Manal Mohammed Alem

malem@alfaisal.edu l 055 822 1311 l Saudi l PO box 91988 l Riyadh 11643 l Saudi Arabia

**Current Position**

**Associate Professor of Clinical Pharmacology**

**Oct, 8th 2023- present**

Dept. of Pharmacology

College of Clinical Pharmacy

Imam Abdulrahman bin Faisal University

Dammam, KSA

**Dec, 8th 2022- present**

**Dean**

College of Pharmacy

Alfaisal University

Riyadh, KSA

**Qualifications**

**Nov, 22nd, 2007**

**MRCP (UK), Membership of the Royal College of Physicians**

Royal College of Physicians of Edinburgh

Edinburgh, UK

**Dec, 2nd, 2005**

**Doctor of Philosophy (Ph.D.); Clinical Pharmacology**

**(***Degree awarded unconditionally)*

Division of Cardiovascular and Medical Sciences

University of Glasgow

Glasgow, UK

**MSc. Medical Sciences; Clinical Pharmacology (***Distinction)*

**July 5th, 2001**

Division of Cardiovascular and Medical Sciences

University of Glasgow

Glasgow, UK

**King Faisal University Diploma** **(Internal Medicine) (KFUD)**

**Sept, 2000**

Dept. of Internal Medicine

King Fahd Hospital of the University

Al Khobar, KSA

**M.B.B.S.**

**Aug, 1st, 1995**

College of Medicine

King Faisal University

Dammam, KSA

**Previous positions**

**Head- Department of Pharmacology**

**Jan 1st, 2019-Jan 25th 2023**

College of Clinical Pharmacy

Imam Abdulrahman bin Faisal University

Dammam, KSA

**Vice Dean for Academic Affairs**

**Mar 10th, 2019- Dec 4th 2022**

College of Clinical Pharmacy

Imam Abdulrahman bin Faisal University

Dammam, KSA

**Assistant Professor of Clinical Pharmacology**

**Nov 17th, 2007- Sept 1st, 2018**

Dept. of Pharmacology

College of Medicine

Imam Abdulrahman bin Faisal University

(University of Dammam previously)

Dammam, KSA

**Feb 18th, 2012-Feb 6th, 2013**

**Assistant Professor of Clinical Pharmacology**

Dept. of Pharmaceutical Sciences

College of Pharmacy

Princes Nora bint Abdulrahman University

Riyadh, KSA

“**Consulting Service”**

**February 2006- March 2007**

**Honorary Senior House Officer** (Internal Medicine)

Division of Cardiovascular and Medical Sciences

Western Infirmary, Glasgow, UK

**January 2006- December 2006**

**Honorary Research Fellow**

Division of Cardiovascular and Medical Sciences

University of Glasgow, UK

**October 2001- December 2005**

**Ph.D. student**

Clinical Researcher in Cardiovascular Pharmacology

Division of Cardiovascular and Medical Sciences

Western Infirmary, Glasgow, UK

**October 2000- August 2001**

**MSc. Student**

Medical Sciences/ Clinical Pharmacology

Division of Cardiovascular and Medical Sciences

Western Infirmary, Glasgow, UK

**October 1998- September 2000**

**Resident** (Internal Medicine)

Department of Internal Medicine

King Fahd Hospital of the University

Al Khobar, KSA

**Demonstrator/ Teaching assistant**

**October 1996- October 2007**

Department of Pharmacology

College of Medicine

King Faisal University

Dammam, KSA

**Intern**

**October 1995- September 1996**

King Fahd Hospital of the University

Al Khobar, KSA

**Other Administrative Experience**

**Pharm.D. Program Director**

**Sept 18th, 2016- Dec 31st, 2017**

College of Pharmacy

Alfaisal University

**Head- Pharm.D. Curriculum Establishment Committee**

**Nov 2nd, 2015- Jan 31st, 2016**

Alfaisal University

Riyadh, Saudi Arabia

**Mar 8th, 2008- Feb 15th, 2012**

**Vice Dean for Students Affairs**

University of Dammam, KSA

**Aug 24th, 2009- Oct 22nd, 2011**

**Member of the Curriculum Committee**

College of Medicine

University of Dammam, KSA

**Sept 12th, 2009- Sept 1st, 2013**

**Member of the Pharmacy and Therapeutic Committee**

King Fahd Hospital of the University

University of Dammam, KSA

**Member of the faculty hiring committee**

Department of Pharmacology

College of medicine

University of Dammam, KSA

**Research Interests**

* My research background involves clinical studies focusing on cardiovascular risk factors. Arterial stiffness is now recognized as independent cardiovascular risk factor. It can be assessed non-invasively via the Shygmocardiography technique to derive central aortic pulse wave, central arterial blood pressure and related indices such as augmentation index, aortic pulse wave velocity, and brachial pulse wave velocity. All of these indices will give a comprehensive idea about the biological age of the arterial tree.
* Inter-related pathological processes such as endothelial dysfunction, left ventricular hypertrophy, and oxidative stress are other areas of interest that I like to investigate. These cardiovascular risk factors can be modified favorably by current pharmacological agents well established for other indications. For example; we might find one medicine that a patient is receiving for hypertension, able to reduce arterial stiffness, improve insulin sensitivity, or improve endothelial function as well.
* **Peer reviewer** for *British Journal of Obstetrics and Gynecology*

**Dec, 2005**

Science direct

* **Peer reviewer** for *Kidney and Blood Pressure Research*

**June, 25th, 2018**

KARGER open access

* **Peer reviewer** for *Clinical Pharmacology: Advances and Application*

**Oct 8th, 2018**

Dove Press

* **Peer reviewer** for *Therapeutics and Clinical Risk Management*

**Oct 8th, 2018**

Dove Press

**Oct 8th, 2018**

* **Peer reviewer** for *Vascular Health and Risk Management*

Dove Press

* **Peer reviewer** for *PLoS ONE*

**June 28th, 2020**

The Public Library of Science

* **Favored Author Program-Member**

**Feb 28th, 2020**

Dove Press

**Ongoing Research**

1. Non-pharmacological management and its relationship with quality of life in patients with Heart Failure (*data collection stage*)
2. Biological markers of oxidative stress in Saudi patients with coronary artery disease (*data collection stage*)
3. Trastuzumab associated cardiotoxicity in HER2 positive breast cancer patients

*(data analysis stage)*

**Prizes and awards**

1. Prince Mohammad Bin Fahd Bin Abdulaziz Prize for Scientific Excellence.

**The fourth festival-1989**.

1. Prince Mohammad Bin Fahd Bin Abdulaziz Prize for Scientific Excellence.

**The tenth festival-1995**.

**Teaching Experience**

* Involved in teaching lectures for basic, systemic and clinical pharmacology to medical students. Clinical case discussion were used in clinical pharmacology courses.
* Involved in teaching pharmacology to other health care disciplines, such as; Pharmacy, Nursing, Applied medical sciences such as; physiotherapy and respiratory therapy.
* Participated in teaching pharmacology to postgraduate nursing students, such as; higher diploma in midwifery, intensive care, and psychopharmacology.

**Publications**

* Trained facilitator in problem based learning sessions to medical students.

**Journal articles**

1. Alanood A. Howsawi and **Manal M. Alem**. Glycemic Variability in Patients with Type 2 Diabetes Mellitus: Clinical Implications and Pharmacological Considerations. *Manuscript submitted for publication*.
2. Amal A Alyami, **Manal M Alem**, Shereen R Dorgham, Sahar A Alshamandy. Trends of Over-the-Counter and Prescribed Medication Use During Pregnancy: A Cross-Sectional Study. *Journal of Multidisciplinary Healthcare* 2023: :16 3847–3856. doi: [10.2147/JMDH.S421087](https://doi.org/10.2147/jmdh.s421087)
3. Doaa R. Adam and **Manal M. Alem**. Erectile Dysfunction: Pharmacological Pathways with Understudied Potentials**.** *Biomedicines* 2023. 11 (1), 46, https://doi.org/10.3390/biomedicines11010046
4. **Manal M. Alem**. Effect of low dose allopurinol on glycemic control and glycemic variability in patients with type 2 diabetes mellitus: A cross-sectional study. *Heliyon* 2022. Nov 9;8 (11):e11549. doi:10.1016/j.heliyon.2022.e11549
5. **Manal M. Alem**, Abdullah M. Alshehri, Muruj A. Alshehri, Mohammed H. Alelaiw, Ali A. Almaa, and Rami Bustami (**2021**).[Red Blood Cell Distribution Width (RDW) in Chronic Heart Failure: Does it have a Prognostic Value in Every Population?](https://www.ejgm.co.uk/article/red-blood-cell-distribution-width-rdw-in-chronic-heart-failure-does-it-have-a-prognostic-value-in-11400) *Electronic Journal of General Medicine* 2021: 19 (1): em338. [doi.org/10.29333/ejgm/11400](https://doi.org/10.29333/ejgm/11400)
6. **Alem, M**. (**2021**). Clinical, echocardiographic, and therapeutic characteristics of heart failure in patients with preserved, mid-range, and reduced ejection fraction: Future directions.*International Journal of General Medicine*. 2021: 14 459- 467. [doi.org/10.2147/IJGM.S288733](https://doi.org/10.2147/IJGM.S288733)
7. **Alem, M**. (**2020**). Predictors of Mortality in Patients with Chronic Heart Failure: Is hyponatremia a useful clinical biomarker?*International Journal of General Medicine*. 2020:13 407–417. doi.org/10.2147/IJGM.S260256
8. **Alem, M**., and Alshehri, A. (**2020**). Inter-relationships between left ventricular mass, geometry and arterial stiffness in patients with chronic heart failure. *Journal of International Medical Research 48(4) 1–15. doi.org/10.1177%2F0300060520903623*
9. **Manal Alem,** Sarah R. Aldosari, Alhassna A. Alkahmous, Adam S. Obad, Nagy M. Fagir, Bandar S. Al-Ghamdi (**2019**). Effect of long term allopurinol therapy on left ventricular mass in patients with ischemic heart disease; a cross-sectional study. *Vascular Health and Risk Management* 2019:15 539–550. doi: 10.2147/VHRM. S226009
10. **Alem, M.** (**2019**). Endothelial dysfunction in chronic heart failure; assessment, findings, significance, and potential therapeutic targets. *International Journal of Molecular Sciences.* 20 (13); 3198; doi:10.3390/ijms20133198
11. **Alem, M.,** Al Shehri, A., Cahusac, P., and Walters, M. (**2018**). Effect of xanthine oxidase inhibition on arterial stiffness in patients with chronic heart failure*. Clinical Medicine Insights: Cardiology* 12: 1-10. DOI: 10.1177/1179546818779584
12. **Alem, M**. (**2018**). Allopurinol and Endothelial function: A Systematic Review with Meta-Analysis of Randomized Controlled Trials. *Cardiovascular Therapeutics.* Aug; 36 (4); e12432. DOI: 10.1111/1755-5922.12432
13. **Alem, M**. (**2018**). Biological markers of oxidative stress and allopurinol therapy; a meta-analysis of randomized controlled trials. *Journal of Pharmacology and Therapeutic Research 2(1):7-16*
14. **Alem, M. M**. (**2017**). Allopurinol and arterial stiffness-what do we know so far? *Journal of Pharmacology and Therapeutic Research* 1(1): 1
15. **Alem, M**., Milia, P., Muir, S., Lees, K., and Walters, M. (**2008**). Comparison of the effects of diuretics on blood pressure and arterial stiffness in patients with stroke. *Journal of stroke and cerebrovascular disease.* Nov; 17(6): 373-377
16. **Manal Alem** and Henry Elliott. (**2007**). Angiotensin-II receptor blockers: their place in hypertension. *Prescriber.* Aug; 18 (15): 24-29
17. **Alem, M**., Cleland, S., Nazir, F., Small, M., and Walters, M. (**2007**). Inhibition of nitric oxide increases arterial stiffness in type 2 diabetic patients. *Diabetic Medicine.* Jul; 24 (7): 803-804
18. Nazir, F., **Alem, M**., Small, M., Connell, J., Walters, M., and Cleland, S. (**2006**). Blunted response to systemic nitric oxide synthase inhibition in the cerebral circulation of patients with type 2 diabetes. *Diabetic Medicine*. 2006 April; 23 (4): 398-402
19. Milia, P., Muir, S., **Alem, M.,** Lees, K., and Walters, M. (**2006**). Comparison of the effect of diuretics on carotid blood flow in stroke patients. *Journal of Cardiovascular Pharmacology* 2006 Mar; 47 (3):446-469
20. **Manal Alem** and Henry Elliott. (**2004**). AIIAS: their place in hypertension, nephropathy and heart failure. *Prescriber*. 2004 Jul; 15 (14): 14-21

**Conference proceedings**

1. Alanood Howsawi, **Manal Alem** (**2023**). Glycemic variability in patients with type 2 diabetes mellitus: clinical implications and pharmacological considerations. Journal of Hypertension, Volume 41, Supplement 3, June 2023, pp. e151-e151(1). **Accepted as a poster presentation in 32nd European Society of Hypertension, Milan, Italy, June 23rd-26th, 2023.**
2. **Manal Alem** (**2023**). Effect of low dose allopurinol on glycemic control and glycemic variability in patients with type 2 diabetes mellitus: A cross-sectional study. Journal of Hypertension, Volume 41, Supplement 3, June 2023. **Accepted as a poster presentation in 32nd European Society of Hypertension, Milan, Italy, June 23rd-26th, 2023.**
3. **Manal Alem,** Sarah R. Aldosari, Alhassna A. Alkahmous, Adam S. Obad, Nagy M. Fagir, Bandar S. Al-Ghamdi (**2020**). Effect of long term allopurinol therapy on left ventricular mass in patients with ischemic heart disease; a cross-sectional study. **Accepted as a poster presentation in European Society of Hypertension-International Society of Hypertension meeting, Glasgow, UK, April 11-14th, 2021**
4. **Alem, M**., Alshehri, A., Cahusac, P., and Walters, M. (2015). Effect of xanthine oxidase inhibition on arterial stiffness in patients with chronic heart failure. *Journal of Hypertension*. Jun; 33 Suppl 1: e47. 25th **European Meeting on Hypertension & Cardiovascular Protection**. **Milan, Italy, June 12th-15th 2015**
5. **Alem, M**., Milia, P., Muir, S., Lees, K., and Walters, M. (2005). Comparison of the effects of diuretics on blood pressure and arterial stiffness in stroke patients. *Cerebrovascular disease.* Vol. 19, Suppl. 2. **14th European Stroke Conference**, **Bologna, Italy, May 25th- 28th 2005.**
6. **Alem, M**., Milia, P., Muir, S., Lees, K., and Walters, M. (2005). Comparison of the effects of diuretics on blood pressure and arterial stiffness in stroke patients. **32nd British Hypertension and Vascular Research Group Meeting, Gleneagles, Scotland, UK, January 2005**
7. **Alem, M**., Nazir, F., Walters, M., Elliott, H., Lees, K., Connell, J., and Cleland, S. (2004). Arterial stiffness in type 2 diabetes: altered pattern of response to systemic NOS inhibition. *J Hypertension*. Vol 22, Suppl. 2: S194-S195. **14th European Society of Hypertension Meeting. Paris, France., June 13th-17th 2004**
8. **Alem, M**., Nazir, F., Walters, M., Elliott, H., Lees, K., Connell, J., and Cleland, S. (2004). Arterial stiffness in type 2 diabetes: altered pattern of response to systemic NOS inhibition. *Diabetes 2004 53 Supplement 2 (Poster 697)*. **64th American Diabetes Association Meeting. Orlando, Florida, June 4th-8th 2004**
9. **Alem, M**., Bain, C., Elliott, HL., and Walters MR. (2004). The effect of hormonal replacement therapy (HRT) on arterial stiffness in postmenopausal women. **Artery 4th, 4th European Conference of the Association for Research into Arterial Structure and Physiology, London, UK. Oct 2004**

**PhD. thesis**

**“Arterial stiffness in health and disease”.** A thesis submitted for the degree of Doctor of Philosophy in the faculty of medicine of the University of Glasgow, UK. May 2005.

**Pro Quest Number 10806051**

<https://search.proquest.com/docview/2023742390?pq-origsite=gscholar>

**Memberships**

1. Member of **the** **European society of Hypertension**

June, 2009- present

1. Member of **the Artery society.** The association for research into arterial structure and physiology

January 2009- present

1. Member of **the Royal College of Physicians of Edinburgh**

Edinburgh, UK

February 2008- present