

Curriculum Vitae

WESAM M. AL KHATEEB, Ph.D

Department of Biological Sciences

Yarmouk University

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Education:

- **2008:** Ph.D Department of Biological Sciences, University of Manitoba, Winnipeg, Manitoba, Canada.
- **2002:** M.Sc. Jordan University of Science and Technology, Irbid, Jordan.
- **1999:** B.Sc. Jordan University of Science and Technology, Irbid, Jordan.

Professional Experience:

- Vice dean, Faculty of Science, Yarmouk University, Irbid, Jordan. (September /2021 – Present)
- Head, Department of Biological Sciences. Yarmouk University, Irbid, Jordan. (September /2019 – September/2020)
- Professor, (December/2018 – present) Department of Biological Sciences. Yarmouk University, Irbid, Jordan.
- Associate professor, (July/2014 – December/2018) Department of Biological Sciences. Yarmouk University, Irbid, Jordan.
- Assistant professor, (July/2010 – July/2014) Department of Biological Sciences. Yarmouk University, Irbid, Jordan.
- Full-time Lecturer (Feb/2009 - June 2010) Yarmouk University, Department Biological sciences, Irbid- Jordan
- Lecturer (May/ 2005 – May/2008): Department of Biological Sciences, University of Manitoba, Winnipeg, Manitoba, Canada
- Teaching assistant (Jan/ 2005 – April/2008): Department of Biological Sciences, University of Manitoba, Winnipeg, Manitoba, Canada
- Research assistant (March/2002 – Aug/2003): Biotechnology center, Jordan University of Science and Technology.

Research Grants (selected):

1. **Al Khateeb W. 2022.** DNA damage in *Halophila stipulacea* as pollution bioindicator in coast of Aqaba. Yarmouk University.
2. **Al Khateeb W. 2020.** Genetic diversity of bottle gourd (*Lagenaria siceraria* (Molina) Standl.) landraces of Jordan assessed by Agro-morphological traits and Inter simple sequence repeat markers
3. **Al Khateeb W. 2018.** Assessment of genotoxicity in *Capparis spinosa* grown in potentially Polluted Soil in Jordan Using Comet Assay. Yarmouk University.
4. **Al Khateeb W. 2016.** Molecular and physiological characterization of some Jordanian Durum Wheat Landraces to abiotic stress conditions. Yarmouk University.
5. Al-Taani A., El-Radaideh N, **Al Khateeb W. 2014.** Assessment of Reservoir Sediments of King Talal and Al-Mujib Dams: Implications for Agricultural Use and Water Quality. Scientific Research Support Fund
6. **Al Khateeb W. 2014.** Molecular Genetic Study on Cross-talk and Specificity of Salt, Drought and Temperature Stress Signaling in *Arabidopsis thaliana*. Yarmouk University.
7. **Al Khateeb W. 2012.** The Effect of various abiotic Stresses on *in vitro* Grown *Solanum nigrum* L. Yarmouk University
8. **Al Khateeb W. 2011.** The Effect of Water Stress, Salinity and Biotic Stress on *in vitro* Grown *Cucumis prophetarum* L., a Crop Wild Relative. Yarmouk University
9. **Al Khateeb W. 2010.** Selection for wheat drought tolerance using *in vitro* radiation induced mutagenesis in Jordan: phenotypic and molecular characterization. Yarmouk University
10. **Al Khateeb W. 2009.** The effect of oxidative stress (heavy metal phytotoxicity) on *in vitro* grown Chicory (*Cichorium pumilum* Jacq.). Yarmouk University

Graduate students supervision (examples):

1. Abu Serdane M. 2011. The effect of water stress salinity and biotic stress on *in vitro* grown *Cucumis prophetarum* L., a crop wild relative. *Department of Biological Sciences, Yarmouk University.* (Graduated)
2. Al Zghoul H. 2012. Production of Phytochemical Compounds from *in vitro* grown *Rumex cyprius* L. and *Artemisia herba alba* L. *Department of Biological Sciences, Yarmouk University.* (Graduated)

3. Al-Qwasemeh H. (2013). Effect of various abiotic stresses on *in vitro* grown *Solanum nigrum* L. *Department of Biological Sciences, Yarmouk University*. (Graduated)
4. Jamal Aldeen A. 2012. Micropropagation, *in vitro* preservation and determination of phenolics content and antioxidant activity of *Ailanthus altissima*. *Department of Biological Sciences, Yarmouk University*. (Graduated)
5. Al-Bataineh N. 2013. Biological activity, toxicity and mutagenicity of selected Jordanian wild plants. *Department of Biological Sciences, Yarmouk University*. (Graduated)
6. Al-Faqih N. 2014. Molecular Genetic Study on Cross-talk and Specificity of Salt, Drought and Temperature Stress Signaling in *Arabidopsis thaliana*. *Department of Biological Sciences, Yarmouk University*. (Graduated).
7. Al Momany R. 2015. Evaluation of DNA Damage in the Cells of *Allium cepa* Exposed to Potentially Polluted Soil and Water Samples Using Alkaline Comet Assay. *Department of Biological Sciences, Yarmouk University*. (Graduated).
8. Al Shalabi A. 2015. Differential Gene Expression in Jordanian Durum Wheat Landraces Exposed to Drought, Temperature Stress and combination of Drought and Heat Stress. *Department of Biological Sciences, Yarmouk University*. (Graduated).
9. Adnan Fadya. 2016. Antibacterial and Other Biological Activity of *Plumbago europaea* L. Collected from Northern Jordan (Graduated).
10. Kanaan Razan. 2016. Phytochemical activity and HPLC analysis of *in vitro* grown *Lavandula coronopifolia* Poir. in South Jordan. (Graduated)
11. Sanaa Alahmed. 2017. Heat shock proteins gene expression and physiological responses in durum wheat under salt stress
12. Ihsan Sababha. 2017. Molecular and agro-morphological diversity assessment of Cowpea (*Vigna unguiculata* L.)
13. Yazan M. Tashtoush. 2017. Screening of newly introduced wheat (*Triticum durum* L.) cultivars to drought and salt stress.
14. Azhar Ananzeh. 2019. Agromorphological and genetic diversity of Bottle gourd (*Lagenaria siceraria* (Molina) standl) landraces in Jordan

15. Sajeda Al Omari. 2022. DNA damage in *Halophila stipulacea* as pollution bioindicator in coast of Aqaba

M.Sc. students thesis examiner (examples):

Otoom R. (2019). Screening for Mutations in Exons 9 & 20 of *PIK3CA* Gene in Prostate Cancer. *Yarmouk University*.

Bahar, E. (2015). Detection of miRNA species as diagnostic and therapeutic response biomarkers in human colorectal cancer. *Yarmouk University*.

Rataan A. (2014). The effect of simvastatin on temozolomide induced apoptosis. *Jordan University of Science and Technology*.

Al-Shraideh, M. (2014). Resolving the taxonomic status and C₄ photosynthetic subtype of Jordanian *Blepharis* Juss. (Acanthaceae). *Yarmouk University*.

Alfassed R. (2013). The antimutagenic effect of chitosan on sister chromatid exchanges induced by paracetamol. *Yarmouk University*.

Rawashdh, M. (2013). Antioxidant, antidiabetic and antihypertensive effects of extracted phenolics from medicinal plants. *Jordan University of Science and Technology*.

Aljammal, S. (2012). Assessments of nitrate levels in raw vegetables irrigated by wastewater in Zarqa river area student. *Yarmouk University*.

Al-Shayeb, A. (2012). Chemical composition of essential oil and crude extract fractions from Jordanian *Capparis spinosa* L. and *Capparis cartilaginea* Decne. (Capparaceae) and their antimicrobial activities. *Yarmouk University*.

Telfah, M. A. (2012). Isolation and characterization of bacterial communities associated with two coral species in the contaminated zones in the Gulf of Aqaba in Jordan. *Yarmouk University*.

Al-Sabi' M. (2012). Screening of *Aegilops* L. Species collected from northern parts of Jordan for abiotic stresses. *Yarmouk University*.

Dalab A. (2011). Effect of thermal manipulation during embryogenesis on the expression level of heat shock protein 70 (HSP-70) in chicken. *Jordan University of Science and Technology*.

• **Membership of Committees**

- Member of several committees in the Department of Biological Sciences, Yarmouk University.
- A member of different committees at the Faculty of Science, Yarmouk University.

- Scientific committee of the Seventh International Scientific Agricultural Conference (SSAC-2012). Irbid, Jordan.

- **Refereeing and Evaluations**

- Several national, regional and international journals
- Judge: 7th Annual International Arab Workshop on Biotechnology: Amman- Jordan. 2016.

Teaching Experience

Taught courses including:

- General biology (First year level)
- Health and Environment (First year level)
- Genetics (3ed year level)
- Molecular biology (3ed year level)
- Biology and society (4th year level)
- Biotechnology (4th year level)
- Ecology (4th year level)
- Cytogenetics (4th year level)
- Research methods (4th year level)
- Advanced genetics (Graduate course)
- Advanced Ecology (Graduate course)
- Advanced biotechnology (Graduate course)

Coordinator and Instructor for the following courses for more than 6 semesters:

1. Public Health Bio 100
2. General Biology Bio 101
3. Health and Environment Sci101

Workshops:

- 7th Annual International Arab Workshop on Biotechnology. Amman-Jordan. 2016.
- The State of Jordan's Biodiversity for Food and Agriculture. 2015. Aqaba, Jordan.
- Teaching techniques. May, 2006. University of Manitoba, Winnipeg, Canada.
- Writing a Successful Research Grant Proposal . Feb, 2006. University of Manitoba, Winnipeg, Canada.
- Science Teaching Assistant. Nov, 2005. University of Manitoba, Winnipeg, Canada.

- Communicate: A course for international teaching assistants. Fall, 2004, University of Guelph, Guelph, Canada.

Scholarships:

- University of Manitoba Graduate Fellowship (UMGF), (2005-2008)
- International Graduate Student Scholarship (IGSS), University of Manitoba (2005 and 2006)
- George H. Duff Student Travel Bursary (CSPP) (2005 and 2007) (Canadian Society of Plant Physiologists)
- Faculty of Graduate Studies Travel Award, University of Manitoba (2006).
- Faculty of Science Travel Award, University of Manitoba (2005 - 2008).
- Department of Biological Sciences Award - University of Manitoba (2005 - 2008).
- Graduate Students Association Travel Award, University of Manitoba (2006 and 2007).
- Ontario graduate scholarship (2005).

Publications :

Aljabali A, MA Obeid, HA Bakshi, W Alshaer, RM Ennab, B Al-Trad, **W. Al Khateeb**, et al. 2022. Synthesis, Characterization, and Assessment of Anti-Cancer Potential of ZnO Nanoparticles in an In Vitro Model of Breast Cancer. *Molecules* 27 (6), 1827

Al Zoubi M, **W. Al Khateeb**, M. El-Oqlah, MIA Al-arja, M. Bzour, A. El-oqlah, S. Almubarak, et al. 2022. Anti-proliferative, Anti-angiogenic and Anti-inflammatory Effects of *Moringa peregrina* Leaf Extracts on Testosterone-Induced Benign Prostatic Hyperplasia in Rats. *Asian Pacific Journal of Cancer Prevention* 23 (1), 161-169

Aljabali A, J Qar, MS Al Zoubi, KM Al-Batanyeh, B Al Trad, AK Alkaraki, **Al Khateeb W**, Hussein E, A Alrababaa A, Muhaidat R, El-Oqlah A. 2022. A new frontier in switchable bioelectronics and bionanotechnology interfaces. *Functional Materials Processing for Switchable Device Modulation*, 25-42

Hussein, E. I., **Al Khateeb, W.**, Abd Al-Razaq, M. A., Jacob, J. H. 2021. Antimicrobial activity of methanolic and ethanolic crude extracts of carp, peel and seed of *Punica granatum* L. *Bulg. J. Agric. Sci.* 27, 227-233

Al Khateeb W, R Muhaidat, S Alahmed, MS Al Zoubi, KM Al-Batanyeh. 2020. Heat shock proteins gene expression and physiological responses in durum wheat (*Triticum durum*) under salt stress. *Physiology and Molecular Biology of Plants* 26 (8), 1599-1608

Al Zoubi M, Al-Batayneh K, Alsmadi M, Rashed M, Al-Trad B, **Al Khateeb W**, Aljabali A, Otoum O, Al-Talib M, Batiha O. 2020. 4,977-bp human mitochondrial DNA deletion is associated with asthenozoospermic infertility in Jordan. *Andrologia* 52 (1), e13379

Al Khateeb W, Sher A, Marcus J, Schroeder D. 2019. UVSSA, UBP12, and RDO2/TFIIS Contribute to Arabidopsis UV Tolerance. *Frontiers in plant science* 10

Al Khateeb W, Basahi R, Al-Qwasemeh H. 2019. Effect of salt stress on in vitro grown *Solanum nigrum* L. *Bulgarian Journal of Agricultural Science*. 25: 72-78

Al Zoubi M, Al-Batayneh K, Al-Trad B, Haddad Y, Hussein E, **Al Khateeb W**, Aljabali A, Bodoor K, Shehab M, Al Hamad M, Muhaidat R. 2019. Evaluation of Vitamin B12, Folate and Ferritin Serum Levels in Jordanian Population. *Journal of nutritional science and vitaminology*. 65: 309-317

Al Khateeb W, Al-Taani A, El-Radaideh N, Tashtoush Y, Al-Momani R. 2019. Growth, Yield and Genetic Integrity of Spinach and Chrysanthemum as Affected by Soil Supplementation with Dam Sediments Collected From King Talal and Al-Mujib Dams/Jordan. *World Applied Sciences Journal*. 37: 58-69

Al-Batayneh K, Al Zoubi M, Al-Trad B, Hussein E, **Al Khateeb W**, Aljabali A, Bodoor K, Shehab M, Al Hamad M, Eaton G, Cornelison C. 2019. Homologous G776G Variant of Transcobalamin-II Gene is Linked to Vitamin B12 Deficiency. *International Journal for Vitamin and Nutrition Research*. ACCEPTED

Al-Ghzawi A, **Al Khateeb W**, Rjoub A, Al-Tawaha A, Musallam I, Al Sane K. 2019. Lead toxicity affects growth and biochemical content in various genotypes of barley (*Hordeum vulgare* L.) *Bulgarian Journal of Agricultural Science* 25: 55-61

Fernando D, **Al Khateeb W**, Belmonte M, Schroeder D. 2018. Role of Arabidopsis ABF1/3/4 during *det1* germination in salt and osmotic stress conditions. *Plant Molecular Biology* 97: 149–163

Al Khateeb, W. 2018. Plants genotoxicity as pollution bioindicator in Jordan using comet assay. *Physiol Mol Biol Plants* 24(1): 89-97.

Muhaidat R, Brake M, Al Zoubi M, Colautti R, Al-Nasser A, Awawdeh M, Al-Batayneh K, **Al Khateeb W**, McKown A, Lahham J, El-Oqlah A. 2018. Integrating morphological characters, molecular markers, and distribution patterns to assess the identity of *Blepharis* species from Jordan. *Botanical Studies* 59:18

Hamdan M. Al- Ruwaie, Rida A. Shibli, **Wesam Al Khateeb**, Reham W. Tahtamouni, Tamara S. Al-Qudah, Hasan Al- Baba. 2018. *Moringa peregrina* (Forssk.) Fiori microshsoots and its Effect on Total Phenolic Compounds. *Jordan Journal of Agricultural Sciences* (14): 13-23

Al Batayneh K, Al Zoubi M, Shehab M, Al-Trad B, Bodoor K, **Al Khateeb W**, Aljabali A, Al Hamad M, Eaton G. 2018. Association between MTHFR 677C>T Polymorphism and Vitamin B12 Deficiency: A Case-Control Study. *Journal of Medical Biochemistry* 37: 1–7.

- Al Khateeb, W.**, Al Shalabi, A., Schroeder, D. Musallam I. 2017. Phenotypic and molecular variation in drought tolerance of Jordanian durum wheat (*Triticum durum* Desf.) landraces. *Physiol Mol Biol Plants*, 23(2):311–319.
- Mhaidat N., Al Sheyab F., Zyoud A., Alzoubi K., Khabour O., AL-Quraan N., **Al Khateeb W.** 2017. Study the epigenetic down-regulation of Bim on colorectal cancer chemotherapy response. *Journal of King Saud University - Science*
- Hamdan M. Al- Ruwaiei, Rida A. Shibli, **Wesam Al Khateeb**, Tamara S. Al-Qudah, Reham W. Tahtamouni, Hasan Al- Baba. 2017. Rescuing endangered *Moringa peregrina* (frossk) fiori by cryopreservation using vitrification and encapsulation- vitrification protocols. *Jordan Journal of Agricultural Sciences* (13): 961-976
- Al Khateeb W**, Kanaan R, El-Elimat T, Alu'datt M, Lahham J, El-Oqlah A. 2017. In vitro propagation, genetic stability and LC-MS/MS analysis of secondary metabolites of wild lavender (*Lavandula coronopifolia* Poir.). *Horticulture, Environment, and Biotechnology*. 58: 393–405
- Al-Taani A, El-Radaideh N, **Al Khateeb W.** 2017. Status of Water Quality in King Talal Reservoir Dam, Jordan. (accepted) *Water Resources*.
- El-Radaideh N, Al-Taani A, **Al Khateeb W.** 2017. Status of Sedimentation in King Talal Dam, Case study from Jordan. *Environmental Earth Sciences*. 76:132 -149.
- Gammoh S, Alu'datt M, Alhamad M, Rababah T, Ereifej K, Almajwal A, A. Ammari Z, **Al Khateeb W** & Hussein N. 2016. Characterization of Phenolic Compounds Extracted from Wheat Protein Fractions Using HPLC/LC-MS in Relation to Anti-Allergenic, Anti-Oxidant, Anti-Hypertension, and Anti-Diabetic Properties. *International Journal of Food Properties*, 20:2383-2395.
- Al Khateeb W.**, Al Zghoul Z, Kanaan R, El-Oqlah A, Lahham J. 2017. *In vitro* Propagation and Enhancement of Phenolic Compounds Production in *Rumex cyprius* L. *Acta Physiol Plant* 39: 14, DOI 10.1007/s11738-016-2312-6
- Al Khateeb W**, Abu Serdane M, El-Oqlah A, Makhadmeh I. 2016. Evaluation of *in vitro* salt tolerance in *Cucumis prophetarum* L., a Crop Wild Relative. *Jordan Journal of Agricultural Sciences*. 12: 1095-1113.
- Al Khateeb W.** 2014. Cadmium-induced changes in germination, seedlings growth, and DNA fingerprinting of *in vitro* grown *Cichorium pumilum* Jacq. *International Journal of Biology*. 6 (1): 65-74.
- Al Khateeb W.** and Al-Qawasemeh H. 2014. Cadmium, copper and zinc toxicity effects on growth, proline content and genetic stability of *Solanum nigrum* L., a crop wild relative for tomato; comparative study. *Physiology and Molecular Biology of Plants*. 20(1):31-39.
- Al Khateeb W.**, Bahar E., Lahham J., Schroeder D. and Hussein E. 2013. Regeneration and assessment of genetic fidelity of the endangered tree *Moringa peregrina* (Forsk.) Fiori

using Inter Simple Sequence Repeat (ISSR). *Physiology and Molecular Biology of Plants*. 19(1): 157-164.

Al Khateeb W., Hussein E., Qouta L., Alu'datt M., Al-Shara B. and Abu-zaiton A. 2012. *In vitro* propagation and characterization of phenolic content along with antioxidant and antimicrobial activities of *Cichorium pumilum* Jacq. *Plant Cell, Tissue and Organ Culture*. 110:103-110.

Hussein E., Kanan G., Al-Batayneh K., Alhussaen K., **Al Khateeb W.**, Qar J., Jacob J., Muhaidat R. and Hegazy M. 2012. Evaluation of Food Preservatives, Low Toxicity Chemicals, Liquid Fractions of Plant Extracts and Their Combinations as Alternative Options for Controlling Citrus Post-Harvest Green and Blue Moulds *In vitro*. *Research Journal of Medicinal Plant*. 6: 551-573.

Abu-Darwish M., Alu'datt M., Al-Tawaha A., Ereifej K., Almajwal A., Odat N. and **Al Khateeb W.** 2012. Seasonal variation in essential oil yield and composition from *Thymus vulgaris* L. during different growth stages in the south of Jordan. *Natural Product Research* 26(14):1310-1317.

Muhaidat R., McKown A., **Al Khateeb W.**, Al-Shreideh M., Bani Domi Z., Hussein E. and El-Oqlah A. 2012. Full Assessment of C₄ Photosynthesis in *Blepharis attenuata* Napper (Acanthaceae) from Jordan: Evidence from Leaf Anatomy and Key C₄ Photosynthetic Enzymes. *Asian Journal of Plant Sciences*. 11(5): 206-216.

Alhussaen K., Hussein E., Al-Batayneh K., Al-Khatib M., **Al Khateeb W.**, Jacob J., Shatnawi M., Khashroum A. and Hegazy M. 2011. Identification and controlling *Pythium* sp. infecting tomato seedlings cultivated in Jordan valley using garlic extract. *Asian Journal of Plant Pathology*. 5(2): 84-92.

Al-Batayneh K., Hussein E., **Al Khateeb W.**, Alhussaen K., Bashaireh I.H., Kanan G.J.H. 2010. Effect of various growth conditions on nitrate uptake and nitrate reductase activity in *Aspergillus nidulans* nitrate assimilation defective mutants. *Advances in Natural and Applied Sciences*. 4(3): 317-332.

Al Khateeb W., Muhaidat R., Odat N., Sawaie A., Lahham J., El-Oqlah A. 2010. Interactive effects of salinity, light, and temperature on seed germination of *Zygophyllum simplex* L. (Zygophyllaceae). *International Journal of Integrative Biology* 10: 9-13.

Al Khateeb, W. and Schroeder, D. 2009. Overexpression of Damaged DNA binding protein 1A (DDB1A) enhances *Arabidopsis* DNA repair. *Plant Molecular Biology* 70(4):371-83

Al Khateeb, W. and Schroeder, D. 2007. *DDB2*, *DDB1A* and *DET1* exhibit complex interactions during *Arabidopsis* development. *Genetics* 176 (1): 231-242.

Al Khateeb, W., K. Hameed and R. Shibli. 2005. Influence of soil salinity on the interaction between tomato and broomrape. *Plant Pathology Journal*. 21(4): 391-394.

Al Khateeb, W., K. Hameed and R. Shibli. 2003. Effect of salinity on *Orobanche cernua* seeds germination. *Plant Pathology Journal*. 19(3) : 148-151.

Conference Presentations

- **Al Khateeb, W.** Screening of selected durum wheat landraces for salt stress tolerance: biochemical and molecular assessments. International Conference on Wheat diversity and human health. 22/10/2019. Istanbul
- **Al Khateeb, W.** and AlShalabi A. 2016. Differential gene expression of durum wheat landraces grown under drought, temperature stress and combination of drought and heat stress. International Research Conference Biotechnology Comprehensive Regional Development ". March 15 – 17, 2016. Moscow, Russia
- **Al Khateeb, W.** and Jamal Aldeen A. 2015. Micropropagation, *in vitro* preservation and determination of phenolics content and antioxidant activity of *Ailanthus altissima*. VIII Moscow International Congress "Biotechnology: State of the Art and Prospects of Development". March 17 – 20, 2015. Moscow, Russia
- **Al Khateeb, W.** 2014. Production of Phytochemical Compounds from *in vitro* grown *Rumex cyprius* L. and *Artemisia herba alba* L. International Conference on Natural Products 2014. Universiti Kebangsaan Malaysia
- **Al Khateeb, W.** and Al Odat M. 2012. Biological activity of selected wild grown Plants from Jordan. Fourth International Symposium on Medicinal and Aromatic Plants (SIPAM). March 22-24, 2012 Djerba-Tunisia.
- **Al Khateeb, W.**, E. Hussein., M. Alu'datt. 2010. In vitro propagation and characterization of phenolic content, antioxidant and antimicrobial activity of *Cichorium pumilum*. An endangered medicinal plant from Jordan. Biodiversity 2010 and Beyond – Science and Collections. May 31- June 5. 2010. Ottawa, ON. Canada.
- **Al-Khateeb, W.** and Schroeder, D. Overexpression of Damaged DNA Binding protein 1A (DDB1A) enhances *Arabidopsis* DNA repair. June 10-14. 2007. Plant Canada. Saskatoon, SK, Canada.
- **Al-Khateeb, W.** and Schroeder, D. The Role of *DET1* and Damaged DNA Binding Proteins (*DDB1* and *DDB2*) in *Arabidopsis* DNA Repair and Light Signaling. Plant Canada. Edmonton, Alberta, June, 15-18. 2005.