

# Fatima Ryalat

ASSISTANT PROFESSOR OF PHYSIOLOGY



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## Education

AUG 2016 -  
MAY 2021

**Ph.D. Integrated Physiology and Pharmacology**  
Wake Forest University, School of Medicine.

AUG 2002 -  
MAY 2008

**M.D.**  
University of Jordan, School of Medicine.

## Experience

JUL 2021 -  
PRESENT

**Assistant Professor**  
University of Jordan, School of Medicine, Department of Physiology and Biochemistry.

- Taught physiology lectures to medical, dental, nursing, rehabilitation, and pharmacy students.
- Conducted paper and computerized exams, coordinated exams with multi-instructors, proctored exams, and analysed the data.
- Coordinated the cardiovascular system course for third year medical students, which was conducted for the first time as blended learning, which included synchronous and asynchronous lectures provided by instructors from various departments in the School of Medicine. I used several features of H5P, available at the learning management system (Moodle) at JU, to design interactive books for asynchronous learning in vascular physiology.
- Organized an open day in cardiovascular sciences (CVS) at the end of the course above. The open day involved several hands-on sessions in CVS at the clinical skills lab, a session on research in CVS, and a session on career path in CVS.
- Designed and implemented a change in the musculoskeletal (MSS) lectures in physiology for dental students course, which included several interactive learning strategies. In addition, for the practical part, they were divided into groups asked to present a topic in MSS related to dental practice. The following skills were assessed: oral presentation skills, visual presentation skills, research skills, team work, time management, and critical thinking skills.
- Mentored medical students to conduct several research projects.
- Supervised several student-led activities at School of Medicine.
- Served in the following committees at School of Medicine: academic mentoring, alumni, curriculum, and educational development committee.

JUL 2016 -  
MAY 2021

**Graduate Student**  
Wake Forest University, School of Medicine  
Hypertension and Vascular Research Center

- I worked on a research project under the mentorship of Dr. Debra Diz. The project included investigating the long-term effects of Muscadine grape extract on arterial stiffness and cardiac function in transgenic hypertensive (mRen2)27 rats, both males and females, using tail cuff BP measurement and a preclinical ultrasound for echocardiography and aortic arch pulse wave

velocity. Throughout my PhD study years, I've been involved in sessions and activities in: sex differences, rigor and reproducibility, as well as diversity and inclusion issues in research.

- Founder and president of the international students group at Bowman Gray Campus, Graduate School, Wake Forest University.
- Member of peer mentoring program, Wake Forest University.
- Member of graduate student ambassador program, Wake Forest University.

JUL 2020 -  
JUL 2021

### **StrokeNet Research Fellow**

**Wake Forest Baptist Health, Neurosurgery Department**

I enforced my skills in vascular research by joining the StrokeNet team at Wake Forest, in which I participated in several activities including designing a pilot study to assess arterial stiffness among patients with intracerebral hemorrhage (ICH) under the mentorship of Dr. Stacey Wolfe, Dr. Debra Diz, and Dr. Hossam Shaltout.

JAN 2017 -  
MAY 2017

### **Teaching Assistant**

**Wake Forest University, School of Medicine**

Integrated Physiology and Pharmacology Graduate Program

I have served as a teaching assistant (TA) for the IPP 702 class (Systemic physiology and pharmacology), Spring Semester 2020 at Wake Forest Graduate School. I helped with tutoring and holding review sessions as well as proctoring and grading exams.

JAN 2014 -  
JUL 2016

### **Research and Teaching Assistant**

**University of Jordan, School of Medicine**

Department of Physiology and Pharmacology

I was in charge of practical physiology sessions for dental and medical students during the period. This includes instruction, conducting experiments and exams, proctoring exams, and mentoring students. As well as assisting faculty members in several research projects.

JUL 2008 -  
DEC 2014

### **Clinical Experience**

Medical Intern	2008 - 2009	King Hussein Hospital, Jordan
Senior house officer	2010 - 2012	Princess of Wales Hospital, UK
General Practitioner	2013 - 2014	Al Balqaa Applied University, Jordan

## **Professional Society Memberships**

Jordan Medical Association/ Jordan

General Medical Council / UK

American Society for Pharmacology and Experimental Therapeutics (ASPET)

American Physiological Society (APS)

American Heart Association

## Publications

Fatima Ryalat, Liliya M. Yamaleyeva, Nildris Cruz-Diaz, Jasmina Varagic, Patricia E. Gallagher, E. Ann Tallant, Debra I. Diz. Muscadine Grape Extract Improves Arterial Stiffness in Hypertensive (mRen2)27 Female Rats. FASEB J. 2018; 32(1):841.4.

Presented as a poster at:

Experimental Biology Conference, San Diego, CA	April 21 - 25, 2018
Cardiovascular Sciences Center Dean Symposium, Wake Forest University	Feb 21, 2018
Graduate Students and Post Doc Research Day/ Wake Forest University	March 27, 2018
Women Research Day on Cardio metabolic Disorders/ Wake Forest University	April 11, 2018

Fatima Ryalat, Nildris Cruz-Diaz, Jasmina Varagic, Patricia Gallagher, Ann Tallant, Debra Diz, Liliya Yamaleyeva. Sex Differences in the Effects of Chronic Muscadine Grape Extract Treatment on Cardiac Function Parameters and Aortic Pulse Wave Velocity (PWV) in Hypertensive Transgenic (mRen2)27 Rats. Hypertension. 2018; 72(Suppl\_1): p134.

Presented as a poster at:

The American Heart Association's Joint Hypertension 2018 Scientific Sessions, Chicago, IL	Sept 6 - 9, 2018
The 26th Annual Surgical Residents' and Fellows' Research Day, Wake Forest University	Nov 7, 2018

Fatima Ryalat, N Cruz-Diaz, EA Tallant, PE Gallagher, DI Diz, LM Yamaleyeva. Muscadine Grape Extract Treatment Improves Aortic Pulse Wave Velocity and Superior Mesenteric Artery Pulsatility Index in Hypertensive Transgenic (mRen2)27 Female Rats. FASEB J. 2019; 33(1):818.2.

Presented as a poster at Experimental Biology Conference, Orlando, FL

Fatima Ryalat, Liliya M. Yamaleyeva, Nildris Cruz-Diaz, E.A. Tallant, Patricia E. Gallagher, Debra I. Diz. Chronic Muscadine Grape Extract Intake Improves Diastolic Function Associated with Lower Circulating Aldosterone in Hannover Sprague Dawley Male Rats. Hypertension. 2019; 74(Suppl\_1): p155.

Presented as a poster at The American Heart Association's Joint Hypertension 2019 Scientific Sessions, New Orleans, LA

Fatima Ryalat, Nildris Cruz-Diaz, Wayne Graham, TanYa Gwathmey-Williams, E.A. Tallant, Patricia E. Gallagher, Liliya M. Yamaleyeva, Debra I. Diz. Sex and Age Specific Circulating Aldosterone Changes in Transgenic Hypertensive (mRen2)27 Rats and Hannover Sprague Dawley Rats and Its Association with BP and Cardiac Function. September 2020. Hypertension 76(Suppl\_1).

Presented as a poster presentation at the Hypertension Council Meeting in September 2020.

Jack Jestus, Sasha Kondrasov, Brock Yager, Nate McMullen, Nicholas Contillo, Fatima Ryalat, Zhidan Xiang, Debra Diz, and Stacey Q. Wolfe. Cardiometabolic Disease Results in Sex- and Age-Dependent Cerebrovascular Degeneration and Arteriolar Morphological Changes. Stroke: Vascular and Interventional Neurology. 2022;2:e000316.

Nathan P McMullen, Nicholas Contillo, Stacey Q Wolfe, Fatima Ryalat, Anthony Anzalone, Stephanie Coffman, Christine Tschoe, Debra I Diz, Zhidan Xiang, Keyan Peterson, and Jack Jestus. Elevations in Proinflammatory Cytokines IL-1 $\beta$  and IL-12 in the Transgenic (mren2)27 Rat: A Clinically-Relevant Animal Model of Metabolic Syndrome. Circulation. 2021;144:A11502

Fatima Ryalat, Hossam A. Shaltout, Debra I Diz, and Stacey Q. Wolfe. Sex Differences In Augmentation Index And Aortic Pulse Pressure Among Patients Diagnosed With Acute Primary Intracerebral Hemorrhage. Hypertension. 2021 | Volume 78, Issue Suppl\_1: AP150

## Awards & Honors

2016-2021	University of Jordan PhD Scholarship in Physiology.
FEB 2018	First Place Best Poster Presentation Award in the Cardiovascular Sciences Center Dean Symposium/ Wake Forest University.
SEP 2018	Wake Forest Alumni Student Travel Award for the poster presented at the Council on Hypertension/ASH Meeting in Chicago, IL.
MAR 2019	Finalist in the Graduate Students Research Day 3-minute Thesis competition
APR 2019	Vevo 2019 Travel Award- Vascular Track (Visual Sonics, Toronto) for the poster presented at Experimental Biology Conference, Orlando, FL.
SEP 2019	Wake Forest Alumni Student Travel Award for the poster presented at the Council on Hypertension/ASH Meeting in New Orleans, LA.

## Languages

Arabic- native language.

English- reading, writing and speaking with high proficiency.

## References

Will be provided upon request.

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