Mohamed H. El-Habbak

Contact Information

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Education

Doctor of Philosophy, Plant Pathology ***2013***

University of Kentucky*, Lexington, Kentucky, USA*

Master of Science, Plant Pathology ***2003***

Benha University*, Moshtohor,* Qaluobeya*, Egypt*

Bachelor of Science, Plant Pathology ***1997***

Zagazig University Benha Branch*, Moshtohor,* Qaluobeya*, Egypt*

Professional Career History

I. Teaching

Associate Professor (full time) ***July 2023 - present***

Plant Pathology Department

Faculty of Agriculture, Benha University, Qaluobeya, Egypt.

Lecturer (full time) = (equivalent to Assistant Professor in USA academia) ***July 2014 - present***

Plant Pathology Department

Faculty of Agriculture, Benha University, Qaluobeya, Egypt.

Invited Instructor (per lecture) ***Fall semester 2013***

College of Agriculture, University of Kentucky.

Guest instructor for lecture and lab of PPA 400G 'Principles of Plant Pathology'.

Assistant Lecturer of Plant Pathology (off duty) ***July 2006 – June 2014***

Faculty of Agriculture, Benha University, Qaluobeya, Egypt.

On 'unpaid leave of absence' for traveling abroad based upon employee request and approval of the academic department.

Assistant Lecturer of Plant Pathology (full time) ***June 2003 – July 2006***

Faculty of Agriculture, Benha University, Qaluobeya, Egypt.

Instructor of Plant Pathology (full time) ***Jan. 1998 – June 2003***

Faculty of Agriculture, Benha University, Qaluobeya, Egypt.

II. Research

Associate Professor (full time) ***July 2023 - present***
Plant Pathology Department
Faculty of Agriculture, Benha University, Qaluobeya, Egypt.

Lecturer (full time) = (equivalent to Assistant Professor in USA academia) ***July 2014 – July 2023***
Plant Pathology Department
Faculty of Agriculture, Benha University, Qaluobeya, Egypt.

Visiting Scholar ***Apr. 2014 - June 2014***
Plant Pathology Department, University of Kentucky.

Post-Doctoral Scholar (full time) ***Apr. 2013 – Mar. 2014***
Plant Pathology Department, University of Kentucky.

Graduate Research Assistant (min. 20h/wk) ***Aug. 2010 - Mar. 2013***
Plant Pathology Department, University of Kentucky.

Academic and Administrative Positions

Coordinator, Center of Excellence for Agriculture, Egypt (COEA) at Benha Univ. ***June 2019 - 2020***
Project Duration: 2019-2024, Awarding Organization: USAID, Value: USD 30 Million.

Member, 'Exchanges. Training, and Scholarships Committee', Center of Excellence for Agriculture, Egypt (COEA). ***July 2019 - present***

Faculty Secretary, Plant pathology departmental council, for the academic year 2018/2019.
Faculty of Agriculture, Benha University, Qaluobeya, Egypt.

Academic Coordinator, 'Agricultural Biotechnology' English Program (Bachelor's) S***ep. 2014 - present***
Faculty of Agriculture, Benha University, Qaluobeya, Egypt.

Top Skills

University teaching, Lecturing, E-learning, Higher education, Qualitative research.

Expertise and Interests

I. Research

Plant genetic resistance; Reverse genetics, Functional genetics, Gene cloning, Gene silencing, Gene overexpression, VIGS, DNA sequencing, real time PCR, Western blotting, Northern blotting.

Biology of fungal pathogens; Isolation and identification of fungal and bacterial plant pathogens, Molecular identification of fungi.

Host-pathogen interaction; Light and fluorescence microscopy, Developing lab, greenhouse and field bioassays for testing plant disease resistance and virulence of plant pathogens.

Mycovirus studies; dsRNA isolation and sequencing.

II. Teaching

Courses taught:

Undergraduate: Fundamentals of Microbiology, Fundamentals of Plant Pathology, Taxonomy of Fungi, Physiology of Fungi, Diseases of Fruit Trees, Diseases of Vegetable and Ornamental Plants, Diseases of Field Crops, Postharvest Diseases, Non-infectious Plant Diseases, Plant Disease Diagnostics, Plant Disease Biotechnology, Biosafety.

Graduate: Virology, Plant Disease Diagnostics, Plant Pathology and Biotechnology, Advances in Plant Pathology, Diseases of Filed Crops (advanced).

Capable of teaching other courses related to classic and modern plant pathology, microbiology and molecular biology.

Honors, Awards and Scholarships

Graduate Research Assistantship ***Aug. 2010 - Mar. 2013***

Awarded by *Plant Pathology Department, University of Kentucky.*

In addition to stipend, the assistantship covers tuition costs and health insurance. Eligibility based on student's prior academic performance.

International Student Tuition Scholarship ***Academic 2010 / 2011***

Awarded by *Office of International Affairs, University of Kentucky.*

Eligibility for an international student who exhibits quality of character, academic merit and seriousness of purpose.

Government Mission (GM) Scholarship ***Aug. 2006 - July 2010***

Awarded by *Ministry of State for Scientific Research Affairs, Egypt*.

A highly competitive program that focused on Egyptian students of high caliber to pursue their Ph.D. study in the United States in selected fields. GM sponsors the student for his study tuition, health insurance and living expenses for four academic years.

Publications

Abogarra, L.; Eisa, N.; El-Habbaa, G.; Darwesh, R. S. S.; **El-Habbak, M**. 2022. Superiority Of Nano-Silver Nitrate And Nano-Chitosan In Controlling Bacterial Contamination And Promoting Growth Of In Vitro Date Palm Cultures. *Plant Cell Biotechnology And Molecular Biology*. 23(33-34): 85-104.

El-Habbak, M.H. 2022. Promising Integrated Management Strategy of Garlic Rust (Puccinia porri G. Wint.) with Improved Productivity Using Benzothiadiazole (BTH), Essential Oils and Fungicides. *Egyptian Academic Journal of Biological Sciences, F. Toxicology & Pest Control.* 14 (2): 249-261.

Ahmed, M. A.; Soliman, D. Z.; **El-Habbak, M. H.**: Role of Some Essential Plant Oils. 2022. Fungicides and Inducer Resistance Elicitors on The Management of Cucumber Downy Mildew. *Egyptian Academic Journal of Biological Sciences, F. Toxicology & Pest Control.* 14(2): 193-206.

Elbatawy, Y. M., Mohamed, F. G., Eisa, N. A. and **El-Habbak, M. H.** 2020. Evaluation of some biological agents and plant extracts for controlling white rot on cucumber. *Annals of Agricultural Science Moshtohor*

Journal. 58(2):351-364.

El-Habbak, M. H. and Refaat, M. H. 2019. Molecular detection of the causative agent of the potato soft rot, *Pectobacterium carotovorum*, in Egypt and essential oils as a potential safe tool for its management. *Egyptian Journal of Biological Pest Control*. 29(1), p.5.

Kachroo A. Shine M. B., Yang J. W., **El-Habbak M.,** Nagyabhyru P., Fu D. Q., Navarre D., Ghabrial S., Kachroo P. 2016. Cooperative functioning between phenylalanine ammonia lyase and isochorismate synthase activities contributes to salicylic acid biosynthesis in soybean. *New Phytologist.* 212: 627–636.

EL-Fiki, I. and **El-Habbak, M. H.** 2016. Effect of some commercial bacteriotoxicants on development of bacterial spot disease in tomato caused by *Xanthomonas vesicatoria*. *Middle East Journal*, *5*(4), 841-855.

Koloniuk I., **El-Habbak M. H.**, Petrzik K., Ghabrial S. A. 2014. Complete genome sequence of a novel hypovirus infecting *Phomopsis longicolla*. *Archives of Virology.* 159(7): 1861-1863. DOI 10.1007/s00705-014-1992-8).

Rao, S.S., **El-Habbak, M.H.**, Havens, W.M., Singh, A., Zheng, D., Vaughn, L., Haudenshield, J.S., Hartman, G.L., Korban, S.S. and Ghabrial, S. A. 2014. Overexpression of *GmCaM4* in soybean enhances resistance to pathogens and tolerance to salt stress. *Molecular Plant Pathology*. 15(2), 145-160. DOI: 10.1111/mpp.12075.

Singh, A.K., Fu, D.Q., **El-Habbak, M.**, Navarre, D., Ghabrial S. and Kachroo, A. 2011. Silencing genes encoding omega-3 fatty acid desaturase alters seed size and accumulation of bean pod mottle virus in soybean. *Molecular Plant-Microbe Interactions*. 24(4): 506-515.

El-Habbak, M. H. 2013. Overexpression/silencing of selected soybean genes alters resistance to pathogens. Ph.D. Dissertation, Theses and Dissertations - *Plant Pathology, University of Kentucky*, pp. 154. http://uknowledge.uky.edu/plantpath_etds/8.

Eisa, Nawal A., El-Fiki, A.I., Mohamed, F.G. and **El-Habbak, M.H**. 2006. Biochemical changes in squash leaves sprayed with some chemicals for inducing resistance to powdery mildew. The Second Conference of Farm Integrated Pest Management, *Fayoum University, Fayoum, Egypt*. 16-18 Jan. 2006, pp. 211-222.

El-Habbak, M.H. 2003. Induction of resistance to powdery mildew disease of squash plants. M.Sc. Thesis, *College of Agriculture, Banha University, Moshtohor, Egypt*.

Posters and Presentations at Professional Meetings

Rao, S., **El-Habbak, M.** and Ghabrial, S. 2012. Use of virus-based vector for stable protein expression and gene function studies in soybean. The 8th Annual Kentucky Innovation and Entrepreneurship Conference (KIEC), June 1st, Louisville, Kentucky (Poster).

Ghabrial, S., Rao, S., Singh, A. and **El-Habbak, M.** 2011. Use of virus- based vector for stable protein expression and gene function studies in soybean. The Joint 7th Annual Kentucky Innovation and Entrepreneurship Conference (KIEC) and the 16th Kentucky ESCoR Annual Conference, May 26th, Louisville, Kentucky (Poster).

Rao, S., **El-Habbak, M.**, Haudenshield, J., Hartman, G.L., Korban, S.S. and Ghabrial, S. A. 2010. Over-expression of the calmodulin gene SCaM4 in soybean enhances resistance to *Phytophthora sojae*. APS Annual

Meeting, August 7-11, Charlotte, North Carolina (Poster).

El-Habbak, M.H., Annamalai, P. and Ghabrial, S.A. 2009. A soybean leucine-rich repeat receptor-like kinase regulates the response to infection with *Phytophthora sojae*. APS Annual Meeting, August 1-5, Portland, Oregon. *Phytopathology* 99:S32 (Abstract).

Memberships & Affiliations

Member, American Phytopathological Society

Member, Egyptian Phytopathological Society

Former Member, Gamma Sigma Delta Honor Society of Agriculture

Social Involvement and Community Service

Member, University of Kentucky Alumni Association

Member, University of Kentucky Postdoctoral Association

Member, Association of Plant Pathology Scholars at University of Kentucky

Judge, Science Fair at Fayette County Public Schools for three consecutive years 2009 – 2011

References

Mahmoud Iraqi, Former Dean, College of Agriculture, Benha University, *E-mail address:* mahmoud.iraqi@fagr.bu.edu.eg

Naglaa Abdallah, Former chief of party, COEA, Emeritus Professor, Genetics Department, Cairo University. *E-mail address:* naglaa.abdallah@agr.cu.edu.eg

Nawal Eisa, Emeritus Professor, Plant Pathology Department, Benha University, *E-mail address:* naeisa@yahoo.com

Paul Vincelli, Professor, Plant Pathology Department, University of Kentucky, *Phone:* (859) 218-0722, *E-mail address:* pvincell@uky.edu

Aardra Kachroo, Professor, Plant Pathology Department, University of Kentucky, *Phone:* (859) 218-1292, *E-mail address:* apkach2@uky.edu

John Hartman, Emeritus Professor, Plant Pathology Department, University of Kentucky, *E-mail address:* jhartman@uky.edu