

**Dr. KHALDOUN AL-HADID**

Department of Biological Sciences

School of Science

The University of Jordan, Amman, Jordan

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**Current Academic Position**

- Associate professor in Biological Sciences Department, School of Science at The University of Jordan, Amman, Jordan. December.23.2019 until present

**Previous Academic Position**

- Head of Department of Biological Sciences, School of Science at The University of Jordan, Amman, Jordan. September.9.2019 to September.20.2020
- Assistant professor in Biological Sciences Department, School of Science at The University of Jordan, Amman, Jordan. July. 2017 until December.23.2019
- Full-time lecturer in Biological Sciences Department, School of Science at The University of Jordan, Amman, Jordan. September.2012 to July. 2017
- Assistant Professor in the Department of Biotechnology and Genetic Engineering at Philadelphia University, Amman, Jordan. September.2011 to June.2012

**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 Production**, Graduated Summer, 1996, The University of Jordan, Amman, Jordan

### **Research Experience**

- Research project supervisor for five undergraduate students, September.2011 to June.2012, (two semesters)
- 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**

- Plant cell wall extraction
- Plant 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 Genetics 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

### Workshops and Webinars in Research

- Webinar titled “**Non-invasive phenotyping to quantify the dynamics of plant-environment interaction**”, by EMBL-EBI, March.8.2023.
- Webinar titled “ChatGPT, Introduction, uses, and limitation”, Accreditation and Quality Assurance Center, The University of Jordan, Amman, Jordan, Febuary.27.2023
- Webinar titled "**Avoiding Rejection: How to successfully navigate the publishing process**". By Taylor & Francis, Febuary.22.2023
- “**Choosing the right journal for Biology, Agriculture and Food Science research**”- Taylor & Francis Author Services Platform, June.30.2022
- “**How to write a Grand Proposal to Scientific and Innovation Fund**”. The University of Jordan, Amman, Jordan, January.23.2022
- “**Facts and Advice of How to Publish in Scopus**”, Accreditation & Quality Assurance Center. The University of Jordan, Amman, Jordan, July.17.2019
- “**Training on HPLC Theory & Practice for Beginners**”, organized by Jordanian Chemical Society (JCS) & Vivid Separation & Filtration, Amman, Jordan, February 2-4, 2019
- “**The Genetically Modified Foods**” workshop, organized by Technical Assistance and Information Exchange Instrument of the European Commission (TAIEX) in cooperation with Jordan Food and Drug Administration, October.17-18.2018
- “**Big Data Analysis**”, The University of Jordan, Amman, Jordan, March.8.2018
- “**Introduction to High Throughput Sequence Analysis with SeqMonq**”, Babraham Institute & The University of Jordan, The University of Jordan, Amman, Jordan, March.13.2017
- “**Introduction of European Projects (Erasmus+)**”, Amman, Jordan, December. 22.2016
- “**Web of Science and EndNote**”, The University of Jordan, Amman, Jordan, October.26.2016
- **FTIR workshop** organized by HIJAZ Electronic & Scientific Supplies Est. Amman, Jordan. October.20.2016
- “**Plagiarism**”, Accreditation & Quality Assurance Center. The University of Jordan, Amman, Jordan, March.03.2016
- “**Taylor & Francis Research Seminar**”, The University of Jordan February.29.2016

- **“Springer Author”**, Accreditation & Quality Assurance Center, The University of Jordan, Amman, Jordan, November.03.2015
- **“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
- **“Enhancing Scientific Communications Skills”**, Jordan University of Science and Technology, Irbid, May.12-13.2015
- **“Statistical Analysis Course (SPSS)”**, Consultation Center, The University of Jordan, June.9-18.2013
- **“EndNote” Reference Manager**, Purdue University, West Lafayette, USA, 2006
- **“Bioinformatics Intensive Course”**, Purdue University, West Lafayette, USA February.2005
- **Poster titled: “Isolation, characterization and expression of defoliation-responsive genes of different cultivars of Alfalfa”**, presented in the annual meeting of American Society of Agronomy, Denver, USA, 2003
- **“Techniques of Plant Biotechnology Course”**, The University of Reading, Reading, UK, October-December.1999
- **“Greenhouse Agricultural Production Techniques”**, One-week field trip, South Spain, March.1999

#### Graduate Defense Committees

- Member of exam committee (M.Sc.), thesis titled: **“Investigation of the types of Vitamin D Receptor Gene polymorphisms in Autistic and Non-Autistic Children in Jordan”**, Fatima Alkayeed, Biological Sciences Department, The University of Jordan, Amman, Jordan, May.23.2022
- Co-Chair of Master student: Bilal Azmi Ayasrah, thesis titled: **“Systematic Revision of the Genus *Micromeria* Benth (Lamiaceae) In Jordan”**, Biological Sciences Department, The University of Jordan, Amman, Jordan, August.2021
- Member of exam committee (Ph.D.), thesis titled: **“Comparative Genomic Analysis of Septicemic and Non-Septicemic *Acinetobacter Baumannii* Isolates After Interaction with Lung Epithelial Cells and Neutrophils”** “Layla Maria” Salah El Khatib, Biological Sciences Department, The University of Jordan, Amman, Jordan, August.2021

- Member of exam committee (M.Sc.), thesis titled: “**Assessment of Antiproliferative and Antioxidant Activities of the Extracts of Two Wild Plants from Jordan; *Sedum nicaeense* All. (Crassulaceae) and *Arbutus andrachne* L. (Ericaceae) *in vitro*.**” Hadeel Shaheen M.Sc., Biological Sciences Department, The University of Jordan, Amman, Jordan, December.2019
- Member of exam committee (M.Sc.) as external examiner, thesis titled: “**Molecular and Biochemical Characterization of Cytotoxic Activity of Some Medicinal Plants against Cancer Cells**”, Ahmad Sami Sharab, Al-Balqa' Applied University, Salt, Jordan, September.2015
- Member of exam committee (M.Sc.) as external examiner, thesis titled: “**Characterization of GABA Shunt Pathway under the Influence of Chlorosulfuron Herbicide in Cultivated Lentil and Wheat in Jordan**”, Ahmed Ishaq Ghuniem, Jordan University of Science and Technology, Irbid, Jordan, November.2013

### Teaching Experience

- Undergraduate **Molecular Biology Course (online)**, two-hour lecture per week for eight weeks, 1200 students of School of Medicine and School of Dentistry, Department of Biological Sciences, The University of Jordan, Amman, Jordan, April.2023- June. 2023
- Graduate **Molecular Biology Course (Master level)**, three-hour lecture per week, Department of Biological Sciences, The University of Jordan, Amman, Jordan, First semester 2017, First semester 2018, Second semester 2019, Second Semester 2021 (four semesters)
- Undergraduate **Molecular Biology Course**, three-hour lecture per week, 40 students, Department of Biological Sciences, The University of Jordan, Amman, Jordan, January.2018- June. 2023 (eleven semesters)
- Undergraduate **General Genetics Course**, average number of students per section is 40 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. 2023, (22 semesters)
- Undergraduate **Biology 101 Course**, two sections of 80 students, Department of Biological Sciences, The University of Jordan, Amman, Jordan, September.2012- January.2023 (21 semesters)

- Undergraduate **Botany Course**, 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)
- Undergraduate **Seminar Course**, one section of 13 students, Spring Semester, 2015
- Undergraduate **Plant Physiology Course**, 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, (two semesters)
- Undergraduate **General Biology Laboratory Course**, average Student No. per section is 40 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 **Entrepreneurship in Biotechnology Course**, one section of 22 students, Department of biotechnology and Genetic Engineering, Philadelphia University, Amman, Jordan, September.2011- June.2012, (two semesters)
- Undergraduate **Laboratory Management and Quality Assurance Course**, one section of 23 students, Department of biotechnology and Genetic Engineering, Philadelphia University, Jordan, September.2011- June.2012, (two semesters)
- Undergraduate **Biology 101 Course**, two sections of 40 students, Department of biotechnology and Genetic Engineering, Philadelphia University, Amman, Jordan, September.2011- June.2012, (two semesters)
- Training three undergraduate student on **Basic Laboratory Techniques of Biological Research**, West Lafayette, Indiana, USA, January.2006- Janurauy.2009
- Undergraduate laboratory: **Introduction to Plant Sciences Laboratory Course**, 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, 2 semesters)
- Undergraduate **Genetics Laboratory Course**, Agronomy Department, Purdue University, West Lafayette, Indiana, USA, January.2002- December.2002, number of students: 15, (two semesters)
- Undergraduate **Arabic language for non-Arab Speakers Course**, 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)

**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 in Teaching**

- **“How to Design the Teaching Materials of Hybrid Classes”**, The University of Jordan, Amman, Jordan, July.1.2021
- **“How to Use Moodle for E-Learning Interactive Education”**, The University of Jordan, Amman, Jordan, June.28.2021
- **“How to Use Moodle in Evaluation”**, The University of Jordan, Amman, Jordan, June.23.2021
- **“Building Exams using LMSystem”**, Accreditation & Quality Assurance Center, The University of Jordan, Amman, Jordan, Srptember.24.2020
- **“How to deal with the examination platform of the University of Jordan (LMSystem)”**, online workshop organized by Quality and Accreditation Center; the University of Jordan, Amman, Jordan, October.2020
- **“TD-O2-009 Biorisk Management Curriculum Development Workshop # 1”**, as presented in conjunction with LEIDOS, INC. and The University of Connecticut, The University of Jordan, Amman, Jordan, 6-8. January.2020
- **“Best Teaching Strategies”**, The University of Jordan, Amman, Jordan, July.5.2018
- **“CAMTASIA STUDIO 9”**, The University of Jordan, Amman, Jordan, May.5.2018
- **“Exams Preparation Techniques”**, The University of Jordan, Amman, Jordan, March.23.2018
- **“Evaluation of Students Using Portfolio”**, The University of Jordan, Amman, Jordan, April.16.2017
- **“Modern Method in Education of Graduate Studies”**, Accreditation & Quality Assurance Center. The University of Jordan, Amman, Jordan, May.24.2017
- **“E-Learning”**, Accreditation & Quality Assurance Center. The University of Jordan, Amman, Jordan, March.10.2016
- **“Moodle”**, The University of Jordan, Amman, Jordan, January.2013



- **“Staff Development”**: 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
- **“Creating Effective Teaching Portfolios”**, Purdue University, West Lafayette, Indiana, USA, October.29.2009
- **“Lecturing Techniques”**, Purdue University, West Lafayette, Indiana, USA, October.5.2004
- **“How People Learn and Remember”**, Purdue University, West Lafayette, Indiana, USA, October.7.2004
- **“Designing Instruction”**, Purdue University, West Lafayette, Indiana, USA, September.28.2004
- **“Student Teacher Relationships”**, Purdue University, West Lafayette, Indiana, USA, September.14.2004
- **“Microsoft Windows, Power Point, Excel, Word and Access”**, Amman, Jordan, June - August.1998

#### **Courses and Workshops in Management & Business**

- **“Linguistics Mistakes in Official Writings”**, The University of Jordan, Amman, Jordan, May.2.18
- **“LRQA Quality Management System (QMS) Auditor/ Lead Auditor Training Course (based on ISO 9001:2008)”**, Amman, Jordan, December.2010
- **“LRQA Internal Quality Management System (QMS) Auditor Training Course (based on ISO 9001:2008)”**, Amman, Jordan, July.2010
- **“6<sup>th</sup> Annual Applied Management Principles Program”**, Krannert Graduate School of Management Department, Purdue University, West Lafayette, USA, May.28 to June.10.2003
- **“Quality Management Systems”**, 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
- **“Financial Accounting”**, Pioneers Center, Amman, Jordan, July.24-27.2011

- **“A Counting for Non-Accountants”**, Consultancy Center, Jordan University, Amman, Jordan, June.19- 30.2011

### Food Safety Workshops

- **“Level 1 Award in Food Safety Awareness in Catering”**, Amman, Jordan, 2010
- **“Level 2 Award in Food Safety Awareness in Catering”**, Amman, Jordan, 2010
- **“Fundamentals of HACCP”**, Royal Society for Public Health (RSPH), Amman, Jordan, April.4.2011
- **“Building ISO22000 FSMS Step by Step”**, A1·Yousei Hygiene & Public Health, Amman, Jordan, March. 4-6, 2011
- **“GLOBALG.A.P Crops Base Workshop”**: in Berlin, Germany, February.7-8. 2011
- **“GLOBALG.A.P Training Course”**, M.A.K. International, Amman, Jordan, November, 2010
- **“Theoretical and Practical Introduction to Integrated Pest Management (IPM)”**, GTZ, Amman, Jordan, May.1997

### Activities

- Referee of evaluation posters presented in Hamdi Mango for Scientific Research, , the University of Jordan, Amman, Jordan, July.5.2023
- Referee of **“Jordan Science Fair” and “LUMA StarT”**, The innovation for Creativity & Development Association, held at the University of Jordan, Amman, Jordan, May.20.2023
- A lecture entitled: **“Why Biology?”** to the students of Biological Sciences Department, School of Science, The University of Jordan, Amman, Jordan, March.9.2023
- **Course Coordinator** of Biology 101 (4200 students), The University of Jordan, Amman, Jordan, First semester, 2022
- Referee of **“Jordan Science Fair” and “LUMA StarT”**, The innovation for Creativity & Development Association, held at the University of Jordan, Amman, Jordan, Mar.19.2022
- Member of **“School of Science Council”** as representative of Department of Biological Sciences, The University of Jordan, Amman, Jordan, September. 2021 to present
- Member of **“Accreditation & Development Committee of School of Science”**, the University of Jordan, Amman, Jordan. Sep.2021- present

- Member of “**Accreditation & Quality Assurance Committee**”, Department of Biological Sciences School of Science, the University of Jordan, Amman, Jordan. Sep.2021- present
- Chair of “**Plan of Study Committee**”, Department of Biological Sciences School of Science, the University of Jordan, Amman, Jordan. Sep.2021- present
- Chair of the “**Department of Biological Sciences Website committee**”, The University of Jordan, Amman, Jordan, September. 2021 to present
- Member of “**Qualifier Exam Committee**”, Department of Biological Sciences, School of Science, The University of Jordan, Amman, Jordan, May.16.2021
- Chair of “**Plan of Study Committee**”, Department of Biological Sciences School of Science, the University of Jordan, Amman, Jordan. Sep.2020 to Sep.2021
- Member of the “**Scientific Committee**”, Department of Biological Sciences, School of Science, The University of Jordan, Amman, Jordan, September. 2020 to September 2021
- Member of “**The Technical Committee of Biological Conservation in Ministry of Environment**”, Amman, Jordan September. 2019 to present
- Chair of “**Higher Education committee**”, Department of Biological Sciences, School of Science, The University of Jordan, Amman, Jordan, September.2019-September.2020
- Chair of “**Plan of Study**” Committee, Department of Biological Sciences, School of Science, The University of Jordan, Amman, Jordan, September.2019-September.2020
- Referee of “**Jordan Science Fair**” and “**LUMA StarT**”, The innovation for Creativity & Development Association, held at the University of Jordan, Amman, Jordan, Feb.2020
- Referee of “**Jordan Science Fair**” and “**LUMA StarT**”, The innovation for Creativity & Development Association, held at the University of Jordan, Amman, Jordan, Feb.2019
- Referee of “**Jordan Science Fair**”, The innovation for Creativity & Development Association, held at the University of Jordan, Amman, Jordan, May.12.2018
- Member of “**Accreditation & Development Committee of School of Science**”, the University of Jordan, Amman, Jordan. Sep.2017- Sep.2018
- Member of “**The Technical Committee of Biological Conservation in Ministry of Environment**”, Amman, Jordan. April.19.2018- present
- Chair of “**International Accreditation & Study Plan Committee**”, Biological Sciences Department, the University of Jordan, Amman, Jordan. Feb.2018- Sep. 2019

- Member of “**International Accreditation & Study Plan Committee**”, Biological Sciences Department, the University of Jordan, Amman, Jordan. Sep.2017- Feb. 2018
- Referee of “**Jordan Science Fair**”, The innovation for Creativity & Development Association, held at the University of Jordan, Amman, Jordan, May.10.2017
- Referee of “**Jordan Science Fair**”, The innovation for Creativity & Development Association, held at the University of Jordan, Amman, Jordan April.30.2016
- Participant in the seminar titled: “**Comprehensive Scope of Assisted Reproductive Technology (ART)**”, organized by PRAVO Academy. The University of Jordan, Amman, Jordan. March.2016
- Referee of “**Jordan Science Fair**”, The innovation for Creativity & Development Association, held at the University of Jordan, Amman, Jordan, May.17.2015
- Member of “**Student Violations Investigation Committee**”, School of Science, 2014

#### Conferences

- **Plant Biology Annual Meeting**, organized by American Society of Plant Biologists, online, July.2021
- **American Society of Agronomy Annual Meeting**, held virtual from November.9-13.2020
- **Plant Biology Annual Meeting**, organized by American Society of Plant Biologists, online, July.27-August.31.2020
- **Plant Synthetic Biology**, organized by American Society of Plant Biologists, San Jose, California, USA, August.7-9.2019
- **Plant Biology Annual Meeting**, organized by American Society of Plant Biologists, San Jose, California, USA, August.3-7.2019
- **Plant Biology Annual Meeting**, organized by American Society of Plant Biologists, Montreal, Canada, July.14-18.2018
- **15<sup>th</sup> SESAME Users Meeting**, organized by Synchrotron-Light for Experimental Science and Applications in Middle East (SESAME), Amman, Jordan, December.18-19.2017
- **14<sup>th</sup> SESAME Users Meeting**, organized by Synchrotron-Light for Experimental Science and Applications in Middle East (SESAME), Amman, Jordan, December.3-4.2016
- **13<sup>th</sup> SESAME Users Meeting**, organized by Synchrotron-Light for Experimental Science and Applications in Middle East (SESAME), Amman, Jordan, December.2015

- **The 1<sup>st</sup> International Conference on Natural Products and Drug Discovery**, The University of Jordan, Amman, Jordan, September 8-10, 2015
- **First JoSTA Conference "Employing Science and Technology and Innovation for Economic Development"**, Amman, Jordan August.12-13, 2015
- **Restoring Degraded Ecosystem: Regional and International Perspectives**, organized by Royal Botanic Garden, Amman, Jordan, March.30.2015
- **12<sup>th</sup> SESAME Users Meeting**, organized by Synchrotron-Light for Experimental Science and Applications in Middle East (SESAME), Amman, Jordan, November.26-27.2014
- **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
- **BIOeConference, Growing the Bioeconomy, Solutions for Sustainability**, Iowa State University, West Lafayette, USA, 2009
- **The annual American Society of Agronomy meeting**, organized by American Society of Agronomy, Seattle, USA, 2004
- **American Society of Agronomy Meeting**, Indianapolis, USA, 2002
- **Arab Society of Plant Protection Conference**, Amman, Jordan, 2000

### **Public Lectures**

- A lecture titled: **"Genetic Engineering"**, was given for students of life Sciences Schools at The University of Jordan, Amman, Jordan, October.2020.
- A lecture titled: **"History and Scientific Principles of Genetic Engineering"** was given at Professional Association Complex in June.2013.
- A lecture titled: **"Occupational Health and Safety Administration (OHSA)"** was given as part of a workshop held at Philadelphia University to 35- participants from different Saudi universities in summer, 2012.

### **Professional Affiliation**

- American Association for the Advancement of Science, 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

### Publications

**Al-Hadid KJ**, Al-Karablieh N, Abu-Irmaileh B, Sharab A, Al-Jaafreh AM. Antibacterial, Antifungal, Antioxidant, and Anti-Proliferative Effects of *Eucalyptus camaldulensis* and *Pistacia atlantica* Ethanol Extracts. *Trop J Nat Prod Res.* 2022; 6(2):207-212. doi.org/10.26538/tjnpr/v6i2.7

**Al-Hadid KJ**, Abu-Irmaileh B, Harb AA, Sharab A, Alhadid A. *Acacia cyanophylla*, *Eucalyptus camaldulensis*, and *Pistacia atlantica* Ethanol Extracts Revealed Cytotoxicity of Breast Cancer Cell Lines. *Trop J Nat Prod Res.* 2021; 5(10):1808-1815. doi.org/10.26538/tjnpr/v5i10.18

Harb, Amal M., **Khaldoun J. AL-Hadid**, and Ahmad S. Sharab. Molecular and Biochemical Changes of Indole-3-Acetic Acid in the Expanding Leaves of Barley (*Hordeum vulgare* L.) under Salinity Stress. (2020). *Jordan Journal of Biological Sciences* 13.1.

**Al-Hadid KJ**, Al-Karablieh N, Sharab A, Mutlak I. Phytochemical analyses and antibacterial activities of *Erodium*, *Euphorbia*, *Logoecea* and *Tamarix* species. *The Journal of Infection in Developing Countries.* November 2019. 30;13(11):1013-20.

Alkhatib, Rami, Maha Mheidat, Nour Abdo, Maher Tadros, Laith Al-Eitan, and **Khaldoun Al-Hadid**. Effect of lead on the physiological, biochemical, and ultrastructural properties of *Leucaena leucocephala*. June. 2019. *Plant Biology.* 21 (6), 1132-1139.

Hazem S. Hasan, **Khaldoun J. AL-Hadid**, and Saeid Abu-Romman. *Sarcopoterium spinosum* (L.) Spach aqueous extract inhibits seed germination and seedling growth of winter wheat (*Triticum durum* Desf.). 2017. *Research on Crops* 18 (2): 210-215.

Saeid, Abu-Romman, and **Al-Hadid Khaldoun**. Novel Zinc Finger-Homeodomain Gene from Barley (HvZFHD1) is Differentially Regulated During Spike Development and under Hormonal Treatments and Abiotic Stresses. 2017. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca*, 45: 1.

**Al-Hadid, Khaldoun J.** Quantitative analysis of antimicrobial activity of *Foeniculum vulgare*: A review. 2017. *Plant Omics*, 10:1, 28-36.

**Al-Hadid, Khaldoun J.** Evaluation of Antiviral Activity of Different Medicinal Plants against Newcastle Disease Virus. 2016. *American Journal of Agricultural and Biological Sciences*, 11: 157-63.

Abu-Romman, Saeid M, Moawiya A Haddad, and **Khaldoun J Al-Hadid**. The Potential Allelopathic Effects of *Varthemia iphionoides* and the Identification of Phenolic Allelochemicals. 2015. *Jordan Journal of Biological Sciences*, 8:4, 301-306.

Abu-Romman, Saeid M, **Khaldoun A Al-Hadid**, and Abdullah R Arabiyyat. Kinetin Is the Most Effective Cytokinin on Shoot Multiplication from Cucumber. 2015. *Journal of Agricultural Science*, 7:10, 159-165.