Queen-Rearing Stations in Egypt Based on ISSR Polymorphism. *Biol Bull Russ Acad Sci* 52, 148 (2025). <https://doi.org/10.1134/S1062359024614125>
- El-Tahan, R. M., Mansy, A. S., Adss, I. A., Abdelrasoul, M. A., & El-Habashy, D. E. (2026). Antifungal activity of some essential oils against sugar beet damping-off caused by *Fusarium oxysporum* f. sp. *radicis-betae*. *Journal of the Advances in Agricultural Researches (JAAR)*, 31(2), 236–256. <https://doi.org/10.21608/jalexu.2026.488638.1318>
- Salim, Y. M. M., Adss, I. A. A., & Nassar, A. M. K. (2026). Phytochemical profiling of date palm cultivars and its role in resistance to pest infestations. *Journal of Agricultural & Environmental Sciences (Damanhour University)*, 25(1), 78–103. <https://doi.org/10.21608/jaesj.2026.479922.1344>
- El-Habashy, D. E., Ghozlan, M. H., Adss, I. A., El-Argawy, E., & Heikal, H. M. (2026). Enhancing potato resistance against early blight using chitosan and salicylic acid. *Assiut Journal of Agricultural Sciences*, 57(2), 57–76. 10.21608/ajas.2026.457719.1589
- Adss, I. A., El-Habashy, D. E., Hafez, E. E., et al. (2026). Organic acids induce plant defense responses and suppress root-knot nematodes in tomato via molecular mechanisms and molecular docking insights. *Scientific Reports*, 16, 18012. <https://doi.org/10.1038/s41598-026-56502-9>
- Hassanine, N.N.A.M., Amin, A.H., Hafez, E.E. *et al.* First breed-pool whole genome sequencing of egyptian sheep: a comprehensive genomic atlas revealing diversity and

candidate genes for production and adaptation. *BMC Biotechnol* **26**, 96 (2026).
<https://doi.org/10.1186/s12896-026-01199-x>