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الصحة
HEALTH

Faculty Research Portfolios

COLLEGE OF PHARMACY

2017 / 2018



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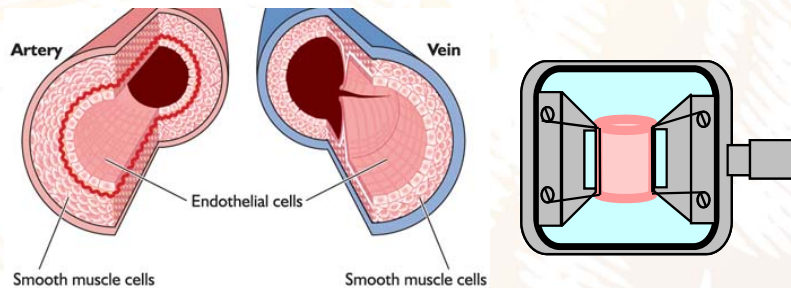
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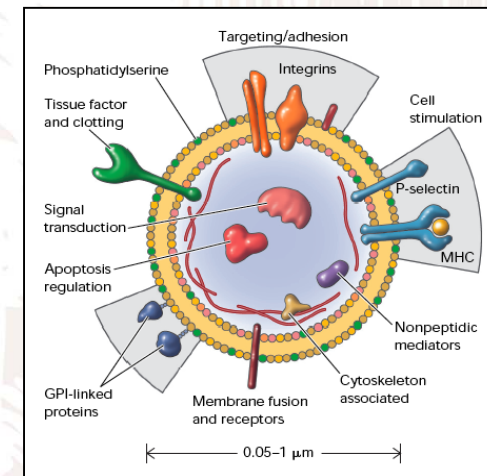
Molecular Cardiovascular Science Lab

Abdelali Agouni, PhD, FHEA

1. Molecular mechanisms underpinning endothelial dysfunction in diabetes and obesity



2. Membrane microparticles as biomarkers and vectors of cardiovascular disease



3. Micro- & macro-nutrition and cardio-metabolic risk



- High selenium intake and cardio-metabolic risk
- High protein dietary intake and cardio-metabolic risk

4. Novel life style interventions to reverse/prevent cardio-metabolic risk



- Intermittent fasting and impact of circadian feeding
- Time restricted feeding
- Intermittent energy restriction



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Interprofessional Education & Collaborative Practice

Dr. Alla El-Awaisi *MPharm, MRPharmS, MSc, PgCert, PhD*

Research expertise lies in the area of interprofessional education, collaborative practice, pharmacy education and pharmacy practice and has published numerous articles in peer-reviewed journals.

El-Awaisi et al. *BMC Medical Education* (2017) 17:15
DOI 10.1186/s12909-016-0852-5

BMC Medical Education

RESEARCH ARTICLE

Open Access



A Middle Eastern journey of integrating Interprofessional Education into the healthcare curriculum: a SWOC analysis

Alla El-Awaisi^a, Kyle John Wilby, Kerry Wilbur, Maguy Saffouh El Hajj, Ahmed Awaisu and Bridget Paravattil

JOURNAL OF INTERPROFESSIONAL CARE
2016, VOL. 30, NO. 6, 769-776
<http://dx.doi.org/10.1080/13561820.2016.1218830>



ORIGINAL ARTICLE

Interprofessional education in the Arabic-speaking Middle East: Perspectives of pharmacy academics

Alla El-Awaisi^{a,b}, Maguy Saffouh El Hajj^a, Sundari Joseph^c, and Lesley Diack^b

^aCollege of Pharmacy, Qatar University, Doha, Qatar; ^bSchool of Pharmacy and Life Sciences, Faculty of Health and Social Care, The Robert Gordon University, Aberdeen, UK; ^cSchool of Nursing & Midwifery, Faculty of Health and Social Care, The Robert Gordon University, Aberdeen, UK



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Synthesis of Biologically Active Compounds

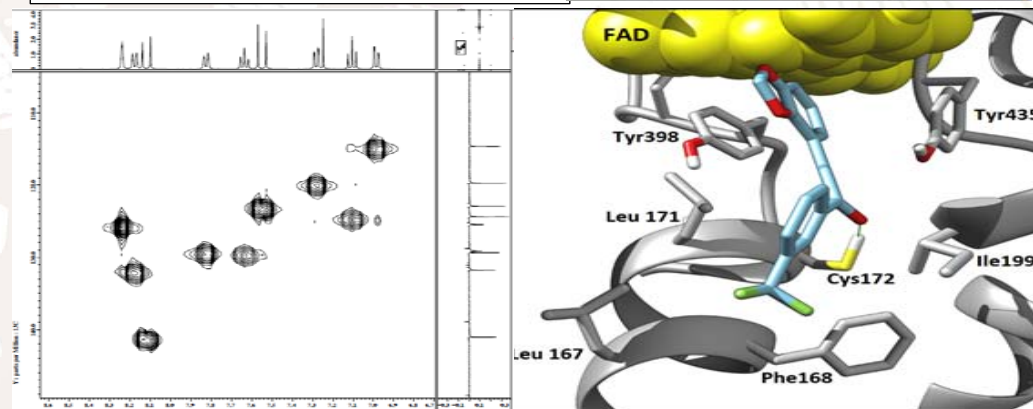
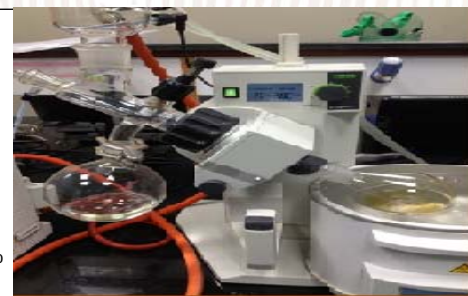
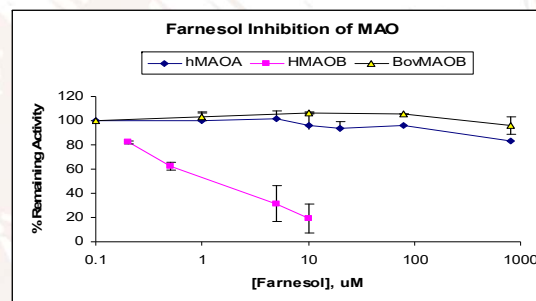
Dr. Ashraf A. Khalil, Associate Professor of Medicinal Chemistry

- ✓ The discovery of new anticancer agents and monoamine oxidase inhibitors
- ✓ Multistep synthesis and chemical modification of natural products
- ✓ Structural elucidation using 1D and 2D NMR, IR and Mass Spectrometry
- ✓ Drug metabolism
- ✓ Evaluation of the effect of tobacco smoke on CNS

Isolation and Characterization of a Monoamine Oxidase Inhibitor from Tobacco Leaves

Ashraf A. Khalil,¹ Salome Steyn, and Neal Castagnoli, Jr.*

Department of Chemistry, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061-0212





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Pharmacy Practice and Outcome Research

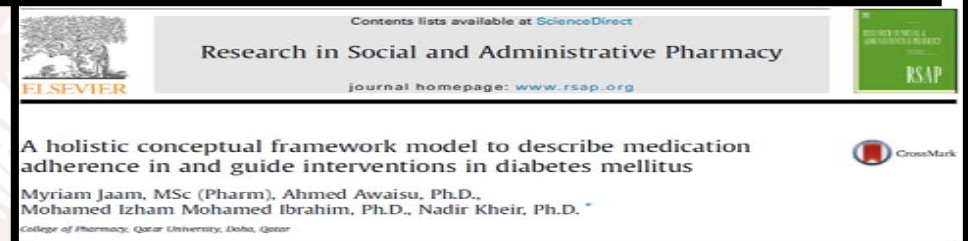
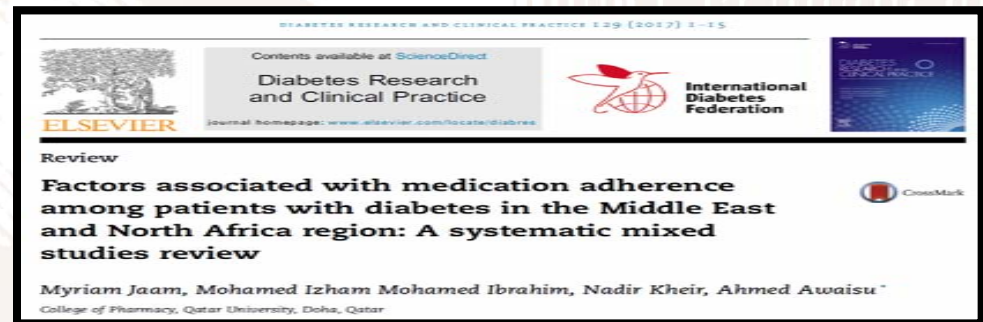
Ahmed Awaisu, PhD, MPharm, BPharm
Associate Professor of Pharmacy Practice



• Research interest:

- Medication adherence and burden in chronic diseases
- Pharmacoepidemiology and quality use of medicines
- Outcome research in cardiology and diabetes
- Health promotion

• Recent Projects:





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Pharmacy Education and Pharmacy Practice

Dr. Banan Mukhalalati

Research interest includes:

- Learning Theories
- Pharmacy and Healthcare Professional Education
- Communities of Practice Theory
- Conduction of Qualitative Research in HealthCare Settings





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Pharmacy Education & Practice

Dr. Bridget Paravattil Javed, PharmD

Director, Doctor of Pharmacy Program

Assistant Professor, Clinical Pharmacy & Practice

Research Focus

Experiential education

Professional development of pharmacy preceptors and practicing pharmacists

Enhancement of patient outcomes related to primary care conditions

Development and improvement of clinical pharmacy services in ambulatory settings

Pharmacy Education, Evidence Based Medicine and Interprofessional Education

Daniel Rainkie

EBM in education and clinical practice

Clinical pharmacy practice

Interprofessional education

Assessment practices





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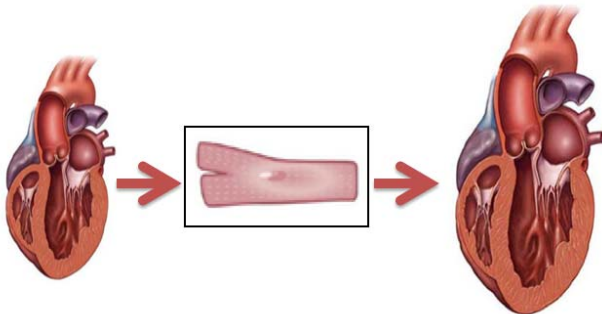


Molecular Biology-Pharmacology Research Laboratory

Dr. Fatima Mraiche, Associate Professor Chair – Pharmaceutical Sciences Section

Research Interests:

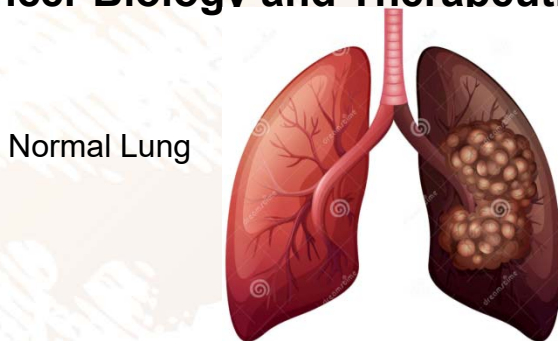
Cardiovascular Cellular and Molecular Pathophysiology



Normal Heart

Hypertrophied Heart

Cancer Biology and Therapeutics



Normal Lung

Lung Cancer

Current Projects:

Cardiovascular Cellular and Molecular Pathophysiology

- The role of NHE1 and mediators of NHE1 (osteopontin, p90 ribosomal S6 kinase, cathepsin B) and in cardiac remodeling
- The inflammatory role in heart failure
- The cardiotoxic effect of tyrosine kinase inhibitors
- The role of NHE1 in the cardiovascular benefits of Empagliflozin, an SGLT inhibitor used in the setting of diabetes

Cancer Biology and Therapeutics

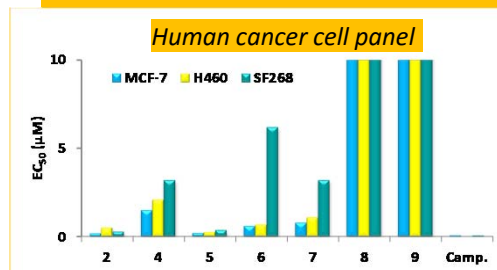
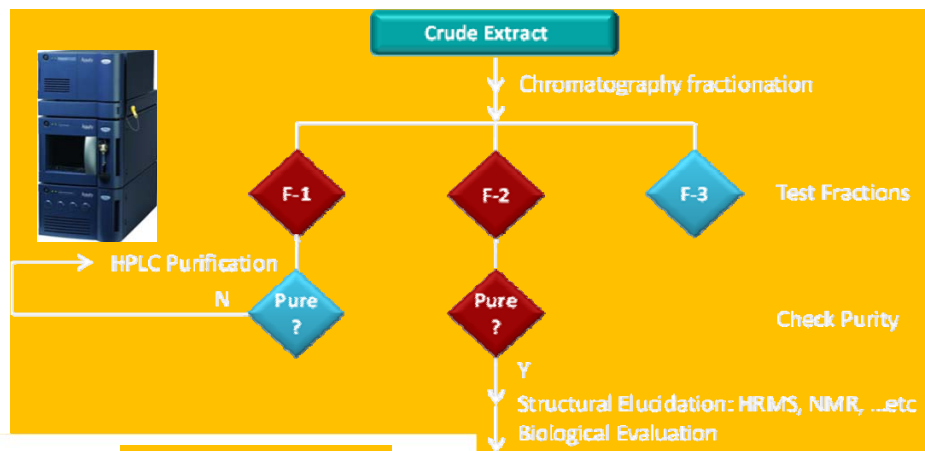
- The role of p90 ribosomal S6 kinase in lung cancer



Research Group Bioactive Natural Products Prof. Feras Q. Alali



Bioactivity-guided Fractionation



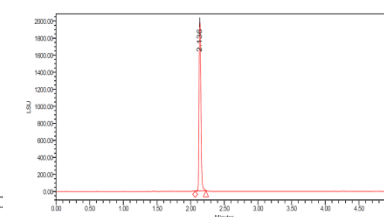
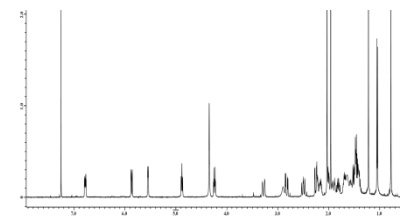
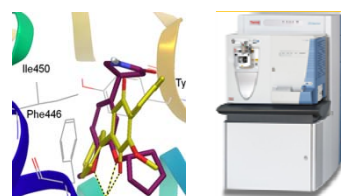
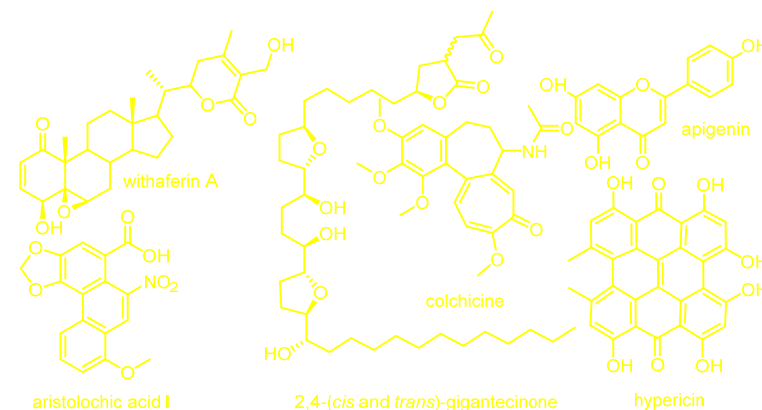
New Colchicinoids from a Native Jordanian Meadow Saffron, *Colchicum brachyphyllum*: Isolation of the First Naturally Occurring Dextrorotatory Colchicinoid
J. Nat. Prod. 2005, 628, 173-178

Feras Q. Alali,*† Tamam El-Elmat,† Chen Li,‡ Amjad Qandil,‡ Ahmad Alkofahi,‡ Khaled Tawaha,§ Jason P. Burgess,‡ Yuka Nakanishi,‡ David J. Kroll,‡ Hernán A. Navarro,‡ Joseph O. Falkinham, III,⊥ Mansukh C. Wani,‡ and Nicholas H. Oberlies*‡

Annonaceous Acetogenins: Recent Progress *J. Nat. Prod.* 1999, 62, 504-540

Feras Q. Alali, Xiao-Xi Liu, and Jerry L. McLaughlin*

Department of Medicinal Chemistry and Molecular Pharmacology, School of Pharmacy and Pharmacal Sciences, Purdue University, West Lafayette, Indiana 47907



- Nature-based anti-cancer drug discovery and development
- Phytotherapeutic evaluation of anti-stress herbs
- Method development and standardization of herbal products



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Precision Medicine and Implementation of Antithrombotic Management

Dr. Hazem Elewa, *RPh, PhD, BCPS*

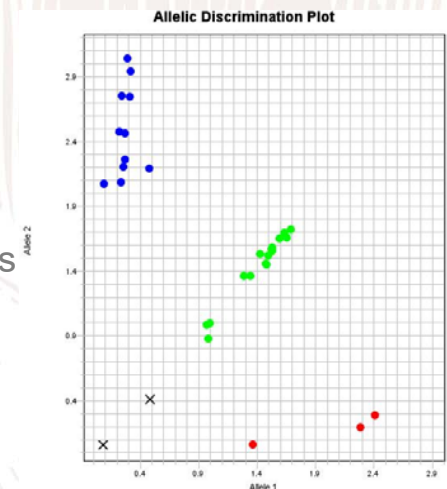
Clinical practice is focused on cardiovascular and antithrombotic management

Current research projects include:

Warfarin dose optimization through the use of pharmacogenetics in Qatari patients

Determination of genetic factors affecting clopidogrel responsiveness in Arabs

J Thromb Thrombolysis (2017) 43:411–416
DOI 10.1007/s11239-017-1474-4



PLOS ONE

Trends in oral anticoagulant use in Qatar: a 5-year experience

Hazem Elewa¹ · Amani Alhaddad¹ · Safa Al-Rawi¹ · Amir Nounou² ·
Hesham Mahmoud³ · Rajvir Singh⁴

RESEARCH ARTICLE

The Impact of Genetic and Non-Genetic Factors on Warfarin Dose Prediction in MENA Region: A Systematic Review

Loulia Akram Bader[✉], Hazem Elewa[✉] *

College of Pharmacy, Qatar University, Doha, Qatar

✉ These authors contributed equally to this work.

* hazem_elewa@qu.edu.qa

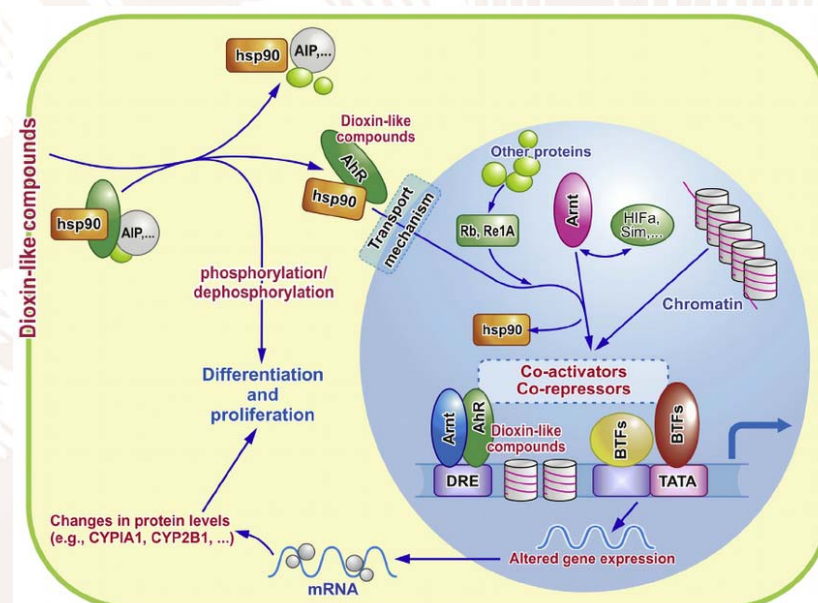


Molecular Pharmacology & Toxicology

Hesham M. Korashy, PhD

My research interests focus on investigating:

- The role of Aryl hydrocarbon receptor (AhR) and its downstream target gene, Cytochrome P450 1A1 (CYP1A1) in breast cancer stem cell proliferations, self-renewal and chemoresistance.
- The mechanisms of cardiovascular toxicity of several new anticancer agents, mainly tyrosine kinase inhibitors, such as sunitinib and gefitinib.
- The environmental toxicity of heavy metals and other toxins.



Activation of AhR and its target gene, CYP1A1





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Research interest:

Personalized nanomedicines for cancer targeting

Prof. Katerina Gorachinova, Pharmaceutics, Pharmaceutical Sciences section



Current research interest involves:

- Design, physico-chemical characterization, nano-biointerface interaction, biodistribution, efficacy and toxicity evaluation of nanoparticles that can home in on cancer cells and selectively destroy them. Critical targeting design components of therapeutic nanoparticles are: i) a targeting mechanism that identifies cancer cells by the molecules they express; ii) therapeutic molecule delivered to the cancer cells; and iii) specifically engineered polymer nanoparticle that allows the therapeutic agent to bypass different barriers in the body efficiently and find its target.

Selected publications:



International Journal of Pharmaceutics
Volume 533, Issue 2, 30 November 2017, Pages 389-401



Journal of Biomaterials Applications

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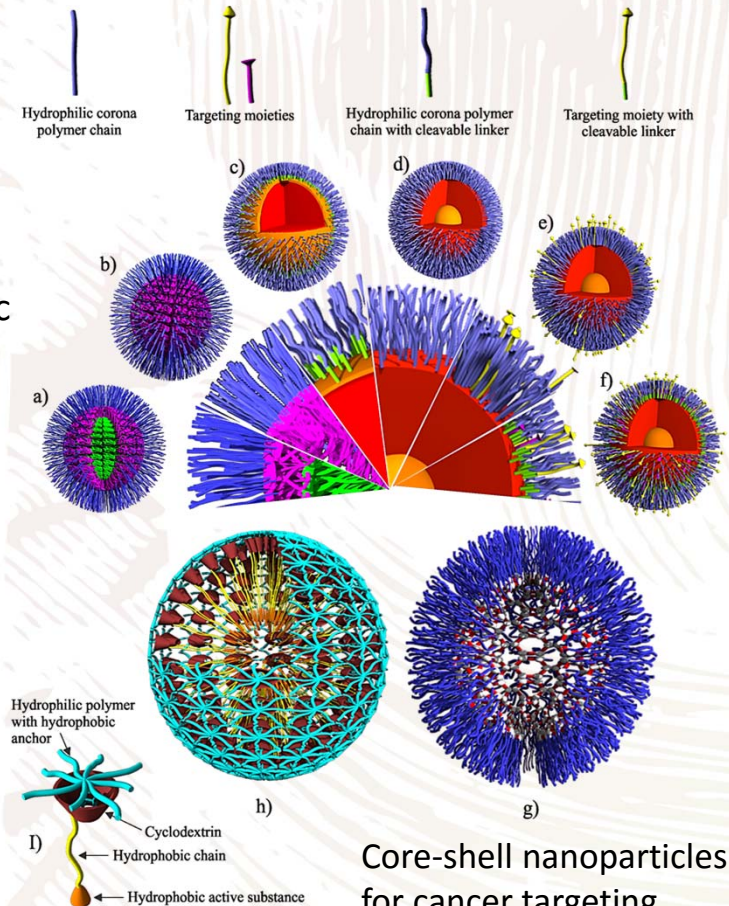
Efficacy assessment of self-assembled PLGA-PEG-PLGA nanoparticles: Correlation of nano-bio interface interactions, biodistribution, internalization and gene expression studies

Simona Dimchevska^{a,1}, Nikola Geskovski^{a,1}, Rozafa Koliji^a, Nadica Matevska-Geskovska^b, Vanessa Gomez Vallejo^c, Boguslaw Szczupak^{d,e}, Eneko San Sebastian^d, Jordi Llop^f, Delyan R. Hristov^g, Marco P. Monopoli^{g,h}, Gjorgji Petrushevskiⁱ, Sorja Ugarkovic^j, Aleksandar Dimovski^b, Katerina Gorachinova^{a,1}

Synthesis and self-assembly of amphiphilic poly(acrylic acid)-poly(ϵ -caprolactone)-poly(acrylic acid) block copolymer as novel carrier for 7-ethyl-10-hydroxy camptothecin

Beti Djurdjic, Simona Dimchevska, Nikola Geskovski, Marija Petrushevska, Valerya Gancheva, Georgi Georgiev, Petar Petrov, Katerina Gorachinova

First Published September 10, 2014 | Research Article | Check for updates





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Current Research and Research Interests:

Dr. Maguy El Hajj

- Role of pharmacist in public health
- Medication use assessment and adherence to clinical practice guidelines
- Development and evaluation of advanced pharmacy services in community pharmacy and hospital settings
- Management of cardiovascular diseases
- Smoking cessation
- Community pharmacy practice

Email:

maguyh@qu.edu.qa

BMJ Open Impact of a pharmacist-delivered discharge and follow-up intervention for patients with acute coronary syndromes in Qatar: a study protocol for a randomised controlled trial

El Hajj et al. *BMC Public Health* (2017) 17:215
DOI: 10.1186/s12889-017-4103-4

BMC Public Health

RESEARCH ARTICLE

Open Access



Effectiveness of a pharmacist-delivered smoking cessation program in the State of Qatar: a randomized controlled trial

Maguy Saffouh El Hajj^{1*}, Nadir Kheir¹, Ahmad Mohd Al Mulla², Rula Shami¹, Nadia Fanous² and Ziyad R. Mahfoud³



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Social & Administrative Pharmacy

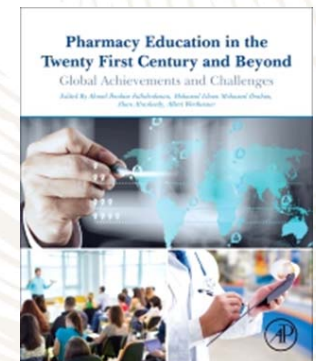
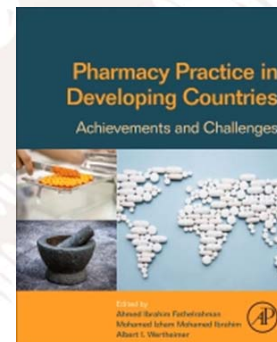
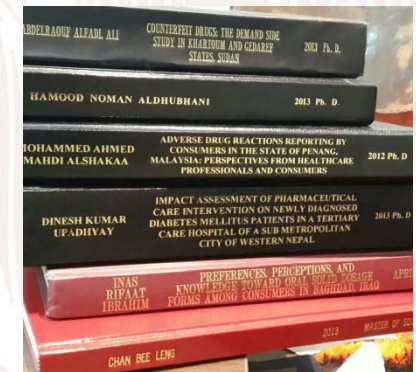
Mohamed Izham B. Mohamed Ibrahim, PhD (USA)

Head of Research and Graduate Studies - Pharmacy

Professor of Social & Administrative Pharmacy

Research Focus

- Pharmaceutical Policy and Supply Management
- Socio-behavioral Aspects of Pharmacy & Health
- Economic Evaluation of Medicines and Services
- Pharmacoepidemiology
- Pharmaceutical Management & Marketing





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Advanced Pharmacy Practice

Dr. Monica Zolezzi, BPharm, MSc, ACPR, PhD

Assistant Professor – Clinical Pharmacy and Practice

Structured Practical Experiences in Pharmacy (SPEP) Coordinator



Research Interests:

Medication therapy management and practice-based research in **mental health** and **geriatrics**.
Expanding roles for community pharmacists, non-medical prescribing, ambulatory care and pharmacy education.

Recent Published Research:

- Outcomes of patient education practices to optimize the safe use of lithium: A literature review. *Mental Health Clinician* 2018; 8(1):41-8.
- Medical comorbidities in patients with serious mental illness: A retrospective study of mental *health patients attending an outpatient clinic in Qatar*. *Neuropsychiatric Disease and Treatment* 2017; 13:2411-2418.
- Stigma Associated with Mental Illness: Perspectives from University Students in Qatar. *Neuropsychiatric Disease and Treatment* 2017; 13:1221-1233.
- Healthcare professionals' perspectives of a mental health educational campaign for the public. *Health Education Journal* 2017; 1-13.
- Perceived preparedness of health care students for providing cardiovascular disease risk assessment and management. *Pharmacy* 2017; 5:9.
- Teaching physical assessment and disease screening to students in the health professions: A focus in pharmacy education. *Health* 2016; 8: 1713-1725.



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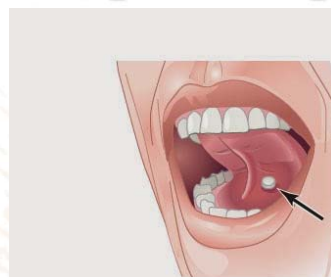
Drug Delivery/ Pharmacokinetics Lab

Ousama Rachid, PhD

In a tri-nation international collaboration (Canada, USA, and Qatar), Dr. Rachid works on *in silico*, *in vitro*, and *in vivo* pharmacokinetic evaluation of novel molecules and drug delivery systems.

Current research interests include *in silico* screening and characterization of novel small molecules for physicochemical properties and pharmacokinetic parameters through early predictions in the drug discovery and development process.

Runs the pharmacokinetics lab utilizing PHOENIX WinNonlin® PK and Simulations Plus ADMET Predictor® and GastroPlus® software as well as chromatographic and drug analysis instruments.

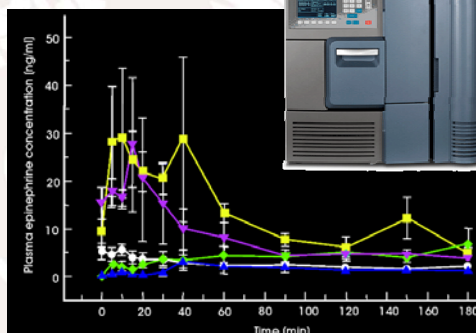
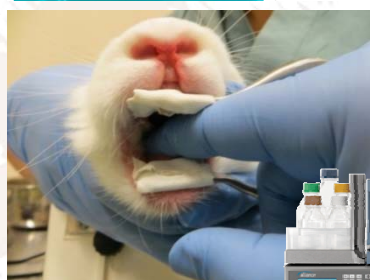


Pharmaceutics 2018, 10(1), 24; <https://doi.org/10.3390/pharmaceutics10010024>

Open Access Article

Epinephrine in Anaphylaxis: Preclinical Study of Pharmacokinetics after Sublingual Administration of Taste-Masked Tablets for Potential Pediatric Use

Ousama Rachid ^{1,*}, Mutasem Rawas-Qalaji ^{2,*} and Keith J. Simons ³



Structure	Ident...	"Risks"	"Tox"	ADMET_Risk	ADMET_Code	Abson_Risk	Abson_Code	RuleOPS	Rt
	DK1			7.438	Kow: Sec: Fc: NEG: MUT: 1A2: 2D6: CL: mEq: B	2.000	Kow: Sec	1.000	1.000
	DK2			2.098	Sec: MUT: 3A4: CL: mEq	1.000	Sw		0.000
	DK3			1.989	Sec: MUT: B	0.344	Sw		0.000
	DK4			4.520	Kow: Sec: 3A4: 1A2: 2C8: 3A6: mEq: B	1.378	Kow: Sec		0.000
	DK5			3.788	Kow: Sec: 3A4: 1A2: 2C8: 3A6: CL: B	1.647	Kow: Sec		0.000
	DK6			6.548	Error: Sec: Fc	2.000	Error: Sec		1.000



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Pharmacy Practice and Education

Dr. Shane Ashley Pawluk, BSc(Pharm), ACPR, PharmD
Assistant Professor, Clinical Pharmacy & Practice

Research Focus

Evaluation of pharmacist interventions to improve medication safety

Clinical pharmacokinetics

Pharmacy student assessment

Advancing pharmacist scope of practice

REVIEW ARTICLE

Pharmacokinetic Profile of Artemisinin Derivatives and Companion Drugs Used in Artemisinin-Based Combination Therapies for the Treatment of *Plasmodium falciparum* Malaria in Children

Pediatric Post-Discharge Mortality in Resource Poor Countries: A Systematic Review

Matthew O. Wiens^{1,2,3}, Shane Pawluk³, Niranjana Kissoon^{4,5}, Elias Kumbakumba¹, J. Mark Ansermino³, Joel Singer³, Andrew Ndamira¹, Charles Larson^{3,4,6}



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Cardiovascular Disease in Diabetes

Dr. Sownd Sankaralingam, MBBS, MSc, PhD

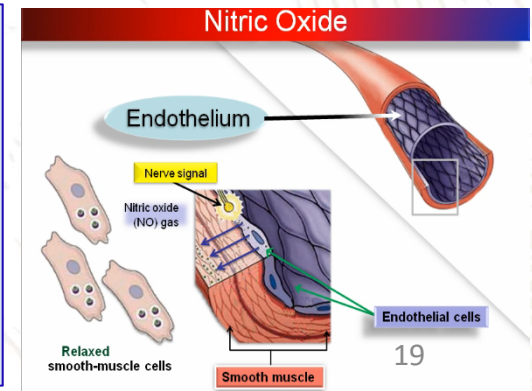
Cardiac Insulin Signaling and Energetics



Heart derives energy in the form of ATP from sources such as glucose and fatty acids (energetics). This is regulated by insulin. However, in diabetes and obesity, there is greater reliance on fatty acids due to insulin resistance which could lead to cardiac dysfunction (heart failure). My interests are to investigate how methylglyoxal that is increased in diabetes affects cardiac insulin resistance and alters energetics and strategies to prevent and treat this imbalance.

Endothelial Dysfunction in Diabetes

Endothelial cells line the inner most layer of any blood vessel. Normally, it generates nitric oxide (NO) that maintains arterial vasodilation and prevents atherosclerosis. However, in diabetes, the dysfunction endothelium generates excess oxygen free radical and less NO resulting in diabetic vascular disease. My interests are to investigate how methylglyoxal affects endothelial function and strategies to prevent and treat diabetic vascular disease.





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Clinical Pharmacy & Practice

Yaw B. Owusu, PharmD, MSc

Research interest includes:

- Outcomes research (Diabetes)
- Chronic anticoagulation
- Infectious diseases and antimicrobial stewardship
- Evidence-based medicine

Contact & Information

For any information email us:

- ❑ Prof. Mohamed Izham, PhD (Head of Research and Graduate Studies)
Email: mohamedizham@qu.edu.qa
Phone: +974 403 5580
- ❑ Assoc. Prof. Abdelali Agouni, PhD (PhD Program Coordinator)
Email: aagouni@qu.edu.qa
Phone: +974 403 5610
- ❑ Ms. Samar Abdalwahab, Administrative Coordinator
Email: samar.unis@qu.edu.qa
Phone: +974 4403 5559