

Dr. KHALDOUN AL-HADID

Faculty of Science

Department of Biological Sciences

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Current Academic Position

- Full-time lecturer in Biological Sciences Department at The University of Jordan, Amman, Jordan from September.2012 to present.

Previous Academic Position

- Assistant Professor in the Department of Biotechnology and Genetic Engineering at Philadelphia University, Amman, Jordan

Education

Doctorate Botany & Plant Molecular Biology, Graduated Fall, 2009, Purdue University, West Lafayette, Indiana, United States of America

Master of Science, Horticulture, Graduated fall, 1999, The University of Reading, Reading, United Kingdom

Bachelor of Plant Sciences, Graduated Summer, 1996, The University of Jordan, Amman, Jordan

Research Experience

- Research Assistantship, Botany & Plant Pathology Department, Purdue University, West Lafayette, Indiana, USA, January.2007- December.2009
- Research Assistantship, Biological Sciences Department, Purdue University, West Lafayette, Indiana, USA, August.2005-December.2006
- Participated in a project titled “ Alfalfa Responses to Phosphorus and Potassium Management”, Agronomy Department, Purdue University, West Lafayette, Indiana, USA, January.2001- December.2004

Research Interests

- Plant cell wall structure & function
- Gene function analysis
- Plant growth & development
- Plant molecular genetics

Research Skills

Molecular Biology Techniques

- DNA & RNA extraction
- DNA Blotting
- RNA Blotting
- Protein Blotting
- Colony PCR
- Dot Blot
- Differential Display
- Reverse transcriptase expression analysis
- Gene Cloning
- Agrobacterium root GUS assay
- Heterologous gene expression
- Agrobacterium Transformation
- Screening homozygous t-DNA insertion knockout lines
- Generating Arabidopsis RNA Interfere & overexpressed transgenic lines

Plant Cell Wall & Biochemistry Techniques

- Cell wall extraction
- Cell wall fractionation
- Arabidopsis trichome Isolation
- Measurement acetylation degree using Hestrin Assay
- Measurement of total sugars using Phenol-Sulfuric assay
- Measurement of Galacturonic acid.

- Enzyme activity assays

Bioinformatics Techniques

- Generating phylogenetic trees
- Multiple alignments of different nucleotide and amino acid sequences
- Hydrophilic and hydrophobic analysis of amino acid sequence
- Motif analysis of amino acid sequence

Tissue Culture and Genetic Techniques

- Initiation callus from Arabidopsis leaves
- Phenotypic screening
- Generating genetic crosses lines of Arabidopsis
- Corn pollination

Spectroscopy and Statistical Analysis Techniques

- Fourier Transform Infrared Spectroscopy (FTIR)
- SPSS Analysis
- SAS Analysis

Teaching Experience

- Undergraduate laboratory: **Introduction to Plant Sciences**, Botany & Plant Pathology Department, Purdue University, West Lafayette, Indiana, USA, January.2006- December.2006 (giving lectures, grading quizzes, supervision students while they were doing the experiments_ number of students: 15 to 20)
- Undergraduate **Arabic language for non-Arab speakers**, Foreign Languages & Literature Department, Purdue University, West Lafayette, Indiana, USA, January.2003- May.2005 (designing syllabus, giving lectures, making quizzes and exams, grading _ number of students: 20 to 25)
- Undergraduate **Genetics Laboratory**, Agronomy Department, Purdue University, West Lafayette, Indiana, USA, January.2002- December.2002 (lecturing and supervision students while they were doing the experiments, grading _ number of students: 10 to 15), (two semesters)

- Training three undergraduate student on **Basic Laboratory Techniques of Biological Research**, West Lafayette, Indiana, USA, January.2006- Janurauy.2009
- Undergraduate **Biology 101**, two sections of 40 students, Department of biotechnology and Genetic Engineering, Philadelphia University, Amman, Jordan, September.2011- June.2012, (two semesters)
- Undergraduate **Laboratory Management and Quality Assurance**, one section of 23 students, Department of biotechnology and Genetic Engineering, Philadelphia University, Jordan, September.2011- June.2012, (two semesters)
- Undergraduate **Entrepreneurship in Biotechnology**, one section of 22 students, Department of biotechnology and Genetic Engineering, Philadelphia University, Amman, Jordan, September.2011- June.2012, (two semesters)
- Research project supervisor for five undergraduate students, September.2011 to June.2012, (two semesters)
- Undergraduate **Biology 101**, three sections of 80 students, Department of Biological Sciences, The University of Jordan, Amman, Jordan, September.2012- June.2016, (seven semesters)
- Undergraduate **General Genetics**, two sections of 35 students, two- hour lecture per week and one three-hour lab per week, Department of Biological Sciences, The University of Jordan, Amman, Jordan, September.2012- June. 2017, (ten semesters)
- Undergraduate **General Biology Laboratory**, three sections of 30 students, Department of Biological Sciences, one lab for three hours/week. The University of Jordan, Amman, Jordan, September, 2012- June 2013, and February.2014- June.2015, (three semesters)
- Undergraduate **Plant Physiology**, one section of 48 students, two-hour lecture per week and one three-hour lab per week, Department of Biological Sciences, The University of Jordan, Amman, Jordan, September 2013- June.2014, and from September.2015- June.2016), (four semesters)

- Undergraduate **Botany**, One section of 25 students, Three-hour lecture per week and one three-hour lab per week, Department of Biological Sciences, The University of Jordan, Amman, Jordan, September.2014- June.2015, (two semesters)

Teaching Rewards

- Teaching Assistant, Botany & Plant Pathology Department, Purdue University, West Lafayette, Indiana, USA, January.2006- December.2006
- Graduate Teacher Certificate (GTC), Purdue University, West Lafayette, USA April.28.2005

Workshops Attended in Teaching

- **Creating Effective Teaching Portfolios**, Purdue University, West Lafayette, Indiana, USA, October.29.2009
- **How People Learn and Remember**, Purdue University, West Lafayette, Indiana, USA, October.7.2004
- **Lecturing Techniques**, Purdue University, West Lafayette, Indiana, USA, October.5.2004
- **Designing Instruction**, Purdue University, West Lafayette, Indiana, USA, September.28.2004
- **Student Teacher Relationships**, Purdue University, West Lafayette, Indiana, USA, September.14.2004
- **Moodle Training Course**, The University of Jordan, Amman, Jordan, January.2013.
- **Staff Development Workshops**: Designing Study Plans (3 hours), Modern Trends in University Teaching (6 hours), Exams Preparation Learner's Assessment (9 hours), Academic Ethics (3 hours), Laws, Bylaws and Regulations of The University of Jordan (6 hours), held by Center of Human

Resources Development at The University of Jordan, Amman, Jordan, August 25- September 4.2013

- **E-Learning Workshop**, Accreditation & Quality Assurance Center. The University of Jordan, Amman, Jordan, March.10.2016
- **Evaluation of Students Using Portfolio**, The University of Jordan, Amman, Jordan, April.16.2017

Workshops Attended in Research

- **Microsoft Windows, Power Point, Excel, Word and Access**, Amman, Jordan, June - August.1998
- **Techniques of Plant Biotechnology**, The University of Reading, Reading, UK, October-December.1999
- **Greenhouse Agricultural Production Techniques**, One-week field trip, South Spain, March.1999
- **Bioinformatics Intensive Course**, Purdue University, West Lafayette, USA February.2005
- **“EndNote” Reference Manager Workshop Training**, Purdue University, West Lafayette, USA, 2006
- **Statistical Analysis Course (SPSS)**, 24 hours, Consultation Center, The University of Jordan, June.9-18.2013
- **Web of Science and EndNote Training Workshop**, The University of Jordan, Amman, Jordan, April.28.2015
- **Scientific Communications Skills**, Jordan University of Science and Technology, Irbid, May.12-13.2015
- **Springer Author Workshop**, Accreditation & Quality Assurance Center, The University of Jordan, Amman, Jordan, November.03.2015
- **Plagiarism Workshop**, Accreditation & Quality Assurance Center. The University of Jordan, Amman, Jordan, March.03.2016

- **Web of Science and EndNote Training Workshop**, The University of Jordan, Amman, Jordan, Oct.26.2016
- **Introduction of European Projects (Erasmus+) Workshop**, Amman, Jordan, December. 22.2016
- **Introduction to High Throughput Sequence Analysis with SeqMonq**, Babraham Institute & The University of Jordan, The University of Jordan, Amman, Jordan, March.13.2017

Courses attended in Management

- **Theoretical and Practical Introduction to Integrated Pest Management (IPM)**, GTZ, Amman, Jordan, May.1997
- **6th Annual Applied Management Principles Program**, Krannert Graduate School of Management Department, Purdue University, West Lafayette, USA, May.28 to June.10.2003
- **Level 1 Award in Food Safety Awareness in Catering**, Amman, Jordan, 2010
- **Level 2 Award in Food Safety Awareness in Catering**, Amman, Jordan, 2010
- **LRQA Internal Quality Management System (QMS) Auditor Training Course (based on ISO 9001:2008)**, Amman, Jordan, July.2010
- **LRQA Quality Management System (QMS) Auditor/ Lead Auditor Training Course (based on ISO 9001:2008)**, Amman, Jordan, December.2010
- **GLOBALG.A.P Training Course**, M.A.K. International, Amman, Jordan, November, 2010
- **GLOBALG.A.P Crops Base Workshop**: in Berlin, Germany, February.7-8. 2011
- **BUILDING ISO22000 FSMS STEP BY STEP**, Al-Yousei Hygiene & Public Health, Amman, Jordan, March, 4-6, 2011

- **Fundamentals of HACCP**, Royal Society for Public Health (RSPH), Amman, Jordan, April.4.2011
- **A Counting for Non-Accountants**, Consultancy Center, Jordan University, Amman, Jordan, June.19- 30.2011
- **Financial Accounting**, Pioneers Center, Amman, Jordan, July.24-27.2011
- **Quality Management Systems Workshop**, organized by The Arab Organization for Quality Assurance in Education (AROQAE) & Department of quality Management at the Laboratory for Machine Tools and Production Engineering (WZL), Technical University of Aachen, held at Talal Abu Ghazaleh University, Amman, Jordan, June.19-20.2013

Graduate Students Committees

- **Characterization of GABA Shunt Pathway under the Influence of Chlorosulfuron Herbicide in Cultivated Lentil and Wheat in Jordan**, Ahmed Ishaq Ghuniem, M.Sc., Jordan University of Science and Technology, Irbid, Jordan, November.2013
- **Molecular and Biochemical Characterization of Cytotoxic Activity of Some Medicinal Plants against Cancer Cells**, Ahmad Sami Sharab, M.Sc., Al-Balqa' Applied University, Salt, Jordan, September.2015

Conferences

- Arab Society of Plant Protection Conference, Amman, Jordan, 2000
- American Society of Agronomy Meeting, Indianapolis, USA, 2002
- American Society of Agronomy, poster titled: "Isolation, characterization and expression of defoliation-responsive genes of different cultivars of Alfalfa", Denver, USA, 2003
- The annual American Society of Agronomy conference, Seattle, USA, 2004

- BIOeConference, Growing the Bioeconomy, Solutions for Sustainability, Iowa State University, West Lafayette, USA, 2009
- International Conference on the Conservation and Use of Soci-Economically Important Wild Plants in the Fertile Crescent, organized by Royal Botanic Garden, Amman, Jordan, April.8-9.2014
- Restoring Degraded Ecosystem: Regional and International Perspectives, organized by Royal Botanic Garden, Amman, Jordan, March.30.2015
- 12th SESAME Users Meeting, organized by Synchrotron-Light For Experimental Science and Applications in Middle East (SESAME), Amman, Jordan, November.26-27.2014
- First JoSTA Conference "Employing Science and Technology and Innovation for Economic Development", Amman, Jordan August.12-13, 2015
- NASIC Conference cum Workshop on Herbal Drug Development for socio-Economic Uplift in Developing World, The University of Jordan, Amman, Jordan, September.6-8.2015
- The 1st International Conference on Natural Products and Drug Discovery, The University of Jordan, Amman, Jordan, September 8-10, 2015
- 13th SESAME Users Meeting, organized by Synchrotron-Light For Experimental Science and Applications in Middle East (SESAME), Amman, Jordan, December.2015
- 14th SESAME Users Meeting, organized by Synchrotron-Light For Experimental Science and Applications in Middle East (SESAME), Amman, Jordan, December.3-4.2016

Activities

- **Referee of Science Jordan Fair**, The innovation for Creativity & Development Association, held at the University of Jordan, Amman, Jordan, May.17.2015
- **Referee of Science Jordan Fair**, The innovation for Creativity & Development Association, held at the University of Jordan, Amman, Jordan April.30.2016.

- **Referee of Science Jordan Fair**, The innovation for Creativity & Development Association, held at the University of Jordan, Amman, Jordan, May.10.2017

Review Articles

- One manuscript submitted to Jordan Journal of Agricultural Sciences
- Two manuscripts submitted to Jordan Journal of Biological Sciences

Public Lectures

- A lecture of “**Occupational Health and Safety Administration**” (OHS) was given as part of a workshop held at Philadelphia University to 35- participants from different Saudi universities in summer, 2012.
- A lecture of “**History and Scientific Principles of Genetic Engineering**” was given at Professional Association Complex in June.2013.

Professional Affiliation

- American Association for the Advancement of Science, January, 2008- present
- American Society of Plant Biologist, 2004- present
- American Society of Agronomy, 2001- present
- Crop Science Society of America, 2001- present
- American Chemical Society, 2016-present
- The Jordan Society of Scientific Research, 2007- present