MOHAMMED A WEDYAN
CURRICULUM VITAE

Associate Professor of Biology (marine biogeochemistry)
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Education:

☒ **Liverpool University, UK**
Ph.D. in Marine Sciences [Chemical Oceanography*], July 2005.*
Supervisor: Prof Martin Preston.

- ✓ Thesis: "***Amino acids in the atmospheric and marine environments: distributions and the influence of chiral characteristics***." . Thesis Committee: Martin Preston (Advisor, Liverpool University) Prof. George Wolff, (Liverpool University. Head of Department), Dr. Mark Fitzsimons (Plymouth University).

☒ **Al albyat University. Jordan**
MSc degree. Biology, June 2000.
Advisors: Prof. Ihsan Mahasneh

- ✓ Thesis: "**Phenotypic characterization of blue green algae under salinity stress**." Emphasis in chemical and biological analysis, impact assessment, contamination, biosensors, remediation techniques for land and seawater, quality systems and pollution management.

☒ **Jordan University of Sciences and Technology, Jordan**
BSc degree of Applied Biology, June 1996.

Employment and Research Experience:

☒ **The Hashemite University**, Department of Biology and Biotechnology
Associate Professor*, September 2013 – present.*
Head of Department ,*10/9/2015 -1/9/2016*

☒ **Al Hussein bin Talal University, Dept. of Biology.**
Assistant Professor*, July. 2005 - April. 2011.*
Associate Professor *May. 2011 – September 2013.*

- ✓ carried out research in relationship between nutrients and cycling of organic nitrogen and other organic compound in the environment and I am also interested in understanding the distribution of dissolved organic carbon, nitrogen and phosphorus in the seawater, and also in investigating the ecological effect of the **red sea** water transfer to the **dead sea** water.
- ✓ Authored or co-authored 13 peer-reviewed journal papers.
- ✓ Served as PI on 120000 JD in grants **(Red Sea and Dead Sea Ecology)**.
- ✓ 110000JD as co researcher in grants **(Red Sea Pollutions).**

☒ **Max-Plank Institution research group in Marine biogeochemistry,** Oldenburg University Oldenburg, Germany.
***Visiting Scholar**, June 2010 – Augest 2010.*

- ✓ Carried out an experimental and modeling study of new technique to detect the trace concentration of dissolved organic matter in the different environmental samples.

☒ **Stanford University, Biological department,** Palo Alto, USA
***Visiting Scholar** September-october . 2006*

- ✓ Collaborated on microbial metabolism data analysis and other projects with host group.

☒ **Environmental School, Liverpool University,** Liverpool, UK
***Ph.D. Student (Marine Sciences)** , 2002 - 2005.*
Advisor: Prof. Martin Preston

- ✓ I was researching the transport and effect of organic pollutant on the surface seawater particularly organic nitrogen, using the overland flow system. This research was conducted as part of AMT research.

- ✓ The investigations are geared towards understanding the "black box" of mass balance regarding nitrogen, phosphorous and carbon in the input and run-off from the over the Atlantic Ocean. This requires wide-ranging environmental knowledge regarding the issues of discharge and consent, agricultural practice, farming attitudes and public perception, as well as the technical laboratory skills and capacity for self-motivated fieldwork..

Teaching Experience

☒ **AHU Department of Biology,**

- ✓ Marine & Environmental biochemistry (Biology, Undergraduate Course).

- ✓ Bioorganic Pollution (Biology , Undergraduate Course)
- ✓ Environmental Biotechnology (Biology , Undergraduate Course)
- ✓ General Biology 1&2 (Biology , Undergraduate Course)
- ✓ Practical general Biology 1&2 (Biology, Undergraduate Course).
- ✓ Special topics (Biology, Undergraduate Course).
- ✓ Ecology (Biology, Undergraduate Course).
- ✓ Marine Sciences, Introduction (Biology, Undergraduate Course).
- ✓ Biochemistry (Biology, Undergraduate Course).
- ✓ Practical Biochemistry (Biology , Undergraduate Course),
- ✓ Clinical Biochemistry (Nurse , Undergraduate Course),

☒ **HU Department of biology and biotechnology**

- ✓ General Biology 1&2 (Biology , Undergraduate Course)
- ✓ Ecology (Biology , Undergraduate Course)
- ✓ Molecular Ecology of communities and Populations (Biology , graduate Course)
- ✓ Environmental Biotechnology (Biology , graduate Course)
- ✓ Advance Biochemistry (Biology , graduate Course),
- ✓ Biochemistry (Biology, Undergraduate Course).

Research Interests

- ✓ Understanding the relationship between nitrogen fixation and export production.
- ✓ Determining the distribution and elemental stoichiometry of dissolved organic carbon, nitrogen and phosphorus in the Gulf of Aqaba.
- ✓ Factors influencing the transfer of both pollutant and naturally occurring organic molecules from terrestrial to marine environments including atmospheric and coastal systems the Gulf of Aqaba.
- ✓ Some additional interests in aquatic nutrient dynamics.

Past Grants

- ✓ **Effect of Organic nitrogen on the Phytoplankton, in the Gulf of Aqaba**. AHU-Granted (2500JD) 2005-2007.

- ✓ **Gut content analysis and in situ grazing experiments of selected species of copepod**. AHU- Granted (2500JD) 2006-2008.

- ✓ **Speciation analysis of organometallic and inorganic compounds of mercury in water, fish and sediments of Gulf of Aqaba, Jordan**. Scientific Research Support Fund-Granted (108.400 JD) 2008- 2010.

- ✓ **The Dead Sea Ecosystem as influenced by Red Sea-Dead Sea conduit project** Scientific Research Support Fund –Granted (117100JD). 2009-2012.

Current Grants

- ✓ **Dissolved Organic Nitrogen in Water Environment,** HU-Granted (73000 JD) 2015-2017**.**
- ✓ ***Springs of life in a "Dead Sea".*** Submitted to DFG collaborated with MPI-Bremen, marine microbiology group.

MSc students supervised

1. Ahmed al harahsh, Identification and characterization of dissolved organic nitrogen in wastewater plants, Jordan, (2015).
2. Tahreer Hamdan, Study the bioavailability of dissolved nucleic acids (D-NA's) in freshwater environment. (2017)
3. Bilal Abu Hanieh, Biochemical characterization of amino acids and fatty acids extracted from olive westwater collected from different areas of north Jordan.(2016).
4. Lina abu mharib, Assessment of contaminations in drinking water in dulil region in Jordan . (2017)

MSc. Internal examiner in examination committee

1. Doaa Budier, The antinociceptive and anti-inflammatory activities of Alcea Setosa Extract. (2015)
2. Ahmed Alatshan,The antinociceptive and anti-infliammtory effect of anastatica heirochuntica extracts in animal models. (2015)
3. Hia Mashgiah, Larval Trematodes in physa Snail in Jordan. (2016)
4. Elham Al Zud, Biological Activity and Apoptosis Signaling Pathway for Cephalostatin 1 analogues. (2016)

Invited Seminars

- ✓ Seminar, Department of biology, Al Hussein University, Maan, Jordan, Apr. 2007.
- ✓ Seminar, Department of Chemistry and biology, Oldenburg University, Germany, Aug. 2010.
- ✓ Seminar, Laboratory for Microbial environment, Environmental Institute, Stanford University, Oct. 2006.

Professional Association Memberships

- ✓ 02/2007- Present. Member of Jordan Badia Research and Development Center
- ✓ 05/ 2007- Present . Member of The National Center for Biotechnology
- ✓ 2006- Present. Member of the Global Network for Environmental Science and Technology.
- ✓ 2005- Present. Member of Challenger Society for Marine Science, UK

Languages

- ✓ Fluent in English
- ✓ Native Arabic speaker

Journal Publications Peer-Review

1. **Wedyan, M.** and Preston, MR (2005) Isomer selective adsorption of amino acids by components of natural sediments Environmental Science and Technology 39 2115-2119.

2. **Wedyan, M** , Al Fandi, K and Al Rossan, S (2007) Bioavailability of Atmospheric Dissolved Organic Nitrogen in The Marine Aerosol over the Gulf of Aqaba. Australian. Journal of Basic & Applied Sciences., 1(2): 208-212.

3. Khleifate. K.;Tarawneh K ; Wedyan M ; Tarawneh , A and Al Sharafa K. (2008) Growth Kinetics and Toxicity of Enterobacter cloacae Grown on Linear Alkylbenzene Sulfonate as Sole Carbon Source. Current Microbiology, Volume 57, Number 4, pp. 364-370(7).

4. Karataş A. **Wedyan M**, Shehab A, Sözen M, Amr Z.S. (2008). Karyotypes of bats (chiroptera: Rhinolophidae, vespertilionidae) from Jordan. The Arab Gulf Journal of Scientific Research, 26(4):193-195.

5. Khleifat, K.M., R.A. Halasah, K.A. Tarawneh, Z. Halasah, R. Shawabkeh and **M.A. Wedyan**, 2010. Biodegradation of linear alkylbenzene sulfonate by *Burkholderia* sp.: effect of some growth conditions. International Journal of Agriculture and biology, 12: 17–25.

6. **Wedyan, M** and Altaif, K (2009) Distribution of dissolved nucleic acids in the soil of southern Jordan, Transylvanian Review of Systematical and Ecological Research, 8, 65-73.

7. **Wedyan, M.A**., Ababneh, F. A., & Al-Rousan, S. (2012). The correlations between mercury speciation and dissolved organic matter in the sediment of the red sea., American Journal of Environmental Science, 8 (4), 403-411.

8. **Wedyan, M**., El-Oqlah, A., Altif, K., & Khlifate, K. (2013). The Dead Sea Ecosystem Influenced by Red Sea–Dead Sea Conduit Project (Peace Conduit). Transylvanian Review of Systematical and Ecological Research, 15(2), 45-60.

9. **Wedyan M**, Al Harahsheh A & Qnais, E (2016) Determination of the Fate of Dissolved Organic Nitrogen in the Three Wastewater Treatment Plants, Jordan; International Journal of Environmental & Science Education, 2016, 11(6), 767-777.

10. **Wedyan M**, Al Harahsheh A, Bsoul E, Qnais E, and Muhaidat R, (2016) Cd and Fe concentrations of surface water of Al Zarqa Channelized Stream. Polish Journal of Environmental Studies Vol. 25, No. 6 (2016), 2617-2521.

11. **Wedyan M,** Dahamsheh A and Qnais E (2016) Investigate the Removal Efficiency of Nitrogen and Phosphate Compounds from AL Hussein bin Talal University Wastewater Treatment Plant (AHUP) ; Der Pharma Chemica, 8(12):25-29.

12. **Wedyan, M**., Bilal Abu Hanieh and Ahmed Al Harasheh, Abdel Rahman Al-Tawaha (2017) Chemical Characterization of Olive Pomace in the northern region of Jordan. Bulgarian Journal of Agricultural Science. (Accepted).

13. Al-Tawaha, A. R., M. A. Turk, Y. M. Abu-Zaitoon, S. H. Aladaileh, I. M. Al-Rawashdeh, S. Alnaimat, A. R. M. Al-Tawaha, M. H. Alu'datt and **M. Wedyan** (2017) Plants adaptation to drought environment. Bulgarian Journal of Agricultural Science, 23 (No 3) 2017, 381–388.

14. Dahamsheh A and **Wedyan M** (2017) Evaluation and Assessment of Al-Hussein bin Talal University (AHU) Wastewater Treatment Plants; International Journal of Advanced and Applied Sciences, Volume 4, Issue 1 , Pages: 84-89 .

15. Dahamsheh, A., K. Al-Zboon, **M. Wedyan**, and Z. Abu-Hamatteh (2017) Climate change impact assessment on rainwater in Jordan. International Journal of Advanced and Applied Sciences, (Accepted)

16. Abuiraq L, G., Kanan, **M. Wedyan** and A El-Oqlah (2015) Efficacy of Extracts of Some Lichens for Potential Antibacterial Activity. Research Journal of Pharmaceutical, Biological and Chemical Sciences, 6(1):318-33.

17. Qnais E, Bseiso Y, **Wedyan M** and Alkhateeb H (2016) Antinociceptive effects of essential oil of Melissa officinalis L. in rats, Der Pharma Chemica, 8(13):55-62.

18. Qnais E, Bseiso Y, **Wedyan M** and Alkhateeb H (2016) Chemical composition and antinociceptive effects of essential oil from aerial parts of Gundelia tournefortii L Asteraceae (Compositae) in rats. Tropical Journal of Pharmaceutical Research, 15 (10):2183-2190 .

19. Qnais E, Bseiso Y, **Wedyan M** and Alkhateeb H (2016) Comparison of Antinociceptive activity of Origanum majorana L. methanol leaf extract in mice in different models ; Der Pharma Chemica, 8(13):307-313.

20. Ismail Y., **Wedyan M**, Muad Al-zu`abe and Salim Abderrahman (2016) Antimicrobial Activity of Rubia cordifolia: Methods to Determine Antimicrobial Activity. Research Journal of Medicinal Plants, 10 (8): 457-462.

Conference Articles

- ✓ Wedyan M, and Preston M. 2nd International Conference on Environmental Science and Technology . Houston, USA. 19-22 August 2006

- ✓ El-oqlah, A. and Wedyan, M. A. Plant biodiversity in mountainous cost of Dead Sa area (Jordan) , Mountains of the world- Ecology, Conservation and Sustainable Development , Muscat, Sultanate of Oman. 10-14 February 2008.

Unpublished Research Reports

- ✓ Wedyan, M ; Fandi, K and Al Najjar, M (2007) Gut content analysis and in situ grazing experiments of selected species of copepod. AHU- Granted (2500JD)

- ✓ Ababneh, F and Wedyan, M (2011) Speciation analysis of organometallic and inorganic compounds of mercury in water, fish and sediments of Gulf of Aqaba, Jordan. SRF-Granted (108.400 JD)

- ✓ Wedyan, M ; Altif, K; Eleogla, A and Khlifate, K (2012) The Dead Sea Ecosystem as influenced by Red Sea-Dead Sea conduit project. SRF-Granted (117.100JD).

References

Upon request