

CURRICULUM VITAE

Ahmed Alhusban, Pharm.D., Ph.D.
Associate Professor
College of Pharmacy, University of Shatjah
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Scopus h-index: 11
Scopus Citations: 461

Education

- 9/2002-6/2008 Doctor of Pharmacy (Pharm.D.)
Jordan University of Science and Technology
Jordan
- 8/2009-8/2013 Doctor of Philosophy (Ph.D.)
University of Georgia
USA
Thesis Title: **“Improving stroke outcome through
increasing the activity of the BDNF/TrkB system”**

Areas of Expertise:

Experimental Stroke models (Middle Cerebral Artery Occlusion model, Embolic Model), Angiogenesis, Neurodegenerative Diseases, Neuroprotection, Mechanisms of vascular mediated neuroprotection after stroke, Cell culture, Gene Knockdown, Molecular Biology.

Professional Positions

- 6/2008-9/2008: **Staff Pharmacist, Pharmacy One Group, Jordan.**
9/2008-7/2009: **Teaching and Research Assistant, College of Pharmacy-
Jordan University of Science and Technology, Jordan.**
8/2009-8/2013: **Graduate student, Program in Clinical and Experimental
Therapeutics, College of Pharmacy, UGA.**
8/2010-8/2013: **Co-Preceptor, Neurology Rotation, College of Pharmacy,
UGA.**
8/2013-9/2018: **Assistant Professor, Clinical Pharmacy Department, College
of Pharmacy-Jordan University of Science and Technology, Jordan.**

9/2018-present (on a vacation): **Associate Professor, Clinical Pharmacy Department, College of Pharmacy-Jordan University of Science and Technology, Jordan.**

9/2019-present: **Associate Professor, College of Pharmacy, Al Ain University, Abu Dhabi, UAE**

Memberships

Phi kappa Phi Honor Society
Jordan Pharmacists Association (JPA)
American College of Clinical Pharmacy (ACCP)

Awards/Honors

- 2003-2008: **Deans' Honor List (College of Pharmacy- Jordan University of Science and Technology- Jordan.**
- 2008: **Graduated First in Class with Excellence and Honor Notion.**
- 2008: **Appreciation Letter (Japan International Cooperation Agency).**
- 2009-2013: **Predoctoral Fellowship (Jordan University of Science and Technology-Jordan).**
- 2011: **M. Kelli Jordan Travel Award.** The pharmacokinetics/pharmacodynamic PRN. ACCP's 2011 annual meeting; Pittsburgh-USA.
- 2011: **First runner up in the best fellow/resident poster presentation.** ACCP's 2011 annual meeting; Pittsburgh-USA.
- 2012: **Second place in the best student poster presentation.** VA research week; Augusta-USA.
- 2012: **Finalist in the best fellow/resident poster presentation.** ACCP's 2012 annual meeting; Hollywood -USA.
- 2018: **European Stroke Conference Travel Award.** ESC Athens 2018; Greece.

Abstracts

1. F Alfwaress, **A Alhusban**, M Al Qawasmeh, L Alhusban, M Al-qudah, K El-Salem. The effect of patients premorbid characteristics on the severity and recovery of speech and language after stroke: A pilot study. *Journal of the Neurological Sciences.* 2019;405, 4.
2. **A Alhusban**, M Al Qawasmeh, F Alfwaress, M Megdadi, L Alhusban, K El-Salem. Pre-stroke angiotensin II manipulation has a differential effect on the initial severity and long-term outcome. *Journal of the Neurological Sciences.* 2019; 405, 4

3. Ayoub NM, **Alhusban A**, Alhusban L. **Antiangiogenic effect of conditioned media derived from triple negative breast cancer cells in brain microvascular endothelial cells in vitro**. AACR Annual Meeting 2019; Atlanta, USA.
4. **Alhusban A.**, Alfwaress F., AL QAWASMEH M. **Treatment with Angiotensin II Receptor Blockers Improves Language Recovery after Ischemic Stroke: A Pilot Study**. 4th European Stroke Organization Conference 2018; Gothenburg, Sweden
5. **Alhusban A.**, AL QAWASMEH M., Alfwaress F., El-Salem K. **Oral Hypoglycemic Agents Reduce the Neurologic Deficit in Patients with Acute Ischemic Stroke**. ESC Athens 2018 (Oral Talk); Athens, Greece.
6. Al Qawasmeh M, **Alhusban A**, Alfwaress F, Abu Murad S. **Serum Thrombospondin-1 Levels Negatively Correlates with the Severity of Neurologic Deficit after Ischemic Stroke**. ESC Athens 2018; Athens, Greece.
7. Nehad M. Ayoub, **Ahmed Y. Alhusban**, Hussein M. Al Husban, Abdul Rahman N. Al Khatib, Alaa O. Al-Mesleh and Ekhlās A. Al-Majali. **Vascularity and vascular maturity in breast cancer: a comparative analysis of the different molecular subtypes**. AACR's 2017 Annual Meeting; Washington, DC.
8. Abdelrahman Y Fouda, **Ahmed Alhusban**, Adviyē Ergul, Susan C Fagan. **The Angiotensin Type 2-receptor Agonist, Compound 21, Provides Neuroprotection After Ischemia Reperfusion Injury Through Interleukin 10 Upregulation**. International Stroke Conference-2015; California-USA
9. **Alhusban A**, Fouda A, Pillai B, Ergul A, Fagan SC. **BDNF knockdown abrogates AT1 blockade induced improvement in stroke outcome** (Oral talk in the International Stroke Conference-2014); San Diego-USA/
10. **Ahmed Alhusban**, Anna Kozak, Tauheed Ishrat, Bindu Pillai, Susan C. Fagan. **The vasculo-protective effect of candesartan after ischemic stroke: an Antioxidant**. ACCP's 2012 annual meeting (Finalist); Hollywood-USA.
11. Abdelrahman Y. Fouda, Anna Kozak, **Ahmed Alhusban**, Jeffrey Switzer, and Susan C. Fagan. **Utility of Serum cytokines as biomarkers for brain injury in translational research**. ACCP's 2012 annual meeting; Hollywood-USA

12. **Ahmed Alhusban**, Anna Kozak, Susan C.Fagan. **AT1 receptor antagonism modulates the angiogenic response of endothelial cells to angiotensin II: BDNF a novel mediator.** Gordon Research Conference (angiotensin)-2012; Ventura-USA.
13. **Ahmed Alhusban**, Anna Kozak, Susan C.Fagan. **Vascular Protection with Candesartan: Beyond Blood Pressure Reduction.** ACCP's 2011 annual meeting (**Finalist**); Pittsburgh-USA.
14. **Ahmed Alhusban**, Ahmad Al-Azayzih, Diana Houg, Susan C. Fagan, Somanath P.R. Shenoy. **Candesartan for Prostate Cancer: A Dose or a Class Effect?** ACCP's 2011 annual meeting; Pittsburgh-USA.
15. Ahmad Al-Azayzih, **Ahmed Alhusban**, Diana Houg, Susan C. Fagan, Somanath P.R. Shenoy. **Angiotensin Receptor Blockers Enhances Prostate Cancer Cell Functions In Vitro.** CDD- University of Georgia-2011.
16. **Ahmed Alhusban**, Weihua Guan, Anna kozak, Susan Fagan. **Angiotensin II Affects the Ability of Endothelial Cells to Secrete BDNF: Implication in Stroke.** Graduate Research Day- Medical College of Georgia-2011.
17. **Ahmed Alhusban**, Weihua Guan, Anna Kozak, Kenneth Behen, Susan Fagan. **Effects of Subhypotensive Doses of Candesartan after Experimental Ischemia.** Graduate Research Day- Medical College of Georgia-2009.
18. **Ahmed Alhusban**, Diana Houg, Mrunal Chaudhary, Susan C. Fagan, and Somanath Shenoy. **Dose-Dependent, Differential Effects of Candesartan on Prostate Cancer Cells.** Sothern Translational Education and Research Conference (STaR). September-2010.

Publications

1. **Alhusban A**, Fagan SC. **Secondary prevention of stroke in the elderly: a review of the evidence.**Am J GeriatrPharmacother. 2011 Jun;9(3):143-52.
2. Guan W, Somanath PR, Kozak A, Goc A, El-Remessy AB, Ergul A, Johnson MH, **Alhusban A**, Soliman S, Fagan SC. **Vascular protection by angiotensin receptor antagonism involves differential VEGF expression in both hemispheres after experimental stroke.***PLoS One.* 2011;6(9):e24551.

3. Ergul A, **Alhusban A**, Fagan SC. **4. Angiogenesis: a harmonized target for recovery after stroke.** *Stroke.* 2012 Aug;43(8):2270-4.
4. Mohamed IN, Soliman SA, **Alhusban A**, Matragoon S, Pillai BA, Elmarkaby AA, El-Remessy AB. **Diabetes exacerbates retinal oxidative stress, inflammation, and microvascular degeneration in spontaneously hypertensive rats.** *Mol Vis.* 2012;18:1457-66.
5. **Alhusban A**, Kozak A, Ergul A, Fagan SC. AT1 receptor antagonism is proangiogenic in the brain: BDNF a novel mediator. *J Pharmacol Exp Ther.* 2013 Feb; 344(2):348-59.
6. Fouda A, Kozak A, **Alhusban A**, Switzer JA, Fagan SC **Anti-inflammatory IL-10 is upregulated in both hemispheres after experimental ischemic stroke: Hypertension blunts the response.** *Exp Transl Stroke Med.* 2013 Nov 13;5(1):12.
7. **Alhusban A**, Al-Azayzih, Goc A, Fagan SC, and Somanath PR. **Clinically relevant dose of candesartan inhibits growth of prostate tumor xenograft in vivo through the modulation of tumor angiogenesis.** *J Pharmacol Exp Ther.* 2014 ;350(3):635-45.
8. Ishrat T, Kozak A, **Alhusban A**, Pillai B, Johnson MH, El-Remessy AB, Ergul A, Fagan SC. **Role of matrix metalloproteinase activity in the neurovascular protective effects of Angiotensin antagonism.** *Stroke Res Treat.* 2014;2014:560491.
9. **Alhusban A**, Fouda AY, Bindu Pillai, Ishrat T, Soliman S, Fagan SC. **Compound 21 is pro-angiogenic in the brain and results in sustained recovery after ischemic stroke.** *J Hypertens.* 2015 Jan;33(1):170-80
10. Fouda AY, **Alhusban A**, Ishrat T, Pillai B, Eldahshan W, Waller JL, Ergul A, Fagan SC. **Brain-Derived Neurotrophic Factor Knockdown Blocks the Angiogenic and Protective Effects of Angiotensin Modulation After Experimental Stroke.** *Mol Neurobiol.* 2017 Jan;54(1):661-670.

11. **Alhusban A**, Kozak A, Eldashan W, Ergul A, Fagan SC. **Artery reopening is required for the neurorestorative effects of angiotensin modulation after experimental stroke.** *Exp Transl Stroke Med.* 2016 Apr 27;8:4.
12. **Alhusban A**, Fouda AY, Fagan SC. **ARBs improve stroke outcome through an AT2-dependent, BDNF-induced proangiogenic and prorecovery response.** *Neural Regen Res.* 2016 Jun;11(6):912-3.
13. **Alhusban A**, Kozak A, Pillai B, Ahmed H, Sayed MA, Johnson MH, Ishrat T, Ergul A, Fagan SC. **Mechanisms of acute neurovascular protection with AT1 blockade after stroke: Effect of prestroke hypertension.** *PLoS One.* 2017 Jun 22;12(6):e0178867.
14. Nuseir KQ, Alzoubi KH, **Alhusban A**, Bawaane A, Al-Azzani M, Khabour OF. **Sucrose and naltrexone prevent increased pain sensitivity and impaired long-term memory induced by repetitive neonatal noxious stimulation: Role of BDNF and β -endorphin.** *Physiol Behav.* 2017 Oct 1;179:213-219.
15. **Alhusban A**, Alkhazaleh E, El-Elimat T. **Silymarin Ameliorates Diabetes-Induced Proangiogenic Response in Brain Endothelial Cells through a GSK-3 β Inhibition-Induced Reduction of VEGF Release.** *J Diabetes Res.* 2017;2017:2537216.
16. Nuseir KQ, Altarifi AY, Tasslaq A, **Alhusban A**, Alzoubi KH. **Early and late anti nociceptive effects of sucrose on neonatal inflammatory pain in rats: Comparison to a non-steroidal anti-inflammatory drug.** *Physiol Behav.* 2019 ;206:37-42.
17. M Al Qawasmeh, **A Alhusban**, F Alfwaress, K El-Salem. **An Assessment of Patients Factors Effect on Prescriber Adherence to Ischemic Stroke Secondary Prevention Guidelines.** *Curr Clin Pharmacol* 2020 (Online ahead of print).
18. Ayoub NM, Jaradat SK, **Alhusban A**, Tahaine L. **Glycosylated Hemoglobin A1c Is Associated with Anthropometric Measurements and Tumor Characteristics in Breast Cancer Patients.** *Int J Womens Health.* 2020;12:139-149 (Online ahead of print)
19. Al-Eitan L, **Alhusban A**, Alahmad S. **Effects of the synthetic cannabinoid XLR-11 on the viability and migration rates of human brain microvascular endothelial cells in a clinically relevant model.** *Pharmacol Rep.* 2020 Jul 6 (online ahead of print).

20. El-Elimat T, Alhawarri MB, Rivera-Chávez J, Burdette JE, Czarnecki A, Al-Gharaibeh M, Al Sharie AH, **Alhusban A**, Alali FQ, Oberlies NH. **Phenethyisoquinoline alkaloids from the leaves of *Androcymbium palaestinum***. *Fitoterapia*. 2020;146:104706. (Online ahead of print).
21. M Al Qawasmeh, **A Alhusban**, F Alfwaress. **An evaluation of the ability of Thrombospondin-1 to predict stroke outcomes and mortality after ischemic stroke**. *The International Journal of Neuroscience*. 2020 Sep 17;1-8 (Online ahead of print).
22. L Alhusban, NM Ayoub, **A Alhusban**. **Pro-BDNF is a novel mediator of the interaction between MDA-MB-231 breast cancer cells and brain microvascular endothelial cells**. *Current Molecular Medicine*, November 2020 (Online ahead of print).
23. Ayoub, N.M., Alkhalifa, A.E., Ibrahim, D.R., **Alhusban, A**. **Combined crizotinib and endocrine drugs inhibit proliferation, migration, and colony formation of breast cancer cells via downregulation of MET and estrogen receptor**. *Medical Oncology*, 2021, 38(1), 8
24. Nuseir KQ, Alzoubi KH, **Alhusban A**, Alazzani M, Bawaane A, Khabour OF. **Saccharin and naltrexone prevent increased pain sensitivity and impaired long-term memory induced by repetitive neonatal noxious stimulation: role of BDNF and enkephalin**.

Book Chapters:

1. Fagan SC, **Alhusban A**, Fenwick NT. eChapter 19. **Evaluation of Neurologic Illness**. In: DiPiro JT, Talbert RL, Yee GC, Matzke GR, Wells BG, Posey L. eds. **Pharmacotherapy: A Pathophysiologic Approach**, 9e New York, NY: McGraw-Hill; 2014.

Grants:

1. **The Involvement of Endoplasmic Stress in Diabetes Induced Dysregulated Brain Angiogenesis** (PI); \$21000; Deanship of Research-JUST; 2015-2018
2. **Assessing The Differential Effect of Endoplasmic Reticulum Stress On Brain and Peripheral Angiogenesis** (PI); \$10000; Deanship of Research-JUST; 2014-2015
3. **Assessment of Microvascular Environment in Triple Negative and HER2-Positive Breast Cancer Patients** (Co-PI); \$10000; Deanship of Research-JUST; 2014-2016

4. **Assessment of Microvascular Environment in Hormone-Dependent Breast Cancer Patients** (Co-PI); \$10000; Deanship of Research-JUST; 2014-2016
5. **Assessing The Effect of Brain Derived Neurotrophic Factor (BDNF) Gene Polymorphism On Speech and Language Recovery After Stroke** (PI); \$160,000; Scientific Research Fund-Ministry of Higher Education; 2015-2019
6. **Assessing The Role Endoplasmic Stress Alleviation in Promoting Recovery After Ischemic Stroke Among Diabetics** (PI); \$14,000; Deanship of Research-JUST; 2015-2019
7. **Assessing The Involvement of Angiogenic Factors in Hyperlipidemia Induced Alteration in Brain Angiogenesis** (PI); \$10000; Deanship of Research-JUST; 2015-2016
8. **Assessing The Involvement of Endoplasmic Stress in Hyperlipidemia Induced Alteration of Brain Angiogenesis** (PI); \$14,000; Deanship of Research-JUST;2015-2019
9. **Assessing The Effect of Silymarin On Diabetes Induced Aberrant Angiogenesis** (PI); \$10,000; Deanship of Research-JUST;2016-2017
10. **Seed Grant-Vascular Biology Lab Renovation** (PI); \$ 63,000; Deanship of Research-JUST; 2016-2019
11. **Investigating The Chemical Composition and Anticancer Potential of Androcymbium Palaestinum Leaves** (Co-PI); \$10,000; Deanship of Research; 2016-2018
12. **Determining The Genetic Determinant of Addiction** (Co-PI); \$94,000; Scientific Research Fund-Ministry of Higher Education; 2018-2021

Courses Taught:

1. Pharmacology (1)-Neuropharmacology
2. Pharmacology (3)-Endocrine Pharmacology
3. Advanced Pharmacology (Master in Clinical Pharmacy)
4. Research Methodology (Master in Clinical Pharmacy Students)
5. Neurotherapeutics (Master in Clinical Pharmacy Students)
6. Therapeutics-Neurological Disorder (For Pharm.D Students)
7. Therapeutics- Neurological and Psychiatric Disorders (For Pharm D Students)
8. Introduction to Therapeutics (For Pharm D Students)
9. Comprehensive Therapeutics (For Pharm D Students)
10. Cardiovascular Therapeutics (For Pharm D Students)

11. Patient Counseling.
12. Gastrointestinal system Therapeutics (Pharm D Students).
13. Respiratory System Therapeutics (Pharm D Students)
14. Endocrine Therapeutics.
15. Clinical Clerkship- Neuropsychiatry (Pharm D and Master in Clinical Pharmacy).
16. Clinical Clerkship-Clinical Research (Pharm D students)
17. Clinical Clerkship-Ambulatory Care (Pharm D students)

Graduate Students:

1. Asma Ararawi. **Assessing the Differential Effect of Endoplasmic Reticulum Stress on Brain and Peripheral Angiogenesis.** Dec, 2015
2. Abdol Rahman El Khatib. **Assessment of microvascular environment in triple negative and HER2-positive breast cancer patients.** May, 2016
3. Alaa Al-Mesleh. **Assessment of Microvascular Environment in Hormone-Dependent Breast Cancer Patients.** May, 2016
4. Tasneem Alnigrish. **Assessing the involvement of angiogenic factors in hyperlipidemia induced alteration in brain angiogenesis.** Aug, 2016
5. Enaam Alkhazaleh. **Assessing the effect of Silymarin on diabetes induced aberrant angiogenesis.** May, 2017
6. Sara Jaradat. **Correlation of glycemic status with anthropometric measurements and tumor characteristics in breast cancer patients.** May 2017
7. Maram Al-Hawarri. **Investigating the Chemical Composition and Anticancer Potential of Androcymbium palaestinum Leaves.** Mar, 2018
8. Leen Asaad. **Investigating the protective effect of metformin against oxidized low density lipoprotein induced antiangiogenic effect in human brain microvascular endothelial cells.** August 2019
9. Saida Makabla. **Investigating the Potential of Metformin to Function as Molecular Chaperone to Reverse ER Stress-Induced Effect on Angiogenesis.** August 2019
10. Amer Alkhalefa. **Evaluation for the effect of crizotinib and tamoxifen combination on proliferation, migration, and invasion of breast cancer cells.** February 2020

Post-Doctoral Fellows:

1. Nadia Al Tibi, Screening the Effect of Synthetic Compounds on Brain Angiogenesis.
2017

Research Skills:

Animal Models of stroke, in vivo pumps implantation, molecular biology, florescence microscopy, angiogenesis, functional recover assessment after stroke.