# CURRICULUM VITAE

## Ahmad Ahmeda, MB ChB, PGDip T&LHEd, PhD

## 1. PERSONAL DATA


**First name**: Ahmad.
**Surname**: Ahmeda.
**Gender**: Male.
**Nationality:** Irish.
**Residency Status:** UAE Golden Visa Holder (10 Years)
**Current Address:** Al-Jurf, Ajman, United Arab Emirates.
**Permanent address:** 50 Leslies Arch, Old Quarter,
Ballincollig, Cork, Ireland.
**Phone Numbers:** 00971503404225
**Emails:** aahmeda@sharjah.ac.ae


## 2. ACADEMIC/PROFESSIONAL PARTICULARS

### (A) Field of Specialization:

Medicine, Physiology

### (B) Academic Qualifications:

| Year | Degrees/Certificates | Institution |
|---|---|---|
| **2012 – 2014** | Postgraduate Diploma in Advanced Audiology (PGDipAA) | University College Cork, Cork, **Ireland** (UCC) |
| **2011 – 2013** | Postgraduate Diploma in Teaching and Learning in Higher Education (PGDipT&LHEd) | University College Cork, Cork, **Ireland**. |
| **2003 – 2007** | Doctor of Philosophy (PhD) in Medicine (Medical Physiology) | University College Cork, Cork, **Ireland**. |
| **1992 – 1999** | Bachelor of Medicine and Surgery (MB ChB) | Al-Arab Medical University (Currently, University of Benghazi), Benghazi- **Libya**. |

## (C) Membership of Professional Bodies:

- The Physiological Society, the UK and Ireland, Affiliated member, 09/2003.
- Scandinavian Physiological Society, ordinary member, 01/2009
- Libyan General Medical Council, Full Member, 05/1999
- Associate Member of the Scandinavian Society of Clinical Physiology and Nuclear Medicine, Associated Member, 01/2009.
- Associate Member of the Swedish Society of Clinical Physiology, Associated Member, 01/2009.

## (D) Language Proficiency:

- English (fluent)
- Arabic (fluent)

# 3. CAREER DETAILS:

## (A) Academic Positions Held:

| Year | Job Title | Department/School | University |
|---|---|---|---|
| August 2025 – up-to-date | Associate Professor of Physiology. | Basic Medical Sciences, College of Medicine. | University of Sharjah, Sharjah, **UAE** |
| August 2020 – August 2025 | Associate Professor of Physiology. | Basic Medical Sciences, College of Medicine. | Ajman University, Ajman, **UAE** |
| 2019 – May 2020 | Associate Professor of Physiology. | Basic Medical Sciences, College of Medicine. | Qatar University. Doha, **Qatar**. |
| May 2018 – August 2019 | Associate Professor of Medical/ Clinical Physiology. | Physiology, College of Medicine. | King Saud University (KSU), **Saudi Arabia.** |
| 2014 – May 2018 | Assistant Professor of Medical/ Clinical Physiology. | Physiology, College of Medicine. | King Saud University (KSU), **Saudi Arabia.** |
| 2008 - 2014 | College Lecturer | Physiology, College of Medicine. | University College Cork, **Ireland.** |
| 2006 – 2008 | Post-Doctoral Research Fellow/ Acting lecturer. | Physiology, College of Medicine. | University College Cork, **Ireland.** |
| 2003 – 2006 | Senior Clinical Medical Demonstrator, PhD Student. | Physiology, College of Medicine. | University College Cork, **Ireland.** |

- Extensive *in vivo* research experience (> 10 years) in Renal Physiology.
- Several years of teaching experience at undergraduate and postgraduate levels (> 15 years).

- Experience in training and supervising undergraduate and postgraduate students.
- Experience in publishing in high-impact international journals.
- Experience in giving oral presentations at international scientific meetings.
- Leadership experience at departmental, college and university levels.
- Experience in applying for and awarded grants.

## (B) Professional/Industrial Positions Held:

| Year | Job Title | Department/School | University |
|---|---|---|---|
| 2000 – 2002 | Senior House Officer/Registrar. | Al-Jalla Accident and Emergency Teaching Hospital. | Benghazi, **Libya.** |
| 1999 – 2000 | Internship. | (Medicine, Surgery, Paediatrics, Obstetrics & Gynaecology and Dermatology) | Benghazi, **Libya.** |

## (C) Administrative Positions Held:

- **September 2023 – present:** Member of the Timetabling Committee, College of Medicine (Student Affairs), Ajman University, Ajman, United Arab Emirates.
- **January 2022 – present:** Chairman of Students' Life and Academic Advising Committee, College of Medicine, Ajman University, Ajman, United Arab Emirates.
- **January 2022 – present:** Member of the Research Committee, College of Medicine, Ajman University, Ajman, United Arab Emirates.
- **August 2020 – January 2022:** Member of the Assessment Committee, College of Medicine, Ajman University, Ajman, United Arab Emirates.
- **August 2020 – January 2022:** Chairman of the Curriculum Committee, College of Medicine, Ajman University, Ajman, United Arab Emirates.
- **August 2020 – present:** Block Coordinator for the Neuroscience Block, College of Medicine, Ajman University, Ajman, United Arab Emirates.
- **August 2020 – April 2023:** Block Coordinator for the Special Senses Block, College of Medicine, Ajman University, Ajman, United Arab Emirates.
- **September 2022 – present:** Block Coordinator for the Endocrine and Reproductive Block, College of Medicine, Ajman University, Ajman, United Arab Emirates.
- **September 2023 – present:** Block Coordinator for the Introduction to the University Life Course (AUL100), College of Medicine, Ajman University, Ajman, United Arab Emirates.
- **2017-2019:** Chairman of the Postgraduate Committee and Supervisory Committee, Dept. of Physiology, College of Medicine, KSU, Saudi Arabia.
- **2014-2016**: Academic Adviser for 1$^{st}$ and 2$^{nd}$-year medical students (College of Medicine, KSU).

- **2014- 2019:** Permanent member representing the Basic Medical Sciences Departments in the Assessment and Evaluation Unit, College of Medicine, King Saud University.
- **2008-2014:** Departmental Representative (Outreach Representative), University College Cork, Ireland.

## 4. TEACHING:

### (A) Summary of Courses Taught:

## CURRENT TEACHING AT AJMAN UNIVERSITY, UNITED ARAB EMIRATES (August 2020 – August 2025):

During my appointment at Ajman University, I am one of the principal professors who delivered the physiology lectures for the following blocks and running the associated laboratory sessions:

- **Anatomy and Physiology I (APY231)** for first-year medical students.
- **Anatomy and Physiology Lab (APL241)** for first-year medical students.
- **Anatomy and Physiology II (APY231)** for second-year medical students.
- **Anatomy and Physiology Lab II (APL241)** for second-year medical students.
- **Renal Block (REN123)** for second-year medical students.
- **Blood and Cardiovascular Block (CVB121)** for second-year medical students.
- **Musculoskeletal Block (MSK112)** for first-year medical students.
- **Gastrointestinal Block (GIT113)** for first-year medical students.
- **Endocrine and Reproductive Block (END231)** for second-year medical students.
- **Pathology of the Disease Block (POD232)** for second-year medical students.
- **Head & Neck and Integumentary System (HNS241)** for second-year medical students.
- **Neurophysiology and Neuroscience Block (NEU242)** for second-year medical students.
- **Special Senses Block (SPS243)** for second-year medical students.
- **Endocrine Block (END353)** for third-year medical students.
- **Reproductive & Beast Block (REP354)** for third-year medical students.
- **Cardiovascular Block (CVS361)** for third-year medical students.
- **Renal Block (REN363)** for third-year medical students.
- **Hematology/Oncology Block (HEM364)** for third-year medical students.

My medical expertise is utilised mostly during Problem-Based Learning (PBL), as the medical school at Ajman University is based on PBL and self-directed learning.

I facilitate and be the principal tutor for two PBL sessions every week (two and a half hours each). The first session is delivered on Sunday morning and the second session is delivered on Thursday morning.

I am also involved in delivering the **T**eam-**B**ased **L**earning (**TBL**) sessions every alternative week.

## PREVIOUS TEACHING AT QATAR UNIVERSITY, QATAR (2019 - 2020):

During my appointment at Qatar University, I was involved in delivering the resource sessions (which are equivalent to the ordinary lecture sessions in the direct stream medical program) for the following units and their associated laboratory sessions using the Lab Tutor and PhysioEx in most of the laboratory sessions:

- **Reproductive Physiology Unit** for third-year Medical Students.
- **Renal physiology Unit** for third-year Medical Students.
- **Cardiovascular Physiology Unit** for second-year medical students.
- **Blood Physiology Unit** for second-year medical students.
- **Body Defense Unit** for second-year medical students.
- **Gene to Community Unit** for second-year medical students.
- **Human Structure and Function I & II** for first-year medical, Dental, Pharmacy and Biomedical sciences programs.
- **Neurophysiology and Neuroscience Block** for fourth-year medical students (the Cognitive part of Neurophysiology).

My medical expertise was utilised mostly during the PBL teaching as the medical school at Qatar University is also based on PBL and self-directed learning.
I facilitated and tutored two PBL sessions a week (two and half hours for each session), the first session delivered on Sunday morning and the second session delivered on Thursday morning.

I was also involved in delivering the **TBL** sessions (every Sunday for 1 hour).

## PREVIOUS TEACHING AT KING SAUD UNIVERSITY, KSA (2014 - 2019):

During my appointment at King Saud University, I was involved in delivering the physiology materials for the following blocks and any associated laboratory sessions:

- **Reproductive Block** for Medical Students
- **Renal Block** for Medical, Dental, and Pharmacy Undergraduate Students.
- **Foundation Block** for Medical Undergraduate Students.

- **Neurophysiology Block** for Medical Undergraduate Students (The Sensory Components of the Nervous System).
- **Renal Physiology** Course for Master's Program.
- **Advanced Blood** Course for Master's Program.
- **Advanced and Basic Cardiovascular System** Course for Master's Program.
- **Experimental Physiology** Course for Master's Program.
- **General Physiology** Course for Master's Program (Preparatory Course)
- **Advanced Renal Physiology** for Dental Postgraduate Students (Saudi Board Students)
- **Physiology of the Cardiovascular** system to 1st-year medical students and pharmacy students.
- **CMED 305, Epidemiology** Course designed for the third year of medicine to conduct research.

Again, my medical expertise was also utilised during the PBL Learning teaching as the medical school at King Saud University is based on PBL and self-directed learning (Hybrid Program).
I facilitated and tutored two PBL sessions weekly (two and a half hours per session). The first session was delivered on Sunday and the second on Thursday.

I used to cover a weekly clinical session in King Abdulaziz and King Khalid Teaching Hospitals (Respiratory and ECG Clinics, Normal and Exercise testing, installing Holter monitors)

## PREVIOUS TEACHING AT UNIVERSITY COLLEGE CORK, IRELAND (2008 - 2014):

During my appointment at University College Cork, I was involved in delivering the physiology materials for the Graduate Entry to Medicine Program (an integrated Program that used PBL, SDL and signposts sessions as primary tools of learning), and I also delivered associated laboratory sessions for the same program. I contributed to teaching the Direct Stream Entry to Medicine Program while I delivered the physiology materials on the kidney and CVS.
Some modules that I was involved in during my work at UCC are as follows:

- GM1001, GM1002, GM1003 (**Fundamentals of Medicine year 1**)
- GM2001 (**Fundamentals of Medicine year 2**)
- FM2002 (**Bone Metabolism, Renal Mechanisms of Homeostasis and Associated Anatomy**)
- PL2034 (**Physiology for Dental Students**)
- PL3023 (**Renal Physiology**)
- PL3006 (**Library Project**)
- PL4004 (**Research Project**)
- CP 1002 (**Clinical Skills and Practice for First-year Medical Students**)
- CP2001 (**Clinical Skills and Practice for Second-year Medical Students**)

The PBL sessions were shorter at UCC, and I used to facilitate a 1-hour session twice weekly.

The most exciting teaching method at UCC was running the large tutorial group in clinical skills and practice, and I used to deliver the materials related to applied anatomy and physical examination.

We used to run sessions in the UCC's simulation lab, and role-playing was an essential teaching method.

## (B) Participation in Academic Accreditation:

- I supported the college and the university in the accreditation processes by timely filling the teaching course files for all blocks I taught (Ajman University, 2020, 2021, 2022, 2023, and 2024)

- I was involved in the WASC Senior College and University Commission (WSCUC) visit to Ajman University concerning its accreditation on November 14-16, 2023. I provided information to the accreditation body and prepared some documents about the college. I also worked closely with students to ensure they would participate in the accreditation visit.

- I was involved in the renewal of the accreditation of the College of Medicine, King Saud University (2018 - 2025), by the National Commission for Academic Accreditation and Assessment (NCAAA). I had a significant role in collecting the data and KPI for our department and filing the essential documents and forms.

## (C) Research Students Supervised/Trained:

Since my appointment, I have supervised post-graduate students in laboratory research at M.Sc. and MD/PhD levels.

I have supervised the laboratory projects for all my M.Sc. and MD/PhD students, and they are as follows:

1) The impact of Reactive Oxygen Species (ROS) & NADPH Oxidase on the Regulation of Renal Haemodynamics: the Role of High Salt Diet, 2008-2012, by Dr Hayder Shabana for Doctorate Degree.

2) Effect of oxidative stress on tubular function, 2009-2013, by Ms Eimear Ferguson for Master's Degree.

3) Interaction between the Renin-Angiotensin system and reactive oxygen species, 2010-2012, by Ms Fiona O'Connor, for Master's Degree.

4) Effects of Angiotensin 1-7 on Renal Haemodynamics, 2011-2013, by Dr Wafaa Osman, for Doctorate Degree.

5) Investigating the activities and expression of the enzymes that generate oxidative stress in the rat kidney and its relationship with salt intake, 2012-2013, by Dr Nura Benghezzi, for Master's Degree.

| Student | MD/PhD | MSc | Year | Institution |
|---|---|---|---|---|
| Mr Hayder Shabana | ✓ | | 2008-2013 | University College Cork, IE |
| Mrs Wafaa Osman | ✓ | | 2011-2014 | University College Cork, IE |
| Ms Fiona O'Connor | | ✓ | 2010-2012 | University College Cork, IE |
| Mrs Nura Benghezzi | | ✓ | 2012-2013 | University College Cork, IE |
| Ms Eimear Ferguson | | ✓ | 2009-2012 | University College Cork, IE |

Three undergraduate epidemiological research studies were conducted at KSU to assess school students' awareness in national and international schools in Riyadh about the benefits of drinking water, the appropriate amount that individuals should consume, and its relation to BMI and academic performance. A similar idea was used to assess the knowledge, attitude and practice of the school students towards the management of diabetic complications (Hypo and Hyper-glycemia)

Another research conducted at KSU to measure the prevalence of sleep deprivation among the different year groups of our medical students, including male and female, investigates its relationship with the student's academic performance and GPA grades.

In UCC: Most of my undergraduate teaching was to 1st and 2nd years of the Graduate Entry to Medicine (GEM) program and 3rd and 4th years of the Physiology B.Sc. (Hons.) degree programme offered by the Department.
My undergraduate teaching is derived from my research interests. 3rd-year students assigned to me for their library project (PL3006) must write a report on a research article to help develop their understanding of how laboratory research is performed. Similarly, in the Experimental Physiology module, I introduced the class to some of the research techniques used in my laboratory. Students assigned to me for their laboratory project (PL4004) spend 12 weeks in an active research laboratory where they learn advanced research techniques and develop skills in experiment design, critical analysis, report writing and oral presentation of results. Since my appointment in 2008, fifteen 4$^{th}$-year students have conducted their research projects in my laboratory, seven under my close supervision.

## (D) Participation in Thesis and Oral Examination Committees

I was the sole external examiner for the following postgraduate thesis. Also, I acted as Internal Examiner and Chair of the Examination Board for four PhD students who completed a project at UCC and KSU. I also served as an Internal Examiner for two MSc students who completed a research project under my supervision /co-supervision.

- Mrs. Fatma Rageb Imhemed 2018. Evaluation of Pulmonary Function in Diabetes Mellitus in Benghazi, University of Benghazi, Libya.

- Mr Matthew Amoni (2017). The effects of magnesium treatment on short-term changes in heart rate variability, cardiac ventricular function and lipid profile in streptozotocin-induced diabetic rats. University of Cape Town, South Africa.

- Mrs Fatma Alatrag (2016). Effects of $Mg^{2+}$ pretreatment and the modulation of Mg2+-sensitive cardiac ion channels on Ca2+paradox phenomenon in the heart. University of Cape Town, South Africa.

- Master in Physiology thesis: Dr. Hora Bin Abdulrehman: Association of HBA1C with Lung Functions and Cognitive Function in Type 2 diabetic patients. College of Medicine, King Saud University, Riyadh, Saudi Arabia, In progress 2017-2019.

At KSU, I was one of the prominent panel members who assessed the student's ability to deliver the research paper bi-weekly (Journal Club session).

I acted as Internal Examiner and Chair of the Examination Board for a PhD student who completed a project in UCC and served as Internal Examiner for two M.Sc. students who performed a research project under my supervision /co-supervision.

At KSU, I was chairing the examination board for 3 PhD students. I selected the external examiners and organised the PhD examination process for all three students.

## (E) Training:

- December 2004, LAST Course for Animal Handling, Animal Experimentation and Ethics, University College Cork and Biological Service Unit in Cork, Ireland.

- June 2008, Tabs Theatre Co, Communication skills course and time management, Cork-Ireland.

- August 2008, Problem Based Medical Education Training Course, Brookfield medical building, University College Cork, Ireland.

- October 2008, Workshop about how to write Extended Matching Questions (EMQs), Brookfield medical building, University College Cork, Ireland.

- March 2009, Microsoft office training course, computer centre, University College Cork, Ireland.

- January 2010, Training and Support for Research Supervisors, Brookfield medical building, University College Cork, Ireland.

- January 2012, Endnote Training Course, Research Skills Teaching Room, Boole Library, University College Cork, Ireland.

- November 2012, attended continuing professional development course focused on The Selection, Verification and Evaluation of Digital Signal Processing (DSP) Hearing Aids for Infants, Department of Speech and Hearing Sciences, University College Cork, Ireland.

- December 2012, attended continuing professional development course focused on Electrophysiological assessments of Infants Referred from the Universal Neonatal Hearing Screening Program, Department of Speech and Hearing Sciences, University College Cork, Ireland.

- March 2013, attended a training course on Identifying and Responding to Students in Distress, Department of Student Counseling and Development, University College Cork, Ireland.

- 18th of September 2014, Seminar and Hands-on workshop on Mastering the Art of Research, College of Medicine, King Saud University, Riyadh, KSA.

- 5th of February 2015, Hands-on workshop 1 on Qualitative Research Methods (How to conduct an effective interview?), College of Medicine, King Saud University, Riyadh, KSA.

- 9th of February 2015, Hands-on workshop 2 on Qualitative Research Methods (Using content analysis in qualitative study e.g. CAQDAS), College of Medicine, King Saud University, Riyadh, KSA.

- 28th and 29th of October 2015, Hands-on training workshop on Becoming a Small Group Facilitator, College of Medicine, King Saud University, Riyadh, KSA.
- 9th of April 2016, How to write a research proposal workshop. College of Medicine, King Saud University, Riyadh, KSA.

- 11th of April 2016, advancing qualitative research methods in health informatics workshop. College of Medicine, King Saud University, Riyadh, KSA.

- 16th of April 2016, Management of patient safety events; from manual to automated approach workshop, College of Medicine, King Saud University, Riyadh, KSA.

- 13th of February 2017, SaudiMed Framework Workshop, Department of Medical Education, College of Medicine, KSU, Riyadh, KSA.

- 20th of February 2017, Hands-on Workshop on Assessment and Blueprinting, Dept. of Medical Education, College of Medicine, KSU, Riyadh, KSA.

- 16th of November 2017, workshop on using PFT in Health and Disease, College of Medicine, King Abdul-Aziz Hospital, Riyadh, KSA.

- 30th of November 2017, research workshop on “Sampling Technique” in Health Sciences Research Centre. Princess Nourah bint Abdulrahman University, Riyadh, KSA.

- 17th of December 2017, research workshop on “Sample Size Calculation” in Health Sciences Research Centre. Princess Nourah bint Abdulrahman University, Riyadh, KSA.

- 3rd of October 2018. The certificate was awarded from the deanship of skills development on completion of a workshop about the advances in medical education technology. King Saud University, Riyadh, KSA.

- 16th and 17th of October 2018. Certificate awarded from the deanship of skills development on completing a program in achieving academic accreditation standards. King Saud University, Riyadh, KSA.

- 4th of September 2019, Hands-on workshop on Problem-Based Learning & Orientation to Medical Curriculum, College of Medicine, Qatar University, Doha, Qatar.

- 17th of September 2019, Orientation Seminar for New Faculty: Teaching First Year Students Effectively, Centre for Excellence in Teaching and Learning, Qatar University, Doha, Qatar.

- 18th of September 2019, Hands-on workshop on Using ExamSoft in Student Assessment, College of Medicine, Qatar University, Doha, Qatar.

- 25th of September 2019, Hands-on workshop on Maximizing the Use of IDEAL Bank, College of Medicine, Qatar University, Doha, Qatar.

- 2nd of October 2019, Hands-on workshop on the Role of Portfolios in Learning and Assessment, College of Medicine, Qatar University, Doha, Qatar.

- 9th of October 2019, Hands-on workshop on the Role of Concept Mapping in PBL, College of Medicine, Qatar University, Doha, Qatar.

- 16th of October 2019, Hands-on workshop on Writing Effective MCQs, College of Medicine, Qatar University, Doha, Qatar.

- 23rd of October 2019, Hands-on workshop on Student Mentoring at College of Medicine, College of Medicine, Qatar University, Doha, Qatar.

- 19th of November 2019, Hand-on workshop on Writing and Mapping Learning Outcomes, College of Medicine, Qatar University, Doha, Qatar.

- 10th October 2020, Attended Faculty Development Workshop on "Problem-Based Learning", organised by the College of Medicine, Ajman University and College of Medicine, Gulf Medical University, Ajman, UAE.

- On the 12th and 21st of January 2021, I completed a 2-day workshop on "How to Write Better SSRs from the Perspective of a Reviewer” held at the OIPE, Ajman University, Ajman, UAE.

- On the 1st of October 2021, I attended the activity entitled MBRU Medical Education Symposium 2021 organised by the Mohammed Bin Rashid University of Medicine and Health Sciences (MBRU), Dubai, UAE.

- 15th September 2021, Hands-on workshop on Constructing a High-Quality Course Syllabus, Clicks Centre for Learning Innovations and Customised Knowledge Solution, UAE.

- On the 24th of November 2021, I received a certificate for completing the Advanced Clinical Educator (ACE) Workshop – Essentials of Clinical Education from Mohammed Bin Rashed University for Medicine and Health Sciences (MBRU), Dubai, United Arab University.

- On the 18th of January 2023, I attended a webinar titled "Constructing a High-Quality Course Syllabus" conducted by Clicks Centre for Learning Innovations and Customised Knowledge Solution, UAE.

- On the 22nd of August 2023, I was awarded a certificate for completing the Student Academic Advising Workshop conducted by the Students Success Center, Ajman University, Ajman, UAE.

- On the 3rd of November, 2023, I completed a "Team-Based Learning: A Proven Approach to Active Learning" workshop in the Teaching and Learning Center at Ajman University, Ajman, UAE.

- On the 11th of January 2024, I received a certificate for completing the Academic Support and Advising Workshop conducted by the Student Success Center, Ajman University, Ajman, UAE.

- On the 17th of January 2024, I completed a "Gamification in Moodle" workshop in the Teaching and Learning Center at Ajman University, Ajman, UAE.

- On the 15th of February 2024, I attended the In-house webinar titled "AI in Teaching & Learning" conducted by Clicks Centre for Learning Innovations and Customised Knowledge Solution, UAE.

- On August 21st, 2024, I completed a workshop titled "Syllogistic Reasoning in Medical Education", delivered by Dr. Gabriel Andrade, organised by the College of Medicine, Ajman University, Ajman, UAE.

- On August 22nd, 2024, I completed a workshop titled "Exam Soft Assessments - Create, Deliver, and Analyse", delivered by Dr Nisha Kumari and Dr Lisha John, organised by the College of Medicine, Ajman University, Ajman, UAE.

- **Teaching development and excellence:** I completed the Postgraduate Diploma in Teaching and Learning in Higher Education programme from UCC. This programme gave me experience with different teaching methods and taught me how to align my teaching with international standards.

# 5. RESEARCH:

## (A) Research Interests:

During my PhD studies, postdoctoral research fellowship and collaborations with the Department of Biochemistry all stimulated my interest in the importance of oxidative stress in determining renal and cardiovascular diseases. My goal was to pursue these lines of research as my career progressed. That would be extended to acute and chronic renal failure, serious problems resulting in damage or disturbances in the renal microvasculature and may frequently contribute to hypertension, oedema and heart failure.

Since my appointment at UCC, I have started to establish my research theme, and that was successfully done when I fitted myself into the renal Physiology research team. Professor Edward Johns and I worked independently as well as collaborated in many ways to develop the physiology lab, including supervising postgraduate students.

Since 2008, I have supervised two MD students, who were funded privately, and co-supervised a research MSc funded by an HRB grant, two MSc students, one of them privately funded, and the other holds an international scholarship. The cumulative work of these students, part of which has been published in the past years.

Examples of some Research investigations that I am interested in:

1) Oxidative stress and control of renal haemodynamics: In this study, we evaluated the contribution of reactive oxygen species (ROS) in regulating blood flow in the renal cortex and medulla normally and in a genetic rat model of hypertension. That was done by determining the effects of a SOD mimetic and inhibitor given locally into the kidney to reduce and increase ROS. The data was presented, and an abstract was published as a full original article at the main Physiological Society Meeting in Cork.

2) Examining Nitric Oxide's role in the neural control of intra-renal haemodynamics in anaesthetised normotensive and stroke-prone spontaneously hypertensive rats: In this groups, we evaluated the contribution of nitric oxide in the management of regional kidney perfusion in response to renal nerve stimulation in normotensive and hypertensive states. This was done by determining the effect of NOS inhibitors given locally into the kidney to block NO production with and without renal nerve stimulation (RNS). The findings of this research were presented and published as an abstract at the Physiological Society meeting.

3) Studied the influence of superoxide anion in the neural control of intrarenal haemodynamics of anaesthetised normotensive and hypertensive rats: This study tested whether superoxide anion might modulate renal sympathetic nerve (RSN)-induced reductions in renal cortical and medullary blood perfusion normally and in the hypertensive state. This was done by determining the effect of Tempol (Superoxide dismutase, SOD, mimetic) given locally into the kidney on the

vascular responses to RNS. The data and results were presented in the physiological society meeting.

4) The regulation of renal haemodynamics by reactive oxygen species: a direct or indirect action via nitric oxide? This study investigated the impact of increased oxidative stress on the renal vasculature in normal and high-salt rats. This was done by measuring the perfusion in the cortex and medulla, also; in this study, we evaluated whether the reduction in the cortical blood perfusion (CBP) and medullary (MBP) is due to the direct action of superoxide anions on renal blood vessels or indirectly by limiting the NO availability. This research was presented and published at the physiological society meeting and the transitional health conference.

5) Consequences of blocking superoxide dismutase on renal haemodynamics in the functioning and blocked angiotensin system in normal and low salt dieted rats: This study examined the implications of blocking SOD on renal haemodynamics in the functioning and blocked RAS in normal and low salt dieted rats. This was achieved by administering a SOD inhibitor (DETC) and AT1 receptor antagonist (Losartan) into the cortico-medullary border. This research's outputs were accepted and published at the experimental biology meeting, thephysiological society meeting, and the Molecules to Medicine Conference.

6) The impact of Reactive Oxygen Species & NADPH Oxidase on the Regulation of Renal Haemodynamics. The Role of High Salt Diet: this study aimed to investigate the contribution of the superoxide anions in regulating cortical and medullary blood perfusion generated by NADPH oxidase. This was done by blocking superoxide dismutase activity in rats with intact or blocked NADPH oxidase. This research's outputs were accepted and published in the physiological society meeting and presented for the RAMI conference in Galway.

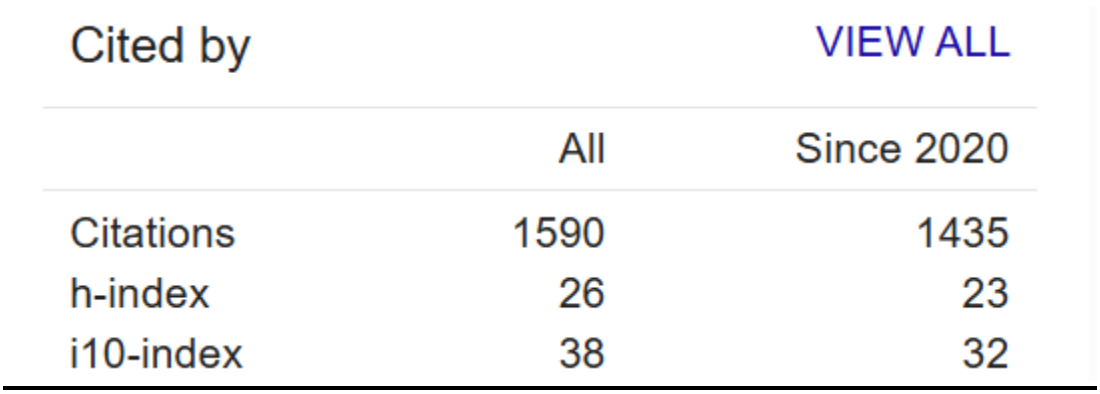
7) An investigation into the expression and activity of enzymes responsible for oxidative stress in rat kidneys and its relationship with salt intake: The main objective of this study is to determine the level of enzyme activities involved in the generation and scavenging of reactive oxygen species in the rat kidney and their expression within the cortical and medullary regions at a different level of salt intake. This research proposal attracted an international student to take an MSc degree in the physiology department at UCC. Also, this research opened a collaboration channel between experimental and molecular physiologists.

8) Effects of angiotensin 1-7 on renal haemodynamics: This research aims to determine the consequences of Ang (1-7) on renal haemodynamics in an activated and inhibited RAS, to establish whether or not the changes in renal vascular tone are modified by the interaction of Ang II and Ang (1-7), to provide information that may be applied to pathophysiological states which in turn may help develop novel strategies, both therapeutic and lifestyle (i.e. dietary sodium intake) for the management of cardiovascular diseases such as hypertension and acute and chronic renal failure. This research proposal challenged an international student to pursue an MD at UCC.

9) Investigating the roles of molecules and nanoparticles extracted from medicinal plants in treating diseases. Their antioxidants and antimicrobial roles.

## (B) Publications/Citations Data:

| Type of Publication | Number of Publications |
|---|---|
| Articles in International Refereed Journals | 59 |
| Conference Papers | 6 |
| Books/Book Chapters | 1 |
| Edited Books | |
| Patents | |
| Others (specify) | |
| Citation Source Number of Citations | 1265 |



| Cited by | | VIEW ALL |
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| | All | Since 2020 |
| Citations | 1590 | 1435 |
| h-index | 26 | 23 |
| i10-index | 38 | 32 |

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**https://www.linkedin.com/in/ahmad-ahmeda-elshiekh-6694a4160/**

## (C) Research Grants:

- I was granted an AU Funded Research Grant 2022-IRG-MED-1 for the project titled Awareness, knowledge, attitude and Practice of Secondary School Students at the Emirates of Ajman, UAE, towards Hyperglycemia and Hypoglaycemia. AED 20000 for 18 months from October 2022.
- Role of Kv7 channels in chemotherapy-induced neuropathic pain, December 2013. KSU and KFU (70000 SAR).
- HRB Summer Scholarship Scheme for Mr Fredolin Lainis. Health Research Board. 11th of June 2007 to 3rd of August 2007. €2,000.00.

- Oxidative stress in the kidney: interactions of superoxide anions and nitric oxide on fluid. Health Research Board. 1st of April 2006 to 31.10.2009. €238,557.00. (For my Post-Doc Position in Cork, Ireland)

- Impact of elevated dietary sodium intake during the growing phase on neural control. Health Research Board. 1st of November 2004 to 1st of November 2007. €184,619.00 (For my PhD Research)

## (D) Participation in Regional & International Conferences:

I have participated in many national and international scientific meetings where I presented my scientific findings (Oral and Poster communications).

1. I was selected to present a talk in the Epithelial, Membrane Transport and Renal Physiology SIG Meeting and chosen to present a poster entitled 'PCA001 Effect of Bradykinin on Renal Hemodynamics of Anesthetized Wister Rats' at Physiology in Focus 2024, a joint conference between The Physiological Society and The Scandinavian Physiological Society, on 2 - 4 July 2024 in Newcastle, UK.

2. I attended the 14th Emirates Cardiac Society (ECS) Annual Conference held in Dubai, Intercontinental Hotel Festival City Dubai, from November 24th - November 26th, 2023.

3. I attended the Health Care Future Summit, held virtually between 6 and 8 December 2020, and was Awarded 2.25 CPD Points.

4. Wafaa Osman; Edward Johns; Ahmad Ahmeda; (2013) "The effects of Angiotensin 1-7 on renal haemodynamics" 07/2013; in proceeding of International Union of Physiological Sciences (IUPS), Birmingham, UK.

5. H. F. Shabana, A. F. Ahmeda, E J Johns (2013) The Impact of High Salt Diet on the Regulation of Renal Hemodynamics and Nitric Oxide in Wistar Rats. Royal Academy of Medicine Ireland, Section of Biomedical Sciences Annual Meeting 2013.

6. O'Connor, F; Johns, E; Ahmeda, A (2011) Interaction between the Renin-Angiotensin System (RAS) and Reactive Oxygen Species (ROS) Washington, DC. The FASEB Journal. 2011; 25:824.8 USA, pp.824-824.

7. Shabana, H.F; Ahmeda, A.F; Johns, E.J (2011) The impact of NAD(P)H oxidase on the regulation of renal hemodynamics Oxford, UK, Physiological Society Meeting.

8. O'Connor, F.B; Ahmeda, A.F (2010) Consequences of blocking Superoxide Dismutase (SOD) on renal haemodynamics in functioning and blocked Angiotensin (Ang) system in rats. Manchester, UK, Physiological Society Meeting UK.

# 6. SERVICE:

## (A) Membership of Institutional, National, or International Scientific Advisory Boards:

- I am the faculty liaison (representing the College of Medicine) for the university's Students Success Center (SSC). The SSC has a significant role in advising students and improving their academic performance. Early detection of the students at risk of failing provides them with the support and facility to help them succeed.

- Delivered several educational sessions to our students, all batched separately, during the academic year to enrich their academic life and help them deal with some academic situations.

- Supervise the students' peer tutor program to improve students' academic performance.

- As an academic advisor, I regularly meet with my students and advise them to reduce the retention rate, detect any academic difficulty early, and try to resolve it before affecting students' performance.

- The college's representative for any carrier fair locally and in the emirate of Sharjah. I represented the College of Medicine to give students a tour of the college and informed them about the admission criteria.

- Created student clubs to ensure students' integration and involvement in the university's activity and spread knowledge among peers and the public.

- Reviewer for the UAE University Graduate Students Research Conference (UAEGSRC), reviewing the students' projects and selecting the projects that will be presented in the UAE Graduate Students Research Conference 2024.

- A member of the postgraduate Maxillofacial Surgery Program, College of Medicine, KSU, KSA, from 2014 to 2018.

- In 2021, I reviewed the master's program in clinical physiology offered by the College of Medicine, Sultan Qaboos University, Sultanate of Oman (I received the invitation from the College of Medicine, Sultan Qaboos University to review the program).

## (B) Service as Reviewer

I acted as a peer reviewer for the following journals:

- Libyan Journal of Medicine.
- Uppsala Journal of Medical Sciences.
- Acta Physiologica Journal.
- Irish Journal of Medical Sciences.

- Saudi Journal of Gastroenterology.
- MDPI Journals.
- Journal of King Saud University.

## (C) University Service:

- Reviewer for the UAE University Graduate Students Research Conference (UAEGSRC), reviewing the students' projects and selecting the projects that will be presented in the UAE Graduate Students Research Conference 2024.

- I supervised and organised the College of Medicine's booth on the UAE National Day (2021/2022 and 2022/2023).

- I actively participated in, supervised, and organised the Libyan booth at the AU Global Cultural Day at Ajman University in February 2023.

- In 2021, I reviewed the master's program in clinical physiology offered by the College of Medicine, Sultan Qaboos University, Sultanate of Oman (I received the invitation from the College of Medicine, Sultan Qaboos University to review the program).

- A member of the postgraduate Maxillofacial Surgery Program, College of Medicine, KSU, KSA, from 2014 to 2018.

## (D) Service to Profession/Industry:

- I was invited to evaluate and provide feedback about the basic medical sciences syllabus for the College of Medicine, Benghazi University. 2022 -2023.

- The Permanent Committee for Scientific Promotions at Taibah University, Madinah, Saudi Arabia, invited me to act as an external examiner to evaluate the promotion application from assistant to associate professor. I received the invitation on April 2, 2023, and returned my feedback on May 21, 2023.

- As an academic advisor, I regularly meet with my students and advise them to reduce the retention rate, detect any academic difficulty early, and resolve it before it affects their academic performance (Ajman University 2023/2024).

- I searched for at-risk students in the College of Medicine and met all of them to guide them and provide the service they need (Ajman University 2023/2024).

- Supported students with research interests by involving them in research and showing them how to write a research proposal appropriately and present it at conferences (Ajman University 2023/2024).

- I collaborated with an international institute by delivering all renal physiology topics toward a diploma course organised by Tobrouk Medical Center, Libya (Nephrology

and Hemodialysis Postgraduate Diploma). The course ran from May 2023 till December 2023.

- I reacted as an external reviewer for the postgraduate Master's program proposed by Sultan Qaboos University (Masters of Clinical Physiology). I received the invitation to review the MSc Program in May 2022 and returned the report in June 2022.

### (E) Public Service:

- Distributing goodie bags to over 1000 Al Ahlia Charity School – Ajman students. The event was on the 21st of February 2024 from 8:00 AM – 10:00 PM at Al Ahlia Charity School, Ajman, UAE

- Donate your time" initiative. A special gift-wrapping session where we wrapped toys and gifts for inpatients at our local hospital. The vent was on the 16th of January 2024 from 10:00 AM – 2:00 PM, Student Hub, second floor, CEC Hall, Ajman University, UAE.

- "Food Distribution" At that time, with other volunteers, we supported the Food ATM team with food preparation, packing, and distribution. The service was on Friday, November 17th, 2023, from 12 PM to 2:30 PM, in Ajman, UAE.

- I was involved in several career fairs and visited several schools in Sharjah and Ajman to guide junior students in their careers and explain the path to medicine 2022/2023.

## 7. LIST OF PUBLICATIONS:

### (A) International Refereed Journals:

1. Hendy, Abdelaziz, Rasha Kadri Ibrahim, Hosny Maher Sultan, Hanan F. Alharbi, Zeinab Al-Kurdi, Naglaa Hassan Abuelzahab, Taliaa Mohsen Al-Yafeai et al. "Fostering a safe horizon: Nursing organizational culture as a mediator between medication safety climate and reporting intentions for high-alert medication errors among pediatric nursing care." Journal of Pediatric Nursing 85 (2025): 103-111.

2. Alruhaimi, Reem S., Emad HM Hassanein, Sulaiman M. Alnasser, Ahmad F. Ahmeda, Hanan S. Althagafy, Amr MT Allam, Hamada S. Qebesy, and Ayman M. Mahmoud. "Attenuation of NF-κB/NLRP3 inflammasome axis and oxidative stress, and upregulation of Nrf2/HO-1 signaling mediate the protective effect of S-carboxymethylcysteine against cyclophosphamide-induced cardiotoxicity." Tissue and Cell (2025): 103092.

3. Alruhaimi, Reem S., Emad HM Hassanein, Sulaiman M. Alnasser, Ahmad F. Ahmeda, Hanan S. Althagafy, Amr MT Allam, Hamada S. Qebesy, and Ayman M.

Mahmoud. "Modulation of NF-κB/NLRP3 inflammasome axis Nrf2/HO-1 signaling and attenuation of oxidative stress mediate the protective effect of ambroxol against cyclophosphamide cardiotoxicity." Biochemical and Biophysical Research Communications (2025): 152242.

4. Hendy, Abdelaziz, Sally Mohammed Farghaly Abdelaliem, Ahmed Zaher, Bothayna N. Sadek, Abdulqadir J. Nashwan, Mohammed Musaed Ahmed Al-Jabri, Ahmad Ahmeda, Ahmed Hendy, Amany Anwar Saeed Alabdullah, and Shaban Majed Sinnokrot. "Telehealth satisfaction among patients with chronic diseases: a cross-sectional analysis." PeerJ 13 (2025): e19245.

5. Ismail, Hossam Ali, Mohamed Hashem Kotp, Hassan Ahmed Awad Basyouny, Aliaa Ezz Eldin Abd Elmoaty, Salwa Sayed, Sally Mohammed Farghaly Abdelaliem, Ahmad Ahmeda, Ahmed Hendy, and Mohamed Ahmed Aly. "Sustainable healthcare futures: how digital leadership stimulates nurses' green creativity: a quasi-experimental study." BMC Nursing 24, no. 1 (2025): 251.

6. Alruhaimi, Reem S., Emad HM Hassanein, Ahmad F. Ahmeda, Sulaiman M. Alnasser, Ahmed M. Atwa, Mostafa Sabry, Mohammed A. Alzoghaibi, and Ayman M. Mahmoud. "Attenuation of inflammation, oxidative stress and TGF-β1/Smad3 signaling and upregulation of Nrf2/HO-1 signaling mediate the protective effect of diallyl disulfide against cadmium nephrotoxicity." Tissue and Cell 91 (2024): 102576.

7. Alruhaimi, Reem S., Ahmad F. Ahmeda, Omnia E. Hussein, Mohammed F. Alotaibi, Mousa O. Germoush, Hassan A. Elgebaly, Emad HM Hassanein, and Ayman M. Mahmoud. "Galangin attenuates chlorpyrifos-induced kidney injury by mitigating oxidative stress and inflammation and upregulating Nrf2 and farnesoid-X-receptor in rats." Environmental Toxicology and Pharmacology (2024): 104542.

8. Alruhaimi, Reem S., Emad HM Hassanein, Ahmad F. Ahmeda, Ahmed M. Atwa, Sulaiman M. Alnasser, Ghadir A. Sayed, Meshal Alotaibi, Mohammed A. Alzoghaibi, and Ayman M. Mahmoud. "Farnesol attenuates cadmium-induced kidney injury by mitigating oxidative stress, inflammation and necroptosis and upregulating cytoglobin and PPARγ in rats." Tissue and Cell (2024): 102526.

9. Alruhaimi, Reem S., Ayman M. Mahmoud, Ibrahim Elbagory, Ahmad F. Ahmeda, Ashraf A. El-Bassuony, Al Mokhtar Lamsabhi, and Emadeldin M. Kamel. "Unveiling the tyrosinase inhibitory potential of phenolics from Centaurium spicatum: Bridging in silico and in vitro perspectives." Bioorganic Chemistry 147 (2024): 107397.

10. Bin-Ammar, Albandari, Ahmad F. Ahmeda, Mouadh Abdelkarim, Ahmed F. Fath El-Bab, Asem A. Amer, Sameh A. Abdelnour, Mohamed M. El-Nawsany, Ayman M. Mahmoud, and Mohammed AE Naiel. "Dietary curcumin nanoparticles improve growth performance, oxidative status and immune response of European seabass (Dicentrarchus labrax)." Annals of Animal Science (2024).

11. Alruhaimi, Reem S., Maisa Siddiq Abduh, Ahmad F. Ahmeda, Albandari Bin-Ammar, Emadeldin M. Kamel, Emad HM Hassanein, Chen Li, and Ayman M. Mahmoud. "Berberine attenuates inflammation and oxidative stress and modulates

lymphocyte E-NTPDase in acute hyperlipidemia." Drug Development Research 85, no. 2 (2024): e22166.

12. Abduh, Maisa Siddiq, Sultan Ayesh Mohammed Saghir, Naif Ahmed Al-Gabri, Ahmad Faheem Ahmeda, Mouaadh Abdelkarim, Saleh Mohammad Aldaqal, and Mohammed Abdullah Alshawsh. "Interleukin-35 and Thymoquinone nanoparticle-based intervention for liver protection against paracetamol-induced liver injury in rats." Saudi Journal of Biological Sciences 30, no. 10 (2023): 103806.

13. Saghir, Sultan AM, Sulaiman M. Alnaimat, Saif M. Dmour, Ayat H. Al-Tarawni, Sameh A. Abdelnour, Ahmad F. Ahmeda, Ahmed H. Arisha et al. "The ameliorative effect of bergamot oil nano-emulsion in stressed rabbit bucks: Influence on blood biochemical parameters, redox status, immunity indices, inflammation markers, semen quality, testicular changes and the expression of HSPs genes." Saudi Pharmaceutical Journal 31, no. 8 (2023): 101691.

14. Dikeocha, Ifeoma Julieth, Abdelkodose Mohammed Al-Kabsi, Ahmad Faheem Ahmeda, Michael Mathai, and Mohammed Abdullah Alshawsh. "Investigation into the Potential Role of Propionibacterium freudenreichii in Prevention of Colorectal Cancer and Its Effects on the Diversity of Gut Microbiota in Rats." *International Journal of Molecular Sciences* 24, no. 9 (2023): 8080.

15. Kamel, Emadeldin M., Albandari Bin-Ammar, Ashraf A. El-Bassuony, Mohammed M. Alanazi, Ali Altharawi, Ahmad F. Ahmeda, Ashwag S. Alanazi, Al Mokhtar Lamsabhi, and Ayman M. Mahmoud. "Molecular modeling and DFT studies on the antioxidant activity of Centaurea scoparia flavonoids and molecular dynamics simulation of their interaction with β-lactoglobulin." *RSC advances* 13, no. 18 (2023): 12361-12374.

16. Mahmoud, Ayman M., Ahmed M. Sayed, Ahmed F. Ahmeda, Esraa K. Abd-Alhameed, Shimaa H. Salem, Reem S. Alruhaimi, Ali Shukur, and Emad HM Hassanein. "Flavonoids-mediated TLR4 Inhibition as a Promising Therapy for Renal Diseases." *Combinatorial Chemistry & High Throughput Screening* 26, no. 12 (2023): 2124-2148.

17. Al-Amarat, Wesam, Mohammad H. Abukhalil, Reem S. Alruhaimi, Haifa A. Alqhtani, Nouf Aldawood, Manal A. Alfwuaires, Osama Y. Althunibat, Saleem H. Aladaileh, Abdulmohsen I. Algefare, Abdulkareem A. Alanezi, Ali M. AbouEl-ezz, Ahmad F. Ahmeda, and Ayman M. Mahmoud. 2022. "Upregulation of Nrf2/HO-1 Signaling and Attenuation of Oxidative Stress, Inflammation, and Cell Death Mediate the Protective Effect of Apigenin against Cyclophosphamide Hepatotoxicity" *Metabolites* 12, no. 7: 648.

18. Saghir, Sultan AM, Mahfoudh AM Abdulghani, Reem S. Alruhaimi, Ahmad F. Ahmeda, Naif A. Al-Gabri, Saleh AMA Alomaisi, Amirin Sadikun, Vikneswaran Murugaiyah, and Ayman M. Mahmoud. "Acute and sub-chronic toxicological evaluation of Averrhoa carambola leaves in Sprague Dawley rats." *Environmental Science and Pollution Research* (2022): 1-12.

19. ALRashdi, Barakat M., Hassan A. Elgebaly, Mousa O. Germoush, Moath M. Qarmush, Mona S. Azab, Reem S. Alruhaimi, Ahmad F. Ahmeda et al. "A

flavonoid-rich fraction of Monolluma quadrangula inhibits xanthine oxidase and ameliorates potassium oxonate-induced hyperuricemia in rats." *Environmental Science and Pollution Research* (2022): 1-13.

20. Alshawsh, Mohammed Abdullah, Abdulsamad Alsalahi, Salah Abdalrazak Alshehade, Sultan Ayesh Mohammed Saghir, Ahmad Faheem Ahmeda, Raghdaa Hamdan Al Zarzour, and Ayman Moawad Mahmoud. "A Comparison of the Gene Expression Profiles of Non-Alcoholic Fatty Liver Disease between Animal Models of a High-Fat Diet and Methionine-Choline-Deficient Diet." *Molecules* 27, no. 3 (2022): 858.

21. Antar, S.A., Abdo, W., Taha, R.S., Farage, A.E., El-Moselhy, L.E., Amer, M.E., Abdmonsef, A.S., Hamid, A.M.A., Kamel, E.M., Ahmeda, A.F. and Mahmoud, A.M., 2021. Telmisartan attenuates diabetic nephropathy by mitigating oxidative stress and inflammation, and upregulating Nrf2/HO-1 signaling in diabetic rats. *Life Sciences*, p.120260.

22. Aladaileh, Saleem H., Farhan K. Al-Swailmi, Mohammad H. Abukhalil, Ahmad F. Ahmeda, and Ayman M. Mahmoud. "Punicalagin prevents cisplatin-induced nephrotoxicity by attenuating oxidative stress, inflammatory response, and apoptosis in rats." *Life Sciences* (2021): 120071.

23. Al-Amarat, W., Abukhalil, M.H., Althunibat, O.Y., Alfwuaires, M.A., Alnamshan, M.M., Alqosaibi, A.I., Ahmeda, A.F., Kamel, E.M., Arab, H.H. and Mahmoud, A.M., 2021. Galangin Attenuates Liver Injury, Oxidative Stress and Inflammation, and Upregulates Nrf2/HO-1 Signaling in Streptozotocin-Induced Diabetic Rats. *Processes*, *9*(9), p.1562.

24. Ahmeda, Ahmad F., Thamer F. Al-Ahmadi, Abdullah F. Alotaibi, Mohammed A. Alshehri, Abdulelah M. Almousa, Omar M. Alshehri, Abdulrahman Z. Alanazi, and Lamyia M. Anweigi. "The awareness of water intake and its correlation with BMI among students attending national and international secondary schools in Riyadh, Saudi Arabia." *Libyan Journal of Medicine* 16, no. 1 (2021): 1918903.

25. Almansour, Abdulwahab, Faisal AlJammaz, Ahmad Ahmeda, Mohammed Alfawaz, Khalid Abdulsalam, Abdulaziz AlSheikh, Mohammed Aljaloud, and Meshal Alkhudhayr. "The Prevalence of Sleep Deprivation and its influence on Students' Life Attending Medical School at King Saud University." *Int J Pharm Phytopharm Res* 10, no. 5 (2020): 149-56.

26. Tan, Yong Chia, Munavvar Abdul Sattar, Ahmad F. Ahmeda, Nurzalina Abdul Karim Khan, Vikneswaran Murugaiyah, Ashfaq Ahmad, Zurina Hassan, Gurjeet Kaur, Mohammed Hadi Abdulla, and Edward James Johns. "Apocynin and catalase prevent hypertension and kidney injury in Cyclosporine A-induced nephrotoxicity in rats." *PloS one* 15, no. 4 (2020): e0231472.

27. Ruane-O'Hora, Therese, Ahmad Ahmeda, and Farouk Markos. "The vascular glycocalyx is not a mechanosensor in conduit arteries in the anesthetized pig." *PeerJ* 8 (2020): e8725.

28. Hemmati, Saba, Ahmad Ahmeda, Yaser Salehabadi, Akram Zangeneh, and Mohammad Mahdi Zangeneh. "Synthesis, characterization, and evaluation of cytotoxicity, antioxidant, antifungal, antibacterial, and cutaneous wound healing effects of copper nanoparticles using the aqueous extract of Strawberry fruit and L-Ascorbic acid." *Polyhedron* 180 (2020): 114425.

29. Ahmadifard, Zeynab, Ahmad Ahmeda, Mahsa Rasekhian, Sajad Moradi, and Elham Arkan. "Chitosan-coated magnetic solid lipid nanoparticles for controlled release of letrozole." *Journal of Drug Delivery Science and Technology* 57 (2020): 101621.

30. Djouhri, Laiche, Trevor Smith, Ahmad Ahmeda, Mohammad Alotaibi, and Xiechuan Weng. "Hyperpolarization-activated cyclic nucleotide–gated channels contribute to spontaneous activity in L4 C-fiber nociceptors, but not Aβ-non-nociceptors, after axotomy of L5-spinal nerve in the rat in vivo." *Pain* 159, no. 7 (2018): 1392-1402.

31. Ahmeda, Ahmad F. "The effect of intra-renal administration of L-NAME on renal medullary and cortical blood flow of stroke-prone spontaneously hypertensive rats and wistar rats." *Journal of Natural Science, Biology and Medicine* 9, no. 2 (2018): 121.

32. Ahmad F. Ahmeda, Mark G. Rae, Lamyia M. Anweigi, Mohammed F. Al Otaibi, Abeer A. Al-Masri and Edward J. Johns (2018): "The effect of superoxide dismutase enzyme inhibition on renal microcirculation of spontaneously hypertensive-stroke prone and Wistar rats." Physiol Res 67(4): 535-541.

33. Ahmad F Ahmeda; Mark G. Rae; Mohammed F. Al Otaibi; Lamyia M Anweigi and Edward J Johns.: Effect of tempol and tempol plus catalase on intra-renal haemodynamics in spontaneously hypertensive stroke-prone (SHSP) and Wistar rats. J PhysiolBiochem 73, 207-214, 2017.

34. Ahmeda, Ahmad F., and Mohammed Alzoghaibi. "Factors regulating the renal circulation in spontaneously hypertensive rats." Saudi Journal of Biological Sciences 23, no. 4 (2016): 441-451.

35. Johns, E.J. and A.F. Ahmeda, Renal Circulation, in Reference Module in Biomedical Sciences. 2014, Elsevier. http://dx.doi.org/10.1016/B978-0-12-801238-3.00200-2.

36. Hayder Shabana; Ahmad Ahmeda and E.J. Johns.: The impact of high salt diet on the regional renal haemodynamic. January 2013. Irish Journal of Medical Science 182 ((Suppl 4)), S140.

37. Ahmeda, Ahmad F., Mark G. Rae, and Edward J. Johns. "Effect of reactive oxygen species and nitric oxide in the neural control of intrarenal haemodynamics in anaesthetized normotensive rats." Acta Physiologica 209, no. 2 (2013): 156-166.

38. Ahmeda, A. F., and E. J. Johns. "The regulation of blood perfusion in the renal cortex and medulla by reactive oxygen species and nitric oxide in the anaesthetised rat." Acta Physiologica 204, no. 3 (2012): 443-450.

39. E. M. Ferguson; E. J. Johns and Ahmad Ahmeda. The effect of Superoxide Anions on Tubular Flow Rates in Isolated Proximal Tubules of Anaesthesised Wistar Rats. September 2011. Irish Journal of Medical Science 180, S293-S294.

40. Tyther, Raymond, Ahmad Ahmeda, Edward Johns, Brian McDonagh, and David Sheehan. "Proteomic profiling of perturbed protein sulfenation in renal medulla of the spontaneously hypertensive rat." *Journal of proteome research* 9, no. 5 (2010): 2678-2687.

41. Tyther, Raymond, Ahmad Ahmeda, Edward Johns, and David Sheehan. "Protein carbonylation in kidney medulla of the spontaneously hypertensive rat." *PROTEOMICS–Clinical Applications* 3, no. 3 (2009): 338-346.

42. Tyther, Raymond, Ahmad Ahmeda, Edward Johns, and David Sheehan. "Proteomic identification of tyrosine nitration targets in kidney of spontaneously hypertensive rats." *Proteomics* 7, no. 24 (2007): 4555-4564.

## (B) Conference Papers:

1. Ahmeda, A. (2024) Effect of Bradykinin on Renal Hemodynamics of Anesthetized Wister Rats. Physiology in Focus 2024, a joint conference between The Physiological Society and The Scandinavian Physiological Society, on 2 - 4 July 2024 in Newcastle, UK.

2. O'Connor, F; Ahmeda, A (2010) Angiotensin II (Ang II) and oxidative stress Molecules to Medicine, College of Medicine & Health, UCC, Ireland.

3. Ahmeda, A; O'Reilly, E; Johns, E (2009) Renal haemodynamics and superoxide anions: direct or indirect actions via nitric oxide? Translational Health Research, College of Medicine & Health, UCC, Ireland.

4. Abu Shanab, A; Ahmeda, A; Murphy, E; OMahony, L; Bennett, M; Shanahan, F; Quigley, EMM (2009) Impact of small intestinal bacterial overgrowth (SIBO) on bacterial translocation and liver histology. Irish Society of Gastroenterology (ISG) Conference Killarney- Ireland, Irish Society of Gastroenterology (ISG) Conference.

5. Ahmeda, A, O'Reilly, E; Johns,E (2009) Regulation of renal haemodynamics by reactive oxygen species in anaesthetized rats: a direct or indirect action via nitric oxide? Dublin, Ireland, Physiological Society Meeting Dublin.

6. Ahmeda, Ahmad F; Johns, Edward J; (2006) Influence of superoxide anions in the neural control of intra-renal haemodynamics of anaesthetised normotensive and hypertensive rats London, UK, Physiological Society Meeting London.

7. Ahmeda, Ahmad F; Johns, Edward J; (2005) Role of nitric oxide in neural control of intra-renal homodynamic in anaesthetised normotensive and hypertensive rats Bristol, UK, Physiological Society Meeting Bristol.

8. Ahmeda, Ahmad F; Johns, Edward J; (2004) Role of oxidative stress on the renal microvasculature of anaesthetised wistar and stroke prone spontaneously hypertensive rats (SHRSP) Cork, Ireland, Physiological Society Meeting Cork.

## (C) Books/Book Chapters:

1. Johns, E.J. and A.F. Ahmeda, Renal Circulation, in Reference Module in Biomedical Sciences. 2014, Elsevier. http://dx.doi.org/10.1016/B978-0-12-801238-3.00200-2.

## (D) Other Publications:

1. Ahmad Ahmeda, and Mohammad Mahdi Zangeneh. "Novel green synthesis of Boswellia serrata leaf aqueous extract conjugated gold nanoparticles with excellent anti-acute myeloid leukemia property in comparison to mitoxantrone in a leukemic mice model: Introducing a new chemotherapeutic drug." Applied Organometallic Chemistry 34, no. 3 (2020): e5344.

2. Ahmad Ahmeda, Akram Zangeneh, and Mohammad Mahdi Zangeneh. "Green synthesis and chemical characterization of gold nanoparticle synthesized using Camellia sinensis leaf aqueous extract for the treatment of acute myeloid leukemia in comparison to daunorubicin in a leukemic mouse model." Applied organometallic chemistry 34, no. 3 (2020): e5290.

# COLLABORATIONS:

During my academic career, I collaborated with the following researchers. Research collaboration always exists, but I only listed partnerships with a published research output.

Prof. Eamonn Quigley (Dept. of Medicine; Impact of small intestinal bacterial overgrowth (SIBO) on bacterial translocation and liver histology)

Prof. David Sheehan (Dept of Biochemistry; Protein carbonylation and sulfonation in the renal medulla of the spontaneously hypertensive rat)

Prof. Edward Johns (Dept. of Physiology; Oxidative stress and renal haemodynamics)

Dr Vincent Healy (Dept. of Physiology; Investigating the expression and concentration of enzymes in the renal cortex and medulla)