

## **Dr. FOAD ALZOUGHLOOL**

**Jordanian & Canadian**

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The Hashemite University/ Faculty  
of Applied Medical Sciences

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### **Academic Experience**

- **Associate Professor, The Hashemite University, Jordan, Sep, 2020 - Now**  
**Cellular & Molecular Medicine**
- **Assistant Professor, The Hashemite University, Jordan, Sep, 2015- Feb, 2020**  
**Cellular & Molecular Medicine**
  - Responsible for carrying out teaching and research duties as well as responsible for organizing lectures and supervising seminars and tutorials.
  - Assessing students course work and material.
  - Involved in the set up of exams and the marking of results.
  - Providing mentoring, advice and support to students on a personal level.
  - Implementing University research projects and involved in its publication.
  - Actively leading class discussions and encouraging debate.
  - Teaching of many courses such as Advance Patho-physiology, Human Physiology, Human Pathology, Special topics (stem cell therapeutics), and research methods in medical laboratory sciences.
  - Involved in the research and designing of new courses and materials.
- **Teaching Assistant, University of Ottawa, Canada** 2009- 2012  
  
Teaching Assistant for many courses in the faculty of Health Sciences such as:  
1- Determinants of Health, 2- Health Problems, 3- Communication and Health, 4-  
Biological Basis of Diseases, and 5- Molecular Mechanism of disease.
- **Teaching and Research Assistant, The Hashemite University/ Jordan,**

2006- 2008

My Responsibility was teaching the practical part of many courses such as Human Genetics, Molecular Biology, Human Anatomy, and Human Physiology.

- **Part Time Lecturer, Jordan University of Science and Technology, Jordan** 2005- 2006  
Teaching biology 107 course.
- **Lecturer, Health College, Yefren, Libya** 2004 -2005

My responsibilities were teaching of many courses such as Anatomy, Physiology, and Biochemistry

## **Management Experience**

- **Assistant Dean / Faculty of Applied Medical Sciences, The Hashemite University, Jordan, Sep, 2018- Sep, 2020**
  - Responsible for planning the agenda and various activities for the faculty.
  - Works under the administrative guidance and performs various tasks to fulfill the faculty objectives.
  - Involved in the development and implementation of annual curriculum and extracurricular activities.
  - Involved in the administrative tasks and even for conducting lectures and seminars for students.
  - Counsel the students if required and provides guidance assistant.
  - Plays an active part in the marketing activities and allocation of funds for various activities during the academic year.

## **Education**

- **PhD in Cellular and Molecular Medicine / (Molecular Patho-physiology) 2015** University of Ottawa / **Canada**
- Arrhythmia Research Group, University of Ottawa Heart Institute, University of Ottawa, Canada
- Thesis Title: Novel Molecular Mechanisms in the Pathophysiology of Human Atrial Fibrillation
- Advisor: Dr. Micheal Gollob , MD, FRCPC University of Ottawa Heart Institute, Associate Professor, University of Ottawa
- **Master Degree in Applied Medical Sciences** 2004

- Jordan University of Science & Technology – Irbid, Jordan
- Thesis Title: Alpha-1 Antitrypsin Genotypes in lung cancer Patients.
- Advisor: Dr.Mohammed Nusir, Professor, Jordan University of Science & Technology
- **B.Sc in Applied Biology/ Human Molecular Genetics** **2000**
- Jordan University of Science & Technology – Irbid, Jordan
- Research Project: Pathophysiology of Male Infertility

### **Teaching Courses:**

#### ➤ **Graduate Courses**

- Advance Research Methods
- Advance Human Patho-physiology.

#### ➤ **Undergraduate Courses**

- Human Physiology.
- Human Pathology.
- Special Topics (Stem Cell Therapeutics).
- Research Methods in medical laboratory sciences.
- Practical Human Physiology

### **PROFESSIONAL SOCIETIES:**

- Member of the American Heart Association (AHA)
- Member of the Canadian Cardiovascular Society (CCS)
- Member of the American Society of Human Genetic (ASHG)

### **RESEARCH SKILLS:**

- Whole-cell patch clamp recording.

- Radioligand Binding Assay.
- Calcium Imaging Techniques.
- Cell culture.
- Cloning, mammalian cells transfection, and site-Directed Mutagenesis
- DNA, RNA and protein extraction.
- Human samples handling and processing (blood and tissues).
- PCR and Gene Sequencing.
- Restriction Fragment Length Polymorphism (RFLP).
- Cell organelles fractionation.
- Immunohistochemistry.
- Enzyme-Linked Immunosorbent Assay (ELISA).
- Immunoblotting- Western blotting.
- Confocal microscopy.
- SPSS statistical analysis.
- Animal Modeling

### **DEFINING SKILLS:**

- Leader, Innovator, Self-dependent.
- Hard working and eager to explore and try.
- Skilled communicator (bilingual Arabic/English with basic French).

### **SCHOLARSHIPS, AWARDS AND HONORS:**

- Sep, 2008-Aug, 2011 Full Scholarship for the PhD study from The Hashemite University/ Jordan. (30000 CAD/year)

- Sep, 2008-Aug, 2013 University of Ottawa Heart Institute Cardiac Endowed Graduate Scholarship and Award (7,500 CAD per year)

## **Grants (Ongoing) - (Total amount 392,500 \$):**

### **A. External Research Grants – (Total amount 57,000 \$)**

- UNICEF - Developments and design new rapid tests and protocols to detect SAR-CoV-2 from saliva samples *Principle investigator. Total fund awarded 28,500 \$; 2020.*
- Abdul Hameed Shoman Scientific Research Support Fund - Studying the therapeutic effect of irisin on Cancer cachexia model in Rats. *Principle investigator. Total fund awarded 28,500 \$; 2020.*

### **B. Internal Research Grants- The Hashemite University (Total amount 335,500 \$)**

- The role of Irisin in endothelial dysfunction associated with diabetes. *Co-investigator. Total fund awarded 126,500 \$; 2021-2023.*
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- Molecular and histo-morphological evaluation of the therapeutic effects of the Jordanian traditional red cream for burns in rat model. *Principle investigator. Total fund awarded 17,000 \$; 2020-2021.*
- Studying antitumor activity of irisin and/or vitamin D in vitro using MCF7 & K562 cancer cell lines. *Principle investigator. Total fund awarded 23,500 \$; 2019-2021.*
- Effects of Irisin supplementation combined with exercise training on two models of muscle atrophy in mice. *Co-investigator. Total fund awarded 59,000 \$; 2019-2021.*
- Studying the correlation between Irisin, adiponectin, and leptin serum level in atrial fibrillation, type 2 diabetes, and polycystic ovarian syndrome and studying the effects of Ramadan fasting on these hormones. *Principle investigator. Total fund awarded 19,000 \$; 2017-2019.*

- Genetic screening of KCNJ11 gene that codes for ATP-sensitive potassium (KATP) channels and explores its role in human Atrial fibrillation (AFIB). **Principle investigator. Total fund awarded 18,000 \$; 2016-2018.**
- Studying the association between the thyroid gland functions and Polycystic ovary syndrome (PCOS). **Principle investigator. Total fund awarded 10,000 \$; 2016-2017.**
- Studying Antitumor Activity of Vitamin D Combined with B12 in vitro by Testing Them in Human Breast Cancer Cell line (MCF-7). **Co-investigator. Total fund awarded 62,500 \$; 2016-2019.**

## **Publication:**

1. Alzoughool F A-ZM: ***Optimal therapeutic adropin dose intervention in mice and rat animal models: A systematic review.*** Vet World 2021, 14:1426-1429
2. Alzoughool F, Alanagreh La, Abumweis S, Atoum M. ***Cerebrovascular comorbidity, high blood levels of c-reactive protein and d-dimer are associated with disease outcomes in covid-19 patients.*** Clin Hemorheol Microcirc. 2021;77:311-322
3. Al Hourani H, Atoum M, Alzoughool F, Al-Shami I. ***Screening for non-invasive risk factors of type 2 diabetes in overweight and obese schoolchildren.*** Endocrinología, Diabetes y Nutrición. 2021
4. Alzoughool F, Al-Zghoul MB, Al-Nassan S, Alanagreh La, Mufleh D, Atoum M. ***The optimal therapeutic irisin dose intervention in animal model: A systematic review.*** Vet World. 2020;13:2191-2196
5. Alanagreh La, Alzoughool F, Atoum M. ***Risk of using hydroxychloroquine as a treatment of covid-19.*** International Journal of Risk & Safety in Medicine. 2020;31:111-116
6. Alzoughool F, Alanagreh L. Coronavirus drugs: ***Using plasma from recovered patients as a treatment for covid-19.*** Int J Risk Saf Med. 2020;31:47-51
7. Alanagreh L, Alzoughool F, Atoum M. ***The human coronavirus disease covid-19: Its origin, characteristics, and insights into potential drugs and its mechanisms.*** Pathogens. 2020;9
8. Alzoughool F, Atoum M, Abu-Awad A, Ghanma I, Halalsheh R. ***The rs2236609 polymorphism is related to increased risk susceptibility of atrial fibrillation.*** Public health genomics. 2020;23:54-58
9. Atoum MF, Alzoughool F, Al-Hourani H. ***Linkage between obesity leptin and breast cancer.*** Breast Cancer: Basic and Clinical Research. 2020;14:1178223419898458
10. Alzoughool F, Al Hourani H, Atoum M, Abdelgader R, Alanagreh L. ***Irisin, leptin and adiponectin levels are reduced significantly during fasting.*** Mediterranean Journal of Nutrition and Metabolism. 2019;12:389-396

11. F. Alzoughool MA, A. Abu-Awad. ***Increase in atrial fibrillation risk susceptibility due to rs6763048 polymorphism in scn5a gene.*** *Acta Medica Mediterr.* 2019;35:2145
12. F. Alzoughool MA, A. Abuawad, R. Abdelqader, L. Alanagreh, M. Hatmal. ***Circulating irisin and adiponectin levels are positively associated with atrial fibrillation.*** *Gazzetta Medica Italiana.* 2019;178:6
13. F. Alzoughool MA, H. Al Hourani, R. Abdelqader, H. Masalha, A.R. Alkharabsheh, A. Abu-Awad. ***Significant reduction of t3 hormone and increase in the occurrence of non-thyroid illness syndrome in ovarian cyst and polycystic ovary syndrome patients.*** *Gazzetta Medica Italiana.* 2019;178:5
14. S.A. Al Haj Mahmoud MFA, H.M. Al-Hourani, S. Bateineh, S. Abderrahman, F. Alzoughool. ***Vitamin d deficiency and rs731236(taq1) vitamin d receptor gene polymorphism as possible risk factors for rheumatoid arthritis and osteoarthritis.*** *Acta Medica Mediterr.* 2018;34
15. Atoum MF, Alzoughool F. ***Reduction in breast cancer susceptibility due to xbai gene polymorphism of alpha estrogen receptor gene in jordanians.*** *Breast Cancer (Dove Med Press).* 2017;9:45-49
16. Atoum M, Alzoughool F. ***Vitamin d and breast cancer: Latest evidence and future steps.*** *Breast Cancer (Auckl).* 2017;11:1178223417749816
17. Adler A, Uppal S, Orr N, Alzoughool F, Gollob MH. ***First report of a large duplication of the kcnq1 gene in a patient with long qt syndrome.*** *Can J Cardiol.* 2014;30:1249.e1245-1247
18. Perrin MJ, Adler A, Green S, Al-Zoughool F, Doroshenko P, Orr N, et al. ***Evaluation of genes encoding for the transient outward current (ito) identifies the kcnd2 gene as a cause of j-wave syndrome associated with sudden cardiac death.*** *Circ Cardiovasc Genet.* 2014;7:782-789
19. El-Akawi ZJ, Nusier MK, Zoughool FE. ***Relationship between alpha-1 antitrypsin deficient genotypes s and z and lung cancer in jordanian lung cancer patients.*** *Saudi Med J.* 2006;27:181-184

## **Conferences:**

### **➤ Presentations**

1. The Distribution of Rs5219 Polymorphism In The Non-Diabetic Elderly Jordanian Subject. 22nd International Conference on Epidemiology of Diabetes 2020, SYDNEY, AUSTRALIA, Mar 26-27,2020. Online
2. Increase in atrial fibrillation risk susceptibility due to rs2236609 polymorphism in KCNE1 gene. Global Chemical Engineering and Chemistry Expo 2019, Valencia, Spain, Mar 25-26, 2019.
3. Comparison the occurrence of non-thyroidal illness syndrome between polycystic ovarian syndrome and single ovarian cyst. Tokyo 28th International Conference

on Medical, Medicine, and Health Study (MMHS-2018), Tokyo, Japan, May 19-20, 2018.

➤ **Attendance**

1. The International Association of Neurorestoratology (IANR) XII Conference. 2-5 Oct, 2019 Amman, Jordan.
2. The 5th Middle East Molecular Biology Congress and Exhibition. 3-6 Oct, 2018 Dead Sea, Jordan.
3. Ottawa Heart Research Conference: Emerging Pathways in Cardiovascular Disease, Ottawa, Canada, May 2013.
4. The Canadian Cardiovascular Congress Scientific session, Toronto, ON, Canada, Oct.27-31, 2012.
5. American Heart Association: Scientific Sessions 2011, Orlando, USA Nov 2011.
6. American Association for Cancer Research (AACR) conference, Jordan 2008.

**Workshops:**

- How to write a competitive project proposal? Funded by Erasmus+ programme of the European Union Jordan, Nov, 2018
- Shaping the Way We Teach, organized by Danish Jordanian University Cooperation (DJUCO). Jordan, Mar, 2016
- Blackboard Learning Management System. The Hashemite University, Jordan, Jul, 04<sup>th</sup> to Jul, 12<sup>th</sup>, 2007.
- International Thematic Workshop on the Use of Bioinformatics in Genomics Research. Islamabad, Pakistan. Aug 19<sup>th</sup> to 02<sup>nd</sup> Sep, 2006.
- International Computer Driving License (ICDL). Jordan, 2003

**Committee Member/ Master Thesis:**



- *Qatada Shahwan*, **Genetic identification of methicillin-resistant *Staphylococcus aureus* (MRSA) in diabetic foot ulcers (DFU) among Jordanian diabetic patient.** Mar 2019, ( The Hashemite University).
- *Fatin Al-Naqrish*, **Molecular characterization of *EZH2* gene in patient with colorectal adenoma in Jordan.** December 2018, ( Jordan University of Science & Technology).- *external examiner*
- *Adham Al-Rousan*, **Investigating the potential effect of herbal ointments (Olive oil, *Nigella sativa* oil, *Inula viscosa* or combined) on the repairing of tendon from traumatic injuries – In vivo rat model.** October 2018, ( The Hashemite University).
- *Salam Al-Zghoul*, **Pharmacogenetics of drug-metabolizing enzymes in Jordanian population.** August 2018, ( Jordan University of Science & Technology). -*external examiner*
- *Ayat Al-shouh*, **Resequencing and haplotype tagging for drug metabolizing enzymes coding genes among Jordanians.** August 2018, ( Jordan University of Science & Technology).- *external examiner*
- *Aya Al-Taylouni*, **The association between rs7903146 polymorphism at the transcription factor 7-like 2 gene that regulates insulin and glucagon among type 2 diabetes mellitus patients.** July 2018, ( The Hashemite University).
- *Mai Alajlouni*, **Association between luteinizing hormone receptor gene polymorphism (rs2293275) and polycystic ovarian syndrome.** July 2018, ( The Hashemite University).
- *Ahmed Khattab*, **Effects of citrus lemon leaves extract on blood glucose and lipid profile in alloxan monohydrate induced diabetic rats.** April 2018, ( The Hashemite University).
- *Aya suliemana Mustafa*, **The in vivo molecular - immunomodulatory effect of Moxifloxacin in Balb c mice.** December 2017, ( The Hashemite University).

### **Faculty & Department Committees:**

- Scientific Research Committee.
- Postgraduate Studies Committee.
- Students Violation Committee.
- Library Committee.
- Educational, Seminars, and Scientific Day Committee.
- Clinical Training Committee.
- Social Committee.
- Studies & Consultations Committee.
- Promotion & Employment Committee.
- Accreditation & Quality Assurance Committee.

### **University Committees**

- The Hashemite University Council for the academic year 2020-2021.
- Postgraduate Studies Committee.