

## CURRICULUM VITAE

**Name:** Mukhallad A. M. Al Janabi  
**Marital status:** Married with two children  
**Address:** Jordan University of Science and Technology  
College of Medicine  
Department of Physiology  
Tel.00 962 2 7201000, ext.23671, mobile 00962 795158960  
e-mail: mukmoh@just.edu.jo

### **Degrees**

Bachelor of Medicine, Bachelor of Surgery (MB. ChB.,1976) University of Baghdad.  
Master of Medical Science (M Sc.,1980) University of Baghdad.  
Doctor of Philosophy (Ph D., 1990) University of Western Australia.

### **Research interests**

**Lung functions in health and disease conditions. Physiological control of the bronchial tree and it's development throughout fetal life. Abnormal physiological control of bronchial smooth muscle in diseases like asthma. Contractile proteins of smooth and skeletal muscles. Using molecular biology techniques to detect different forms of myosin in different types of muscle.**

### **Positions Held:**

1976 -1977 Medical house officer in teaching hospitals (Baghdad).  
1977-1980 Tutor in Department of Physiology, University of Baghdad.  
1980-1985 Assistant Lecturer, Department of Physiology, University of Baghdad.  
1985-1990 Postgraduate student (Ph D), Tutor and Demonstrator in Department of Physiology, University of Western Australia.  
1990-1994 Lecturer Department of Physiology, University of Baghdad.  
1994-1995 Assistant Professor Department of Physiology, University of Baghdad.  
1995-1997 Assistant Professor Department of Physiology, Al Arab Medical University.  
1997-2000 Assistant Professor and Head of the Department, Al Arab Medical University.  
2001-2021 Associate Professor, Department of Physiology, Jordan University of science and technology.  
2021 Professor, Department of Physiology, Jordan University of science and technology.

### **PRESENT POSITION:**

Professor  
Department of Physiology  
Faculty of Medicine  
Jordan University of Science and Technology  
Irbid – Jordan.

### **PROFESSIONAL AND SCIENTIFIC ORGANIZATIONS MEMBERSHIP:**

1. Iraqi Medical Association
2. The Iraqi Medical Society for Basic Medical Sciences
3. American thoracic society
4. International Society Heart Research/ North America section

### **Teaching experiences**

1. I have broad experiences in teaching of human and medical physiology for more than twenty years in Iraq, Australia, Libya and Jordan. I taught almost all aspects of human physiology, for example: respiratory system, cardiovascular system, renal, gasterointestinal, special senses and general physiology for medical, pharmacy, nursing and science students

(undergraduates and postgraduates). Also I coordinated many courses in human and medical physiology in universities that I have worked in.

2. Teaching the following courses at the Department of Physiology/ Jordanian University of science and technology

1. Med. 237: Physiology for Medical Students
2. Med. 131: Physiology for Nursing Students
3. Med. 172: Medical Terminology
4. Med. 731: Pathophysiology for Nursing Postgraduate Students
5. Pharmacy: M 230 All topics of Physiology
6. Pharmacy M 372 Pathophysiology-
7. Nursing M 230
8. Medical Eng: M 236
9. Doctor of Pharmacy: M132
10. Medical: Modular system; Gastrointestinal, Respiratory, Endocrine systems, Musculoskeletal and Urogenital systems. Neurosciences I and II.

3. Course co-ordination

1. Course co-ordinator for the Pharmacy student's course, M230. 1990-1994 (4 years)
2. Course co-ordinator for M132 Introduction to human physiology 2003 – 2007
3. Course co-ordinator for the Pharmacy student's pathophysiology course, M372(4 years)
4. Course co-ordinator for master courses M730, M734 and M738
5. Course co-ordinator for the Doctor of pharmacy student's pathophysiology course, M372 (2007)
6. Course co-ordinator Gastrointestinal Module (M311) 2007-2014

### **Referees**

1. Professor Said Khatib Professor and Chairman of the department Physiology Jordan University of Science and Technology e-mail [sykhathib@just.edu.jo](mailto:sykhathib@just.edu.jo)
2. Professor Majeed Al Ani, Department of food science and nutrition. Sultan Qaboos University. Muscat/ Oman e-mail [majeed@squ.edu.om](mailto:majeed@squ.edu.om)
3. Professor Mohammad Jaffar Department of Physiology Jordan University of Science and Technology e-mail [mmjaffar@yahoo.co.uk](mailto:mmjaffar@yahoo.co.uk)

### **Workshops and training programs**

1. Educational methods in higher education: organized by University of Baghdad 1994
2. Educational planning workshop: organized by School of Medicine/JUST and WHO March 2002.
3. The basics of medical education workshop: organized by the faculty of medicine, Mu'tah University and WHO July 2002.
4. E- learning workshop organized by School of Computer sciences /JUST Sept 2007.
5. Testing and Evaluation "university examinations" JUST July 2009
6. Statistical Data Analysis Using Minitab JUST Jan. 2017
7. Teaching methods and learning style JUST FEB 2017
8. Introduction to improve quality of education OCT 2017

### **COMMITTEE MEMBERSHIP:**

1. Member of the Faculty of Medicine Council/ University of Baghdad 1990-1992
2. Member of the Faculty of Medicine Council/ Al Arab medical university 1997-1988
3. Member of the Faculty of Medicine Council/ Jordanian university of science and technology 2005,2006,2007

- 4 Member of the Scientific Research Committee 2001,2003**
- 5. Member of the Library committee 2004 at Just**
- 6. Member of curriculum committee/Faculty of medicine JUST**

#### **Scientific conferences attended**

1. XXX congress of international union of physiological society 1986
2. Australian physiological and pharmacological society 1986
3. Australian biochemical society 1987
4. Airways 87 Satellite symposium of the 10<sup>th</sup> international congress of pharmacological society 1987
5. Australian physiological and pharmacological society 1988  
Smooth muscle symposium England 1988
6. Baghdad medical school scientific days 1992-1994
7. The fourth Jamahiryia conference in medical sciences 1998
8. The scientific conferences/ Faculty of Medicine/JUST 2001-2012
9. American thoracic society meeting Denver/Colorado USA 10. 5 2011
10. International Society Heart Research meeting Banff/ Canada 28.5.2012
11. American thoracic society meeting Denver/Colorado USA 17. 5 2015
12. Experimental biology annual meeting, Chicago 2017
13. American thoracic society meeting Dallas/Texas USA May 2019
12. Experimental biology annual meeting, San Diego USA 2020

#### **POSTGRADUATE TEACHING EXPERIENCE:**

1. Supervised 4 MSc. Theses in Iraq and Libya
2. Supervised 6 MSc. Theses in Jordan
3. Member of examination committees for many MSc. Theses

#### **Postgraduate thesis supervision**

1. Hemodynamic Effects of Phosphodiesterase 5 Inhibitor (Ordonafil) on Isolated Hypertrophied Rabbit Heart .2009
2. The Effect of Phosphodiesterase-5 Inhibitor (Sildenafil) on Lung Function in Human 2009
3. Effect of NG - Nitro- L- Arginine Methyl Ester on the Cardiac Myosin Heavy Chains 2011
4. Changes in expression of myosin heavy chains in hypertrophied right ventricle and ability of Sildenafil to reverse them 2015
5. The Effect of Chronic (four weeks) Administration of Phosphodiesterase-5 Inhibitors on L-NAME Induced Left Ventricular Hypertrophy 2009.
6. Effect of strength training with different loads on GH secretion and its relationship with lactate and creatinine kinase in endurance athletes. 2007.
7. The effect of vipera lebetina venom on erythrocytes osmotic fragility in vitro. 2007
8. The effect of sildenafil drug on atrial natriuretic peptide level in mice treated with monocrotaline 2019
9. Sequential finger movements based on handiness and gender

## 10. BURNOUT AMONG EMERGENCY HEALTHCARE PROVIDERS IN JORDAN: PHYSICIANS, NURSES, AND PARAMEDICS.

مشاريع البحث العلمي المدعومة من عمادة البحث العلمي

### **RESEARCH PROPOSAL SUPPORTED BY SCIENTIFIC RESEARCH DEANSHIP**

1. Association of leptin serum levels and leptin gen polymorphisms with the risk of prediabetes in northern Jordan.
2. Association of adiponectin serum levels and ADIPOQ single nucleotide polymorphisms with the lack of glycemic control in type 2 diabetes mellitus patients.

#### **Publications:**

1. Mohammad MA, Sparrow MP, 1988 The Heavy chain stoichiometry of smooth muscle myosin is a characteristic of smooth muscle tissues Aust. J. Biol Sci, 41: 409-419.
2. Mohammad MA. Sparrow MP. 1988. Changes in myosin heavy chain stoichiometry in pig tracheal smooth muscle during development FEBS Lett 228: 109-112.
3. Sparrow MP Mohammad MA. Arner A, Hellstrand P, Ruegg IC 1988. Myosin composition and functional properties of smooth muscle from the uterus of pregnant and non-pregnant rats Eur. J. Physiol.; 412: 624-633.
4. Mohammad MA, Sparrow MP, 1989 The distribution of heavy chain isoforms of myosin in airways smooth muscle from adult and neonate humans. Biochem. J; 260: 421-426.
5. Sparrow MP, Arner A, Mohammad MA, Hellstrand P, Ruegg IC 1987. Isoforms of myosin in smooth muscle. In: Regulation and contraction of smooth muscle. Eds Siegelman MI, Somlyo Ap, Stephens NL. Alan R. Liss, Inc, New York 67-79.
6. Mohammad MA, Mohammed NH and Al-Hammamy HR. 1993. The relation between forced expiratory impairment and respiratory disease symptoms in smoker patients. J. Fac. Med. Bag. 35(4):467-472.
7. Al kassab F, Nadeem AS, Mohammad MA, El-Yassin DI. 1994 Coomb's (the antiglobulin) test in patients with chronic lymphocytic leukaemia. J Comm. Med. 7(1): 23-27.
8. Mohammad MA 1994. The effect of salbutamol inhalation on the forced expiratory volumes in smoker and nonsmoker patients with obstructive pulmonary disease. J. Fac. Med. Bag 36(1):133-136.
9. El-Yasin D, Mohammad MA, Nadeem AS 1994 Carboxyhemoglobin level in primary and secondary traditional iraqi "nargila" smokers. J. Comm. Med 7(2): 213-215.
10. Fora MA and Mohammad MA 2005 High frequency of suboptimal serum vitamin B12 in adults in Jordan Saudi Med J 26: 1591-1596
11. Mohamad JM, Karayyem M, Mohammad MA, Al-Alami J, Al-Hader A SERUM SEX HORMONES IN PREMENOPAUSAL WOMEN WITH CORONARY HEART DISEASE Neuroendocrinology letters 2006; 27:758-762

12. Mohamad Jaffer Mohamad, Mukhallad A Mohammad Mohamad Karayyem, Aktham Hairi and adulfatah Al Hader 2007 SERUM LEVELS OF SEX HORMONES IN MEN WITH ACUTE MYOCARDIAL INFARCTION  
*Neuro Endocrinol Lett.* 2007 Apr;28(2):182-6.
13. Al-hussain SM, Al-haidari MS; Kouri NA, El-migdadi F, Al-safar, RS, Mohammad MA. prevalence of mistreatment and justice of grading system in five health related faculties in Jordan university of science and technology. *Medical Teacher journal* 2008;30:e82-86.
14. Khalid F. Talafih, Mohamad Mousa J. Mohamad, Mukhallad A Mohammad and Zeyad J. El-Akawi Effect of Intra-venous Versus Intra-arterial Leptin Infusion on Blood Pressure And Heart Rate. *The open physiology journal* 2009; 2: 14-17.
15. MMJ Mohamad, M A Mohammad, KSH Alomari, M Karayyem, and AF Al Hader Leptin, insulin and glucose levels in menopause women during acute myocardial infarction. *Journal of medical sciences* 2009; 9: 214-218
16. Mohammad MA, Mohammad MMJ, Daradka H. Effect of black seeds (*Nigella Sativa*) on spermatogenesis and fertility of male albino rats. *Research Journal of Medicine and medical Sciences* 2009; 4:386-390.
17. Mohamad MJ Mohamad, Mukhallad A Mohammad, Khalifa SH Alomari and Mohamad Karayyem. EFFECT OF SMOKING ON LEPTIN CONCENTRATION IN NORMAL SUBJECTS AND DURING ACUTE MYOCARDIAL INFARCTION. *Medical journal of Islamic academy of sciences.* 2009; 17:75-80.
18. Mukhallad A Mohammad, Khalid Talafih, Mohamad MJ Mohamad, Mohamad Nidal Khabaz Intra-arterial infusion of leptin does not affect blood pressure in salt-loaded rabbits. *Pak J Biol* 2010; 13:761-764.
19. Hameed N Bataineh and Mukhallad Mohammad. Effect of oral administration of *Euphorbia prostrata* on the productive system of male albino rats: a histometric and biochemical study. *Comparative clinical pathology.* 2012, 21:433-439
20. Asad Zeidan, Aiad Siam, Abdulaziz Al Kaabba, Mukhallad Mohammad, Said Khatib. The ability of phosphodiesterase-5 inhibitors sildenafil and ordonafil to reverse L-NAME induced cardiac hypertrophy in the rabbit: possible role of calcineurin and p38. *Canadian Journal of Physiology and Pharmacology.* 2012,90 (9): 1247-1255
21. Mukhallad A. Mohammad, Khalid Talafih, Osama Y. Abo Al-rob, Nayef S. Gharaibeh, and Mohammed Ayesh Osmotic fragility of human erythrocytes in vitro using *Vipera lebetina* venom *Comparative clinical pathology.* 2014; 23 (2): 249-254.
22. Mukhallad A. M. Mohammad, Muhanad S. Abdelwahab , Mohamad MJ Mohamad Othman El shbool and Waleed R. Ezzat CARDIAC MYOSIN HEAVY CHAINS IN MICE TREATED WITH NG- NITRO - L- ARGININE METHYL ESTER AND THYROXINE *Comparative clinical pathology* 2014; 23 (5) 1639-1644.
23. Al-Shboul OA, Mustafa A, Mohammad M, Al-Shehabat M, Yousef A, Al-Hashimi F Effect of oxidative stress on the expression of thin filament-associated proteins in gastric smooth muscle cells. *Cell Biochem Biophys.* 2014 Sep;70(1):225-31.
24. Haytham M. Daradka & Mohaned Mohamed Abas & Mukhallad A. M. Mohammad & Mohamed Mousa Jaffar Antidiabetic effect of *Artemisia absinthium* extracts on alloxan-induced diabetic rats *Comp Clin Pathol* (2014) 23:1733–1742
25. Mukhallad Aljanabi, Said Khatib, Nayef S. Gharaibeh. Does sildenafil improve ventilatory function in asthmatic subjects? *Breathe* 2017; 13: 113–116.

26. Mukhallad A. Mohammad, Mohammad A. Alqudah, Ramzi Alhorani, Said Khatib1 & Nayef S. Gharaibeh. Ca<sup>2+</sup> sensitivity of skinned ventricular cardiac muscle and expression of cardiac myosin heavy chain isoforms in hibernating versus active frogs. *Comp Clin Pathol* 2017; 26:799–804..
27. Ramzi A. Al-horani and Mukhallad Mohammad. The contribution of noradrenergic nerves to the vasoconstrictor response during local cooling of leg and forearm skin in humans. *Gen. Physiol. Biophys.* 2018; **37**:33–40
28. Mohammad Al Qudah, Naser Alrabadi, Mahmoud Alfaqih, Mukhallad Mohammad, Ahmed Al-Dwairi. The effect of the anabolic steroid sustanon on the expression levels of neurotrophins in adult chicken gastrointestinal tract. *Comparative Clinical Pathology* 2018; 27:385–392.
29. Muhanad S. Abdelwahab, Mukhallad A. M. Mohammed, H. M. Abdelwhab, Mazin S. Abdalla Mohamed and Mansour Abdelgader Bellal. Basic Pharmacology of NG -Nitro – L – Arginine Methyl Ester. *Journal of Advances in Medical and Pharmaceutical Sciences* 2018; 19: 1-5.
30. Muhanad S. Abdelwahab, Mukhallad Am. Mohamemed, Abdelwahab Hassan Mohamed, Mansour Abdelgader Bellal and Mazin S. Abdalla Mohamed. Cardiac Myosin Heavy Chains. *Cardiology and Angiology: An International Journal* 2019; 8: 1-7.
31. Mukhallad A aljanabi, Mahmoud A Alfaqih, Anwar Mohammad A Al-Khayat and Hameed N. Bataineh. Sildenafil reverses the hypertrophy of mice right ventricle caused by hypoxia but does not reverse the changes in the myosin heavy chain isoforms. *Int J Physiol Pathophysiol Pharmacol* 2020;12(3):79-87
32. MUKHALLAD A. ALJANABI, MAHMOUD A. ALFAQIH, MARIAM KHANFAR, ZOUHAIR O. AMARIN, LINA ELSALEM, RAMI SAADEH and FAHEEM AL-MUGHALES. Leptin and the GA genotype of rs2167270 of the LEP gene increase the risk of prediabetes. *BIOMEDICAL REPORTS* accepted for publication

### **Communications and Abstracts presented in scientific meetings**

Sparrow MP, Mohammad MA, Evertt. AW 1986. Multiple isoforms of myosin in smooth muscle of pig guinea pig and toad: changes with age and with hypertrophy. *Proc XXX Congress Inter Union Physiol. Sc.* 16:143.

Sparrow MP, Mohammad MA, Evertt. AW 1986. Multiple isoforms of myosin in smooth muscle of pig guinea pig and toad: changes with age and with hypertrophy. *Eur. J Physiol.* 406: R41

Sparrow MP, Mohammad MA, Evertt. AW 1986. Multiple isoforms of myosin in smooth muscle of pig, guinea pig and toad: changes with age and with hypertrophy. *Proc. Aust Physiol. & Pharmacol Soc.* 17: 42P.

Sparrow MP, Bates G, Mohammad MA 1986 Stretch-induced hypertrophy of slow-twitch muscle: is there a limit to the potential for muscle growth? *Proc Aust Physiol & Pharmacol Soc*; 17: 41P.

Sparrow MP, Arner A, Hellstrand P, Mohammad MA, Ruegg IC 1986 isoforms of myosin in smooth muscle: in "Smooth Muscle Contraction" Satellite Symposium of the XXX Internat Cong Union Physiol Sci, Minaki, Ontario, Canada.

Mohammad MA, Sparrow MP. 1987. Isoform of myosin in smooth muscle. *Proc Aust Biochem Soc*; 19: 31

Sparrow MP, Mohammad MA, DeMarzo N, Stephens NI, 1987. Isoforms of myosin in airways smooth muscle; in "Airways '87". Satellite symposium of the 10th Internat Cong Pharmacol, Sydney.

Mohammad MA, Sparrow MP 1988. Evidence for existence of isoforms of myosin in smooth muscle. Proc Physiol & Pharmacol Soc; 9: 81P

Elbedri A, Mohammad MA, Marya RK 1997. forced expiratory test before and after exercise in nonasthmatic and asthmatic children. Preceedings of the first conference on postgraduate studies in medical sciences. p5.

Gassar ES. Mohammmad MA, Qurani YMS 1998. Pulmonary function test in patients with high spinal cord injuries. The fourth Jamahirya conference in medical sciences.

Said Y. Khatib, Mukhalid Al-Kinabi and Nahed Alawnah- Phosphodiesterase-5 inhibitor "Ordonafil" prevents myocardial hypertrophy. Journal of Molecular and Cellular Cardiology Volume 44, Issue 4, April 2008, Page 816

Said Khatib, Aiad Siam , Mukhaled Jinabi, Adnan Badwan Effect of long term administration of phosphodiesterase-5 inhibitors on L-NAME induced left ventricular hypertrophy Journal of Molecular and Cellular Cardiology 48 (2010) S1–S185

S.Y. Khatib, S.W. Eid, M.A. Mohammed The Effect Of Phosphodieaterase Inhibitor "Sildenafil" On Pulmonary Function In Healthy Subjects Am J Respir Crit Care Med 183;2011:A4502.

Mukhallad Al-janabi, Emad Ababneh, Omar F Jbarah, Aisha Gharaibeh, Asma Abo salah, Mohmmmed Sammour. Ventricle myosin heavy chain isoforms in active and hibernating cold-blooded vertebrate. The Seventh Medical Conference of Faculty of Medicine Jordan University of Science and Technology; 2012: 37.

Said Y. Khatib, Fawaz AlFawaz, Hani Lababidi, Maher Moazen, Abbas Abbas, , Mukhallad M. Mohammed Effects of Sildenafil on the Parameters of the Pulmonary Function Test (PFT) in Adult Asthmatic Patients Compared to Normal Subjects. American Journal of Respiratory and Critical Care Medicine, Meeting Abstracts. American Thoracic Society 2015 International Conference, May 15-20, 2015 – Denver.

Said Khatib and Mukhallad AlJanabi The Effects of Sildenafil, phosphodiesterase 5 inhibitor, on the Expression of  $\alpha$  and  $\beta$  Myosin Heavy Chains in Hypoxia induced Right Ventricular Hypertrophy in Mice. FASEB Volume 31, Issue 1\_supplement|01 Apr 2017. Abstract Number:843.1

Khatib SY and Aljanabi MM. Tracheal smooth muscle relaxation caused by phosphodiesterase inhibitors (Sildenafil and Ordonofil) compared with theophylline. Am J Respir Crit Med 2019;199:A2163

Mukhallad Mohammad and Said Y. Khatib. Sildenafil reverses the right ventricular hypertrophy induced by hypoxia but does not bring down the expression of MHC- $\beta$  to normal value. FASEB Journal April 2020