**Kholoud M. Alananbeh**

**Associate Professor/Mycology, Molecular Plant Pathology**

**Dept. of Plant Protection**

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**OBJECTIVES**

To obtain a challenging and demanding job in Plant Pathology and Microbiology using advanced tools that will further enhance my knowledge and skills and to spread what I learned to the coming generations.

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| **RESEARCH INTERESTS** |
| 1. Molecular population biology and genetic diversity of fungal (Rusts (wheat stem rust, leaf rust and yellow rust), *Verticillium dahliae*, *Fusarium* spp., *Colletotrichum* spp., *Phomopsis* spp., *Rhizoctonia* sp., and others) and bacterial plant pathogens.
2. Wheat fungal diseases including: rust, crown rot, smut, powdery mildew, spots and other diseases.
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| 1. Date palm diseases and management
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| 1. Endophytes and rhizospheres for plant growth improvement
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| 1. Mushroom identification, cultivation, and improvement
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| 1. Biological control of fungal and bacterial plant pathogens
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| 1. Pathogens control using photosensitizers and nanotechnology
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| 1. Phytoremediation and mycoremediation
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| 1. Pesticides residue analysis in different food
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**EDUCATION**

**North Dakota State University**, Fargo, ND 58105, USA

Ph.D, Plant Pathology, Jan 2006 – Jan 2010.

* My research was entitled by “Studies on the population biology of *Colletotrichum coccodes* using AFLP and SCAR markers". GPA = '3.83'.

I also had a Statistical Certificate for Non-majors in the NDSU (12 credits in Statistic Department, NDSU). This included:

* Advanced applied statistics
* Applied regression
* SAS programming
* Introduction to Experimental design
* Nonparametric Statistics

I would like to add that I took the following courses in Plant Science to enhance my knowledge and experience during my MSc and PhD:

* Advanced Plant Physiology
* Plant Tissue culture
* Professional Development
* Intermediate Genetics
* Field Design

**Jordan University**, Amman, Jordan

Master, Horticulture and Plant Protection, Sep 2000 - Feb 2003.

* Research entitled “Production of Oyster Mushroom *Pleurotus ostreatus* on Different Agricultural Wastes Available in Jordan”. With GPA= “3.65”.
* It has been conducted in Plant Pathology Department, Jordan University, Jordan. There are a lot of agricultural wastes available such as tomato tuff, banana leaves, and pine needles, wheat straw and olive cake. Agro wastes were collected, chopped if needed, boiled, and then used for mushroom cultivation.
* I prepared mushroom spawn (spores on millet or wheat grains) for cultivation, and analyzed protein, fiber, fat, ash, moisture, and minerals in mushroom.
* Analyzed protein, fiber, fat, ash, moisture, and minerals in mushroom.

**Jordan University**, Amman, Jordan

Bachelor, Plant protection, Sep 1995 - Jun 1999. GPA= “2.75”

**Kufranjah Secondary School for Females**, Ajloun, Jordan

High School, Scientific Stream, Oct 1994 - Jun 1995. GPA of 86%.

**WORK EXPERIENCE**

**Sep 2015 – Present.**

**Associate Professor**

University of Jordan, Amman, Jordan

Responsibilities:

* Taught the following courses for undergraduate students:
1. Plant Pathology (Bachelor)
2. General mycology (Bachelor)
3. [Field Training in Plant Protection (Bachelor)](http://agriculture.ju.edu.jo/Lists/Courses/Attachments/170/Field%20Training%20in%20Plant%20Protection%20%280646499%29.doc)
4. Beneficial fungi (Bachelor)
5. Seminar (Bachelor)
6. Principles of plant protection (Bachelor)
7. Soil Microbiology (Bachelor)
8. Fungal plant diseases (Master)
9. Seed Pathology (Doctorate)
* Second supervisor for three master students.
* Estimating the impact of *Trichoderma* spp. fungi on turfgrass quality under different levels of salinity
* Biological control of pepper root rot by using arbuscular mycorrhizal fungi and olive cake.
* Effect of three *Bacillus* spp. on tobacco whitefly *Bemisia tabaci* (Gennadius) (Hemiptera: Aleyrodidae)**.**
* Second supervisor for PhD student. Project entitled “Effect of endophytic fungal isolates on wheat aphid *Rhopalosiphum padi* (L.) (Hemiptera: Aphididae) under favorable and unfavorable conditions**”.**

**Researches**

* Survey and characterization of wheat stem rust (*Puccinia graminis*) in Jordan. Principal investigator. 12000 JD. Funded by The University of Jordan and Abdul Hameed Shoman Foundation 15000 JD.
* Studying leaf rust-induced genes in Jordanian durum wheat in relation to population genetic diversity of the causative fungus (*Puccinia triticina*) using cDNA-AFLP technique and microsatellite markers. 113000 JD. Funded by the Scientific Research Support Fund.
* Effects of mycorrhizal fungi inoculation on gerbera growth and flower quality under salinity conditions. 10000 JD. Funded by The University of Jordan.
* Impact of Fusarium crown rot disease and identification of quantitative trait loci (QTL) for resistance in Jordanian durum wheat Germplasm. 20000 JD. Funded by The University of Jordan.

**Sep 2011 – August 2015.**

**Assistant Professor**

Taibah University, Al Madinah Al Munawwarah, Saudi Arabia

Responsibilities:

* Taught the following courses for the seventh and eighth level:
1. Bacterial Physiology
2. Biostatistics and Field Design
3. Food Microbiology
4. Genetic Engineering
5. Graduation Research Topic
6. Mycology
7. Petroleum Microbiology and Mineralization
8. Plant Pathology
9. Special Topics
* Supervised three graduate students:
1. “Evaluation of film-coating legume seeds with the fungicide thiram on nodulation and plant establishment against soil-borne diseases”.
2. “Photodynamic inactivation of Dematiaceous phytopathogenic fungi with emphasis on *Alternaria spp.,* the causal agentof early blight of tomato”.
3. “Study on microbial contamination of wastewater and their treatment with nanoparticles in Saudi Arabia”.
* Participated in King Abdulaziz and His Companions Foundation for Giftedness and Creativity (MAWHIBA) program for two years 2014-2015 (The path of scientific research).
* Responsible about organizing the department undergraduate courses for each semester, prepare and assign faculties and lecturers courses schedule, and enter the undergraduate courses online using the ORACLE registration system.
* Responsible about graduation project committee in the department (assigning students to doctors, solve any possible difficulties, writing guidelines for research project's writing and presentation.
* Academic advisor for undergraduate students.
* Member in the student affairs and extension committee.
* Course specifications for the following courses:

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| Level | Course code | Course name |
| Master |  | Molecular Genetics of Eukaryotes |
|  | Molecular Systematic |
|  | Genetic Engineering |
|  | Genomics and Bioinfromatics |
|  | Molecular diagnostic |
| Bachelor (3rd Year) | BIOL312 | Molecular biology and genetic engineering |
| BIOL 314 | Biostatistics and Experimental Design  |

**June 2012 – August 2012.**

**Visiting Scientist**

North Dakota State University, Fargo, North Dakota, USA

Responsibilities*:*

Writing manuscripts for publication with two professors.

**Aug 2009 – Aug 2011.**

**Post Doc Research Fellow**

North Dakota State University, Fargo, ND, United States of America

Worked on Verticillium wilt disease on sunflower and potato caused by the fungus *Verticillium dahliae* and funded by the National Sunflower Association (NSA).

Responsibilities:

* Field surveys to collect infected samples of sunflower for further testing for *Verticillium*, *Phomopsis*, *Phoma*, *Fusarium*, Sclerotinia stem and stalk rot, insect damage, charcoal rot, downy mildew and other diseases.
* Received, isolated, and identified *V. dahliae* and all the other fungi infecting Sunflower morphologically and molecularly using PCR amplification with specific primers and ITS region.
* Used Amplified Fragment Length polymorphism (AFLP) and Simple Sequence Repeats (SSR) to study the genetic diversity of *Verticillium dahliae* on different hosts including sunflower and potato, and studied the global genetic diversity.
* Identified the vegetative compatibility groups (VCG’s) of the fungus using the molecular techniques.
* Identified the most aggressive VCG on sunflower using different inoculation methods.
* **Had side projects** on identifying the different species of *Fusarium, Phomopsis, Phoma, Microphamina,* and *Colletotrichum* morphologically and molecularly using different primers, tested their pathogenicity on sunflower, and run different molecular markers such as AFLP and rep-PCR on those fungi, as well as reporting new fungi on sunflower.
* Laboratory skills in preparation (merchandise necessary equipments and materials), student supervising, and had different laboratory techniques skills.

**Jan 2006 – Jan-2010.**

**Research assistant**

North Dakota state University, Fargo, ND, United States of America

Worked on the fungus *Colletotrichum coccodes*, the causal agent of black dot disease on potato plant.

* I worked with laboratory and greenhouse techniques including potato planting in green houses and field and scoring disease severity in potato fields.
* Isolated, cultured, identified and maintained different fungal cultures using different methods.
* Identified and counted germinated conidia of *Alternaria solani* on fungicides-supplemented media.
* Prepared different media types for fungal pathogens, and single sporing of *Colletotrichum coccodes* and other fungi.
* Conducted molecular work (DNA extraction, PCR-running, AFLP running and analysis by the traditional way and by using Li-COR, cloning, developing SCAR markers, designing primers), running different statistical softwares to analyze the binomial data such as PHYLIP, WINBOOT, POPGENE, MULTILOCUS, GENALEX, and STRUCTURE, BAPS, MEGA 5.1, AFLPsurv.
* Able to identify different fungal pathogens on potato plants visually, by culture, and molecularly.

**Jun 2007 - Sep 2007.**

**Plant disease diagnostician**

North Dakota state University, United States of America, Fargo, ND

Worked in the Plant Diagnostic Laboratory.

* Visual identification of some plant disease depending on the symptoms, then confirming the identification by culturing the samples on different media types.
* I helped in preparing potato tubers and stems for future testing for different potato diseases.

**Apr 2003 - Jun 2005.**

**Mushroom cultivation trainer**

Extension Department, Ministry of Agriculture, and through the Agro-Biodiversity project in NCARTT, Jordan, Amman.

Trainer in the Extension Department, Ministry of Agriculture, and through the Agro-Biodiversity project in national center for agricultural research and technology transfer (NCARTT) on Oyster mushroom Production for home level.

* Conducted workshops on oyster mushroom cultivation using simple methods.
* Presented topics regarding mushroom and spawn production.

**Feb 2004 - Jan 2006.**

**Pesticide analyzer and agricultural engineer**

Ministry of Agriculture, Jordan, Amman.

Worked on a project with Ministry of Agriculture and the National Center for Agricultural Research and Technology Transfer (Jordan) (NCARTT) in laboratories of pesticide and residue analysis called “Safety Use of Pesticide and Residue Analysis”.

In this project, I worked with a hard-working team in planting open field and green house for different vegetables (cucumber, tomato, squash, pepper, strawberry, eggplant, cabbage, lettuce, and other vegetables). Some of job duties were:

* Checked the plots for any possible diseases and pests and applied the necessary pesticides to control those diseases and pests.
* Supervised the application of the pesticides studied in that project in the right amount and method.
* Received and prepared samples for pesticide residue analysis,
* Analyzed pesticides residue using different chemicals.
* Calculated the residue amounts in the samples, worked on Gas Chromatograph. High Performance Liquid Chromatograph, and Mass spectrophotometer for finding the active ingredient concentration for different pesticides received at the Ministry of Agriculture
* Prepared pesticides stocks for different pesticides used in the study.

**Feb 2002 - Feb 2004.**

**Teaching Assistant**

Jordan University, Jordan, Amman.

* Taught the practical part of the following courses during and after my M. Sc degree:

- Plant Nematology in 2004

- Fungal Plant Diseases in 2002/2003.

* I got good experience in preparing the laboratory section for undergraduate students, good interaction with the students through helping them to diagnose and recognize different fungal diseases through symptoms and causal agents.
* Experienced collecting, picking and saving nematodes through different collecting techniques, and finally helped the students in differentiating the different nematode species through the microscope.

**2001 – 2002.**

**Research assistant**

University of Jordan.

Worked on collecting diseased plants for *Eutypa* species affecting grape vines, scoring the disease, and data entry.

* Prepared and corrected the exams for the undergraduate students.

**Oct 2000 - Feb 2002.**

**Part -time job in the insect museum**

Jordan University, Jordan

* I had good ability in collecting, preserving, and identifying different types of insects.
* I helped some graduate students in collecting the insects for their researches through surveys around Jordan.

**PUBLICATIONS**

* Kholoud Alananbeh, Mohammad Al Qasim, Aladin Gharaibeh, Huda Al-Hiary. 2019. First report of shoot blight caused by *Neoscytalidium dimidiatum* on citrus in Jordan. Plant Disease. Published Online: 15 Oct 2019<https://doi.org/10.1094/PDIS-04-19-0860-PDN>.
* Randa N. Albdaiwi, Hala Khyami-Horani, Jamal Y. Ayad, Kholoud M. Alananbeh and Rabea Al-Sayaydeh. 2019. Isolation and characterization of halotolerant plant growth promoting rhizobacteria from durum wheat (*Triticum turgidum* subsp. *durum*) cultivated in saline areas of the Dead Sea region. Frontiers in Microbiology, doi: 10.3389/fmicb.2019.01639.
* Kholoud M. Alananbeh, Salah-Eddin Araj & Haitham M. Al Taweel. 2019. First record of *Raoiella indica* Hirst (Acari: Tenuipalpidae) in Jordan. International Journal of Acarology, https://doi.org/10.1080/01647954.2019.1602165.
* Monther Mohumad Tahat, Kamaruzaman Sijam, Kholoud Alananbeh. 2018. Exploring the use of legumes as host plant species in *Glomus mosseae* sporulation. Legume Research, (Online Published: 29-10-2018).
* Lara R. Jaber, Kholoud M. Alananbeh. 2018. Fungal entomopathogens as endophytes reduce several species of *Fusarium* causing crown and root rot in sweet pepper (*Capsicum annuum* L.). Biological Control 126 (2018) 117–126.
* Asma M Shaderma, Maher B Al-Dabbas, Tawfiq M Al-Antary, Kholoud M Alananbeh. 2018. Evaluation of ozonation treatment effect on tomato fruits and lettuce colour. Fresenius Environmental Bulletin, 27 (7): 5137-5141.
* Kholoud M. Alananbeh, Nahla BoQuellah, Mashael Rabih Al-Harbi, and Salama A. Ouf. 2018. Effect of Photosensitizer on Mycelium Growth, Mycotoxin and Enzyme Activity of *Alternaria* sp. Jordan Journal of Biological Sciences, 11 (5): 499-510.
* Osama W Al Arabiat, Salah-Edden A Araj, Kholoud M Alananbeh, Twafiq M Al-Antary. 2018. Efficacy of three *Bacillus* spp. on development of tobacco whitefly *Bemisia tabaci* (Gennadius) (Homoptera: Aleyrodidae). Fresenius Environmental Bulletin, 27 (7): 4965-4972.
* Osama W Al Arabiat, Salah-Edden A Araj, Kholoud M. Alananbeh, Tawfiq M. Al-Antary. 2018. Effect of three *Bacillus* spp. on tobacco whitefly *Bemisia tabaci* (Gennadius) (Homoptera: Aleyrodidae). Fresenius Environmental Bulletin, 27 (5a): 3706-3712.
* Osama W Al Arabiat, Salah-Edden A Araj, Kholoud M. Alananbeh, Tawfiq M. Al-Antary. 2018. Influence of three *Bacillus* spp. on different parameters of cauliflower plant growth when tested on tobacco whitefly *Bemisia tabaci* (gennadius) (Homoptera: Aleyrodidae). Fresenius Environmental Bulletin, 27 (5a): 3746-3751.
* Firas Hayajneh and Kholoud Alananbeh. 2018. Awareness of the presence of antimicrobial drugs in food among consumers in Jordan. Journal of Food Agriculture and Environment, 16 (2):56-59; DOI: 10.1234/4.2018.5497.
* Kholoud Alananbeh, Firas Hayajneh. 2018. Pesticide residue awareness among students and employees in the University of Jordan, Jordan. Journal of Agricultural & Food Information. DOI:10.1080/10496505.2018.1429929.
* K.M. Alananbeh, W. J. Al-Refaee, Z. A. Qodah. 2017. Antifungal Effect of Silver Nanoparticles on Selected Fungi Isolated from Raw and Waste Water. Indian Journal of Pharmaceutical Sciences, 79(4): 559-567.
* Kholoud M. Alananbeh, [Zakaria Al-Qudah](https://www.researchgate.net/researcher/2104649961_Zakaria_Al-Qudah), [Amira El-Adly](https://www.researchgate.net/researcher/2104703572_Amira_El-Adly), [Wadha J. Al Refaee](https://www.researchgate.net/researcher/2104659705_Wadha_J_Al_Refaee). 2017. [Impact of Silver Nanoparticles on Bacteria Isolated From Raw and Treated Wastewater in Madinah, KSA](https://www.researchgate.net/publication/299134671_Impact_of_Silver_Nanoparticles_on_Bacteria_Isolated_From_Raw_and_Treated_Wastewater_in_Madinah_KSA?ev=prf_pub). Arabian Journal for Science and Engineering. 42:85-93.
* Alananbeh, K.M., Boquellah, N., Al Kaff, N.S., Al-Ahmadi, M. 2017. Evaluation of aerial microbial pollutants in Al-Haram Al-Nabawi during pilgrimage of 2013. Saudi Journal of Biological Sciences, 24 (1): 217-225.
* Dalia Essamy El Nashar, Kholoud Mohammad Alananbeh, Noora Al Hassan. Genetic, dietary, and non-dietary risk factors of obesity among preparatory-year female students at Taibah University, Saudi Arabia. Journal of Taibah University for Science, DOI: http://dx.doi.org/doi:10.1016/j.jtusci.2016.06.003.
* Kholoud M. Alananbeh, Neil C. Gudmestad. 2016. Genetic diversity of *Colletotrichum coccodes* in the United States using amplified fragment length polymorphism analysis. [Journal of General Plant Pathology](http://link.springer.com/journal/10327), 82(4): 199-211.
* Kholoud Mohammad Alananbeh, Salama Abu-Elyazeed Ouf, Khyreyah Jubran Al-Fifi. 2017. Effect of thiram as a seed-dressing fungicide on growth and enzymatic activities of *Fusarium solani* on legumes. Jordan Journal of Agricultural Sciences. 13(2): 367-380.
* Abeer A. Al- Dakhil, Tahany H. Ayaad, Nikhat J. Siddiqi, Reem A. Al- Ajmi, Kholoud M. Alananbeh. 2016. Low-stringency single specific primer- PCR as a tool for molecular characterization of sand fly species (Diptera: Psychodidae) populations collected from Al-Madinah and Asir regions, Saudi Arabia. Brazilian Archives of Biology and Technology, **Accepted**.
* Mathew, F. M., Alananbeh, K. M., Jordahl, J. G., Meyer, S. M., Castlebury, L. A., Gulya, T. J., and Markell, S. G. 2015. Phomopsis stem canker: A reemerging threat to sunflower (*Helianthus annuus*) in the United States. Phytopathology, 105:990-997.
* Mathew, F. M., Castlebury, L. A., Alananbeh, K., Jordahl, J. G., Taylor, C. A., Meyer, S. M., Lamppa, R. S., Pasche, J. A., and Markell, S. G. 2015. Identification of *Diaporthe* *longicolla* on dry edible pea, dry edible bean, and soybean in North Dakota. Plant Health Progress doi:10.1094/PHP-RV-14-0045.
* Zakaria Al-Qodaha, Mohammad Al-Shannag, Eman Assirey, Wasim Orfali, Khalid Bani-Melhem, Kholoud Alananbeh, Nahla Bouqellah. 2015. Characteristics of a novel low density cell-immobilized magnetic supports in liquid magnetically stabilized beds. Biochemical Engineering Journal, 97: 40–49.
* Alananbeh, K.M., Bouqellah, N.A., Al Kaff, N.S. 2014. Cultivation of oyster mushroom *Pleurotus ostreatus* on date-palm leaves mixed with other agro-wastes in Saudi Arabia. Saudi Journal of Biological Sciences, 21: 616–625.
* Al-Qodah, Z., Al-Shannag, M., Bani-Melhem, M., Assirey, E., Alananbeh, K., Bouqellah, N. 2014. Biodegradation of olive mills wastewater using thermophilic bacteria. Desalination and Water Treatment, 56 (7): 1908-1917.
* Mohammad Al-Shannag, Zakaria Al-Qodah , Kholoud Alananbeh, Nahla Bouqellah, Eman Assirey, Khalid Bani-Melhem. 2014. COD reduction of baker's yeast wastewater using batch electrocoagulation. Environmental Engineering and Management Journal, 13(12): 3153-3160.
* Alananbeh, K. M., Tsror (Lahkim), L., and Gudmestad, N. C. 2014. Genetic diversity of a global population of *Colletotrichum coccodes* using amplified fragment length polymorphism markers. American Journal of Potato Research, 91: 75-87.
* Al-Qodah, Z, Daghistani, H., Alananbeh, K. 2013. Isolation and characterization of thermostable protease producing *Bacillus pumilus* from thermal spring in Jordan. African Journal of Microbiology Research, 7(29): 3711-3719.
* Alananbeh, K. M., Pasche, J. S. and Gudmestad, N. C. 2011. Genetic diversity and population biology of *Colletotrichum coccodes* in the United Sates using amplified fragment length polymorphism analysis. Potato Res. 54:81-103.
* Al-Momany, A., and Ananbeh, K. 2011. Conversion of Agricultural Wastes into Value Added Product with High Protein Content by Growing *Pleurotus ostreatus*. [Environmental Earth Sciences](http://www.springerlink.com/content/k172vq/), Part 9, 1483-1490, DOI: 10.1007/978-3-540-95991-5\_139.
* Alananbeh, K. M., Viviana-Rivera, V., Acuña, I., Secor, G., and Gudmestad, N. C. Genetic diversity of *Colletotrichum coccodes* isolates from Chile using amplified fragment length polymorphism markers. **(In process).**
* Alananbeh, K. M., Johnson, K., and Gudmestad, N. C. Phylogenetic study of *Colletotrichum coccodes*-different VCGs from different geographic origins using different gene sequences. **(In process).**
* Alananbeh, K., Mathew, F., Cohli, S., Gudmestad, N., Gulya, Y., and Markell, S. Determination of presumptive vegetative compatibility groups of *Verticillium dahliae* occurring on sunflower using molecular markers**. (In process).**
* Alananbeh, K., Mathew, F., Gudmestad, N., Gulya, Y., and Markell, S. Genetic diversity study of two asexual fungi infecting sunflower and potato in the United States using rep-PCR. **(In process).**
* Mathew, F., Alananbeh, K., Meyer, S., Jordahl, J., Bertero de Romano, A., Paoloni, P., Clemente, G., and Gudmestad, N. Identity and pathogenicity of *Fusarium* spp. isolated from sunflower**. (In process).**
* Alananbeh, K., Mathew, F., Taylor, C., Gudmestad, N., Gulya, Y., and Markell, S. Genetic diversity study of *Macrophamina phaseolina* infecting sunflower in the United States using rep-PCR. **(In process).**
* Ananbeh K. and Al-Momany, A. 2008. Production of Oyster Mushroom (*Pleurotus ostreatus*) on Tomato Tuff Agro waste. Dirasat, Agricultural Sciences. 35(3): 133-138.
* Abdel-Wali, M., Bahdousheh, M., Al-Awamleh, A., Shaderma, A., Arabyat, S., Ananbeh, K., Ayassreh, M., Frehat, A., Romiah, N., Alawneh, Y., Abu-Nab, N., Gharaybeh, A., Qbielat, S. and Edwan, M. 2007. Determining pesticides waiting periods and residues on vegetables under Jordan Valley conditions. Acta Hort. (ISHS) 741:87-107.
* Ananbeh, K.M, and Almomany, A.R. 2005. Production of Oyster mushroom *Pleurotus ostreatus* on olive cake agro waste. Dirasat, Agricultural Sciences, 32(1):64-70.
* Kholoud Alananbeh, Febina Mathew, Chris Taylor, Thomas Gulya, Neil Gudmestad, and Samuel Markell. Phenotypic and fingerprinting characterizations of charcoal rot on sunflower in North and South America. (**In Process**).
* Kholoud M. Alannabeh, Nadia S. Al Kaff, Nahla Boquellah. Effect of date-palm bacterial endophytes on wheat seeds under salt stress. **(In process**).
* Kholoud Alananbeh, Nahla Boquellah, Waad Al-Raddadi, Dalal Al-Sahli. Antifungal potential of plant extracts against selected fungi and bacteria **(In process).**

**MEETINGS (ABSTRACTS and POSTERS)**

* Kholoud M. Alananbeh, Ayed Al-Abdallat, Monther M. Tahat. 2018. Survey of wheat stem rust *Puccinia graminis* f. sp. *tritici* in Jordan. The 2018 BGRI Technical Workshop, 13-17-4-2018, Marrakech, Morocco.
* Kholoud M. Alananbeh, Nahla A. Boquellah, Dalal S. Al-Sahle. *Acremonium strictum* as antifungal and antibacterial agent in vitro. 12th Arab Congress for Plant Protection, Hurghada, Egypt, 4-10/11/2017.
* Salama A. Ouf, Kholoud M. Alananbeh, Mashael R. Al-Harbi. Photodynamic inactivation of dematiaceous phytopathogenic fungi with emphasis on *Alternaria spp., the causal agent* of early blight of tomato. The 29 Meeting of Saudi Biolgical Society, 25-27 February 2014,Dammam, KSA (**Oral** **presentation**).
* Mathew, F., Alananbeh, K., Jordahl, J., Meyer, S., Gudmestad, N., Gulya, T., and Markell, S. 2014. *Fusarium* sp. associated with stem diseases on sunflowers. National Sunflower Association. (Oral presentation). Available online at http://www.sunflowernsa.com/uploads/resources/698/fusarium\_mathew\_2014.pdf.
* Mathew, F., Alananbeh, K., Balbyshev, N., Heitkamp, E., Castelbury, L., Gulya, T., and Markell, S. 2012. Reevaluation of *Phomopsis* species affecting sunflowers in the United States. 18th International Sunflower Conference, Mar Del Plata and Balcarce. Argentina February 27th -March 1st 2012. **Poster.**
* Mathew, F., Alananbeh, K., Meyer, S., Jordahl, J., Bertero de Romano, A., Paoloni, P., Clemente, G., and Gudmestad, N. Identity and pathogenicity of *Fusarium* spp. isolated from sunflower. Poster. National Plant Diagnostic Network,Third National Meeting, Berkeley, California, November 6-9, 2011. **Poster**.
* Alananbeh, K., Gudmestad, N., Gulya, Y., and Markell, S. 2011. Determination of presumptive vegetative compatibility groups of *Verticillium dahliae* occurring on sunflower using molecular markers. **Oral presentation**, APS 2011 meeting, Hawaii, USA. Aug 5-10, 2011.
* Mathew, F., Alananbeh, K., Gudmestad, N. C., Gulya, T., and Markell, S. Characterization of *Phomopsis* sp. affecting sunflowers in the United States. Poster, APS 2011 meeting, Hawaii, USA. Aug 05-10, 2011. **Poster.**
* Alannabeh, K., Mathew, F., Meyer, S., Jordahl, J., Gudmestad, N., Gulya, T., and Markell, S. 2011. Identification and pathogenic characterization of *Fusarium* spp. On sunflower in the United States. Poster, APS North Central Division 2011 Meeting, USA. June 06-08. **Poster.**
* Alananbeh, K., Gudmestad, N., Gulya, Y., and Markell, S. 2011. Preliminary Studies on the Vegetative Compatibility Groups of *Verticillium* on Sunflower. **Oral presentation**, National Sunflower Association board spring meeting, Ramada Plaza Hotel, Fargo, ND. January 12-13, 2011.
* Alananbeh, K., Tsror (Lahkim), L., and Gudmestad, N. C. 2010. Genetic diversity of global population of *Colletotrichum coccodes* using amplified fragment length polymorphism. **Poster**, APS North Central Division 2010 Meeting, Rapid City, SD, USA. June 06-08.
* Alananbeh, K., Gudmestad, N., Gulya, Y., and Markell, S. 2010. Determination of presumptive vegetative compatibility groups of *Verticillium dahliae* occurring on sunflower using molecular markers. **Oral presentation**, APS North Central Division 2010 Meeting, Rapid City, SD, USA. June 06-08.
* Alananbeh, K., Markell, S., Gulya, T., and Gudmestad, N. C. 2010. Determination of vegetative compatibility groups using molecular markers, and their aggressiveness of *Verticillium dahliae* occurring on sunflower. National Sunflower Association board spring meeting, USDA, ARS Northern Crop Science Laboratory, Fargo, ND. February 24-25, 2010. **Oral presentation.**
* Alananbeh, K., Markell, S., Gulya, T., and Gudmestad, N. C. 2010. Determination of vegetative compatibility groups using molecular markers, and their aggressiveness of *Verticillium dahliae* occurring on sunflower: Research Plan. 32nd National Sunflower Association Research Forum, Ramada Plaza Suites & Convention Center, January 13-14, 2010. **Oral presentation.**
* Alananbeh, K and Gudmestad, N.C. 2009. Genetic Diversity of *Colletotrichum coccodes* Vegetative Compatibility Groups Using Fluorescent Amplified Fragment Length Polymorphism Markers. APS North Central Division Meeting. June 21-23, 2009, Iowa State University, Reiman Gardens, Ames, Iowa, USA. **Oral presentation.**
* Al-Momany, A. and Ananbeh, K. 2007. Conversion of agricultural wastes into value added product with high protein content by growing *Pleurotus ostreatus*. Proc. of International Conference on Environment: Survival and Sustainability. Nicosia-Northern Cyprus. 19 -24Feb. 2007.
* Ananbeh, K. M., and Almomany, A. R. 2005. Production of Oyster mushroom *Pleurotus ostreatus* on olive cake agro waste. The 5th Agriculture Scientific Conference. 9-12 /5/2005, Albalqa' Faculty of Agricultural Technology, Applied University, Jordan.
* Almomany, A. R. and Ananbeh, K. M. 2004. Production of Oyster mushroom *Pleurotus ostreatus* on olive cake agro waste. The 44th Annual Science Week Conference on Environmental Sustainable Development, 22-25 November 2004, Al Baath University, Syria.

**SCHOLARSHIPS, HONORS and AWARDS**

* **FULBRIGHT Fellowship Scholar, 1**/10/2018 – 1/7/2019. USDA-CDL, University of Minnesota, Minneapolis, MN, USA. Supervisor: Dr. Les Szabo, Pablo Olivera, Yue Jin.

 **Proposal entitled**” Genetic diversity of wheat stem rust (*Puccinia graminis*) in Jordan”.

* **Jordanian Agricultural Engineers Association, 9/9/2017**

 Nominated as an expert in the University Agricultural Education within Plant Protection

 Field starting from 10/10/2016.

**Study achievements, Sep 2009**

* Research assistants from (2007 until 2009) in Department of Plant Pathology, NDSU.
* Activity secretary and treasurer of Plant Pathology Student Organization, in Department of Plant Pathology at North Dakota State University, Fargo 58105, North Dakota USA, from 2007- 2008.
* Graduate Teaching Assistantship during the following Academic Semesters, Department of Plant Protection, University of Jordan, Amman, Jordan.
* Mango Research Assistant, Department of Plant Protection, University of Jordan, Amman. Jordan.

**Travel Award, Jun 2009**

* From the North Central American Phytopathological Society (NA-APS).

**TRAINING COURSES GIVEN**

|  |  |  |  |
| --- | --- | --- | --- |
| **Course name**  | **Location** | **Date** | **Attendance as** |
| Preparation of funded research projects | Deanship of Academic Development - Taibah University | 5-8/11/2013 | Trainer |
| MINITAB | Deanship of Academic Development - Taibah University | 13/11/2013 | Trainer |
| How to design scientific experiments | Deanship of Academic Development - Taibah University | 12/9/2014 | Trainer |
| National Olympiad for Science Innovation - The path of scientific research- School districts  | King Abdul Aziz and his Companion Foundation for Giftedness and Creativity / Department of Education | 2012-20132013-2014 | Judge |

**TRAINING COURSES ATTENDED**

|  |  |  |
| --- | --- | --- |
| **Course name**  | **Location** | **Date** |
| NSC First Aid, CPR % AED Course | USDA-CDL, Minneapolis, MN, USA | 02/27/2019 |
| Wheat stem rust race typing | USDA-CDL, Minneapolis, MN, USA | 7/10-22/7/2017 |
| Training the trainers | Deanship of Academic Development-Taibah University | 6/9/2014 |
| Documentation methodology in scientific research | Deanship of Academic Development-Taibah University | 8/9/2014 |
| International publication for Scientific Research | Deanship of Academic Development-Taibah University | 25/11/2014 |
| Management research team | Deanship of Academic Development-Taibah University | 28/11/2014 |

**COURSES I CAN TEACH**

* Advanced Mycology
* Mycology
* Fungal Biology
* General Plant Pathology
* Host-Parasite Interaction
* Plant Disease Management
* Plant Disease Physiology
* Plant Disease Epidemiology
* Bacterial Physiology
* Fungal Physiology
* Food microbiology
* Field crop diseases
* Applied Statistics
* Applied Regression
* Non-Parametric tests

**MEMBERSHIP**

* Member of Arab Plant Protection Congress since 2017-Now.
* Member of Saudi Biological Sciences in Saudi Arabia since 2013.
* Member of American Phytopathological Society (APS) in United States since November 2007, and member of APS North Central Division, United States (2009. -2010)
* Plant Pathology Organization, North Dakota State University since 2006-now.
* National Sunflower Association, United States. Since 2010.
* Agricultural Engineers Association in Jordan since 1999 till now.

**ADDITTIONAL SKILLS**

* Reviewer in the following Journals:
1. Plant Disease
2. African Journal of Biotechnology
3. Chiang Mai Journal of Science
* Microsoft Office (Word, Excel, Access), Microsoft Windows XP, Microsoft Internet Explorer, Microsoft Outlook Express (Email), Internet, SAS Programming, and MINITAB analysis program with interpreting their output.
* Work both independently and within a team.
* Create appropriate plans to test experimental hypotheses by identifying and organizing resources, including experimental materials, inoculums production, space, and time to biological experiments.
* Design and conduct plant disease control assays, including compound preparation and application methods, inoculation methods, and assessment methods.
* Collect, analyze statistically, and summarize data and deliver results, conclusions, and recommendations as oral and written reports
* Keep experimental records in Laboratory Notebooks.
* Develop new test protocols and align methods with project objectives.
* Support the plant pathogen culture collection of bacteria, fungi both in pure culture (non-obligate pathogens) and on plants (obligate pathogens) including cryogenic storage.
* Practical whole organism agricultural and plant pathological research experience.
* Knowledge of life histories and disease cycles of various bacterial, fungal, and plant pathogens.
* Knowledge of greenhouse plant production.
* Effective communication skills, both oral and written, with the ability to prepare concise, timely, and accurate research summaries.
* Ability to use PCR, AFLP machine (LiCOR), microscopes, balances, pH meters, lyophilizes, autoclaves, laminar hoods, and many other laboratory and greenhouse/field equipments.
* Bacterial identification using PHOENIX 100 system.
* Thorough understanding of laboratory and greenhouse safety practices.

 **Language skills**

* Fluent in speaking, reading, and writing Arabic
* Fluent in speaking, reading, and writing English

**SUMMARY**

* Solid understanding of plant pathology concepts and host-pathogen interaction.
* Proficiency in a wide range of genetic statistical softwares such as PHYLIP, WINBOOT, TASSEL, POPGENE, MULTILOCUS, GENALEX, and STRUCTURE, BAPS, MEGA 5.1, AFLPsurv.
* Good in using statistical softwares such as SAS, SPSS, and MINITAB and interpreting their output.

**REFERENCES**

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