



كلية الصيدلة
College of Pharmacy
QATAR UNIVERSITY جامعة قطر

Faculty Research Portfolio's

2013 / 2014





كلية الصيدلة
College of Pharmacy
QATAR UNIVERSITY جامعة قطر

Mission

To prepare our students to provide optimal pharmaceutical care and advance health care outcomes, to promote research and scholarly activity, and to serve as a pharmacy resource for Qatar, the Middle East and the world.

Vision

To be the leading pharmacy school in the Middle East region.

**Accredited by the Canadian Council for
Accreditation of Pharmacy Programs (CCAPP)**





Research Fund Sources:

Qatar University provides the following funding programs:

- ◆ Start-up Grants
- ◆ Student Grants
- ◆ University Grants
- ◆ Summer Grants
- ◆ Research Facility Grants

Other Funding Programs:

- ◆ National Institute of Health (NIH)
- ◆ The National Science Foundation (NSF)

Qatar National Research Funds (QNRF) provides the following funding programs:

- ◆ National Research Priorities Program (NPRP)
- ◆ Undergraduate Research Experience Program (UREP)
- ◆ Junior Scientists Research Program (JSREP)
- ◆ Graduate Student Research Award (GSRA)
- ◆ Postdoctoral Research Award (PDRA)
- ◆ Conference and Workshop Sponsorship Programs (CWSP)





Research Mission: to create and disseminate knowledge related to drug entities, products, therapy and medication use for the purpose of advancing health outcomes and quality of life.

The researchers in this college are committed to the following fundamental principles that have been promulgated by The Council of Canadian Academies:

- ◆ Conduct research in an honest search for knowledge (Honesty; Fairness; Trust; Openness)
- ◆ Foster an environment of research integrity, accountability, and public trust. (Trust; Accountability)
- ◆ Know your level of competence and your limitations; act accordingly. (Honesty; Trust; Accountability)
- ◆ Avoid conflict of interests, or if cannot be avoided, address them in an ethical manner. (Trust; Accountability; Openness)
- ◆ Use research funds responsibly. (Honesty; Accountability)
- ◆ Review the work of others with integrity. (Fairness; Trust)
- ◆ Report on research in a responsible and timely fashion. (Trust; Openness)
- ◆ Treat data with scholarly rigour. (Honesty; Accountability)
- ◆ Treat everyone involved with research fairly and with respect. (Fairness; Trust)
- ◆ Acknowledge all contributors and contributions in research. (Fairness; Accountability; Openness)
- ◆ Engage in the responsible training of researchers. (Fairness; Trust)





Important Research Facts:

- ◆ The College of Pharmacy has received \$ 6 million dollars in research grants to date
- ◆ 28.7% compound annual growth rate (11-2007) making QU the fastest-growing university in research in the middle east
- ◆ More than 60 posters, 50 papers and more than 70 oral presentations at the college in one year
- ◆ 55% of CPH students benefitted from student grants per academic year while all students are engaged at a certain point in research as it is a requirement for graduation
- ◆ 45 research projects are ongoing at the college level
- ◆ CPH is collaborating with many research groups in leading institutions across the world





Post Graduate Degrees



Master of Science in Pharmacy MSc (Pharm)

A 2 year post baccalaureate thesis-based, research-oriented graduate studies degree offering the following specializations:

- ◆ Clinical Pharmacy and Pharmacy Practice - NEW
- ◆ Pharmacognosy
- ◆ Medicinal Chemistry
- ◆ Pharmacology
- ◆ Pharmacokinetics
- ◆ Pharmaceutics

Doctor of Pharmacy Degree (PharmD)

The PharmD program is designed to prepare promising BSc (Pharm) graduates for a fulfilling career in advanced clinical pharmacy practice, research and academia. The PharmD program is the only international program to be accredited by the Canadian Council for Accreditation of Pharmacy Programs (CCAPP).





Research Interests Overview

Research Interests Include:

- ◆ To understand the potential interaction between heavy metals and aryl hydrocarbon receptor ligand which are common in the environment on the regulation of drug metabolizing enzymes
- ◆ To understand the role of cytochrome P450 (CYP) enzymes in the pathogenesis of cardiac hypertrophy

Methods/Expertise:

- ◆ In vivo (rats and mice), Cell lines, Isolated hepatocytes and cardiomyocytes, Real-time PCR, Western blot, DNA-Protein interaction, Enzyme activities and kinetics, Metabolites determination, Transfection, siRNA



Soluble epoxide hydrolase inhibitor, TUPS, protects against isoprenaline-induced cardiac hypertrophy

Hassan N Althurwi^a, Mandy MY Tse¹, Ghada Abdelhamid¹, Beshay NM Zordoky¹, Bruce D Hammock², Ayman OS El-Eadi¹

¹Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta, Edmonton, AB, Canada, and ²Department of Entomology and Cancer Research Center, University of California, Davis, CA, USA

Original Contributions

Methylated pentavalent arsenic metabolites are bifunctional inducers, as they induce cytochrome P450 1A1 and NAD(P)H:quinone oxidoreductase through AhR- and Nrf2-dependent mechanisms

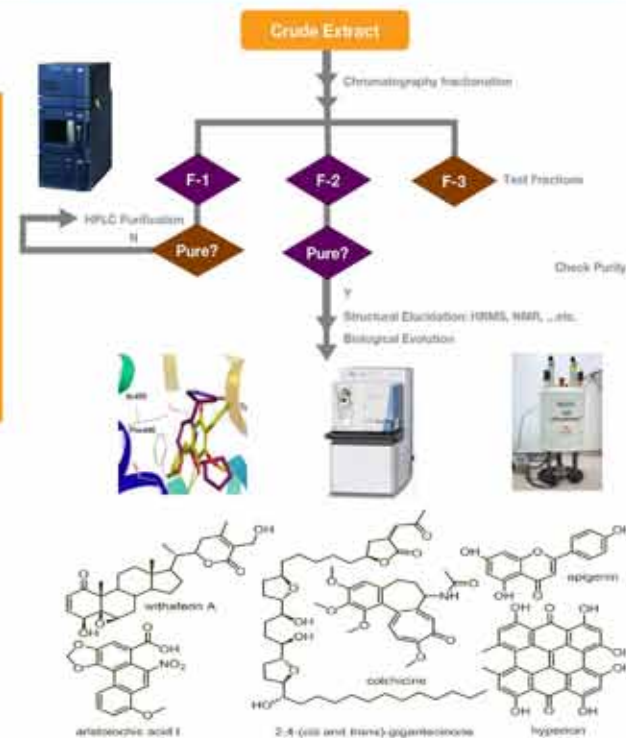
Anwar Anwar-Mohamed^a, Osama H. Elshenawy^a, Anatoly A. Soshilov^b, Michael S. Denison^b, X. Chris Le^c, Lars-Oliver Klotz^a, Ayman O.S. El-Kadi^{a,d,*}



Research Interests Include:

- ◆ Chemistry and biological activity of medicinal plants
- ◆ Quantitative analytical studies using HPLC, LC/MS/MS, and GC/MS
- ◆ Phytochemical standardization of herbal drugs

Bioactivity-guided Fractionation



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

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

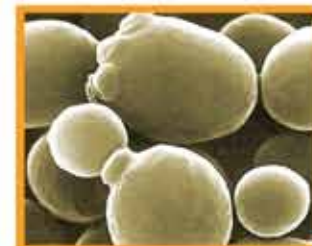
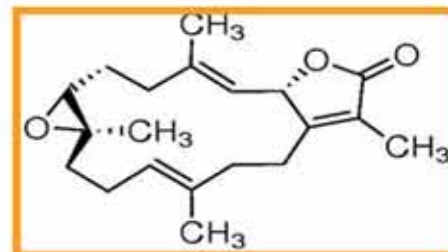
Department of Medicinal Chemistry and Molecular Pharmacology, School of Pharmacy and Pharmaceutical Sciences, Purdue University, West Lafayette, Indiana 47907

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,^{1,2} Tamam El-Elimat,² Chen Li,² Amjad Qandil,² Ahmad Alkofahi,² Khaled Tawaha,² Jason P. Burgess,² Yuka Nakanishi,² David J. Kroll,² Hernán A. Navarro,² Joseph O. Falkinham, III,² Mansukh C. Wani,² and Nicholas H. Oberlies^{1,2,3}





Latrunculin with a Highly Oxidized Thiazolidinone Ring: Structure Assignment and Actin Docking

Safwat A. Ahmed,[†] Srinivas Odde,[†] Parkaj R. Daga,[†] John J. Bowling,^{§§} Mostafa K. Mesbah,[†] Diaa T. Yousef,[†] Sherief I. Khalifa,^{†*} Robert J. Doerksen,^{*,§§} and Mark T. Hamann^{§§}

Available online at www.sciencedirect.com
 **SCIENCE @ DIRECT®** 
 Journal of Chromatography B 911 (2006) 47–53
www.elsevier.com/locate/jchromb

Quantitative determination of latrunculins A and B in the Red Sea sponge *Negombata magnifica* by high performance liquid chromatography
 Sherief Khalifa^{a,*}, Safwat Ahmed^a, Mostafa Mesbah^a, Diaa Yousef^a, Mark Hamann^b
^a Department of Pharmacognosy, Faculty of Pharmacy, Suez Canal University, Ismailia 41522, Egypt
^b Department of Pharmaceutical Chemistry and Biotechnology and Research Institute of Pharmaceutical Sciences, School of Pharmacy, The University of Michigan, Ann Arbor, MI 48106-1344
 Received 11 August 2005; accepted 14 December 2005
 Available online 20 January 2006

Research Interests Include:

- ◆ Isolation of bioactive substances from terrestrial and marine sources
- ◆ Structure elucidation using spectroscopic methods
- ◆ Microbial transformation as a tool in drug discovery
- ◆ Metabolism studies utilizing microorganisms

Bioactive cembranoids from the Red Sea soft coral *Sarcophyton glaucum*

Rania F. Abou El-Ezz^a, Safwat A. Ahmed^b, Mohamed M. Radwan^{c,d}, Nahla A. Ayoub^e, Manal S. Afifi^a, Samir A. Ross^{c,f}, Pawel T. Szymanski^g, Hesham Fahmy^g, Sherief I. Khalifa^{h,*}

Antiepileptic Ceramides from the Red Sea Sponge *Negombata corticata*

Safwat A. Ahmed,^{*,†} Sherief I. Khalifa,[†] and Mark T. Hamann[‡]





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Ms. Banan Mukhalalati, BSc (Pharm), RPH, MBA
Lecturer, Assistant Dean for Faculty and Student
Affairs



- ◆ MBA: Total Quality Management and Continuous Quality Improvement
- ◆ PhD (on going): Pharmacy Education: Design and Evaluation of Educational Programs





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College of Pharmacy
QATAR UNIVERSITY جامعة قطر

Dr. Maguy El-Hajj, PharmD, BCPS

Assistant Professor, Clinical Pharmacy and Practice
Chair of Clinical Pharmacy and Practice Section



Dr. Maguy El-Hajj
PharmD, BCPS (Clinical Pharmacy)
RESEARCH ARTICLE
Breast cancer health promotion in Qatar: a survey of community pharmacists' interests and needs
Maguy Sahab El-Hajj - Rana Khatib Al-Nahel

Dr. Maguy El-Hajj
PharmD, BCPS (Clinical Pharmacy)
RESEARCH ARTICLE
Smoking cessation counseling in Qatar: community pharmacists' attitudes, role perceptions and practices
Maguy Sahab El-Hajj - Rana Khatib Al-Nahel - Raja's Al-Sayid

Patient Preference and Adherence

Dovepress

ORIGINAL RESEARCH

Public's attitudes towards community pharmacy in Qatar: a pilot study

Research Interests Include:

- ◆ Pharmacotherapy
- ◆ Pharmacy practice
- ◆ Ambulatory care
- ◆ Public health

Current Research Projects:

NPRP 4th cycle

Assessing the effectiveness of a Pharmacist Delivered Smoking Cessation Program in the State of Qatar.

UREP 10 cycle

Diabetes Mellitus Care in the State of Qatar: a Survey of Pharmacists' Activities, Attitudes and Knowledge.

UREP 11 cycle

Cardiovascular disease prevention in the state of Qatar: a survey of pharmacists activities, attitudes and knowledge.



Pharmacy Practice and Outcomes Research

Research Interests Include:

- ◆ Pharmacy practice
- ◆ Outcome-based research
- ◆ Pharmacoepidemiology
- ◆ Health promotion and tobacco

Current Research Projects:

- ◆ Effectiveness of research training programs on improving research capacity among pharmacists
- ◆ Utilization and predictors of proton pump inhibitors use in patients with ACS receiving antiplatelet therapy
- ◆ Impact of insulin-containing regimens vs. oral anti-diabetic therapy on economic and clinical outcomes of poorly controlled T2DM patients
- ◆ Pictorial health warnings on cigarette packages in Qatar
- ◆ Waterpipe smoking: prevalence, perception, correlates of quitting



Int J Clin Pharm (2011) 33:150–154
DOI 10.1007/s11096-011-9480-7

SHORT RESEARCH REPORT

Efficacy and safety of dexmedetomidine versus morphine in post-operative cardiac surgery patients

Noorizan Abd. Aziz · Mul Ching Chue ·
Chow Yen Yong · Yahaya Hassan · Ahmed Awaisu ·
Jahizah Hassan · Mohd. Hamzah Kamarulzaman

Nicotine & Nicotine & Tobacco Research Advance Access published May 3, 2013

ORIGINAL INVESTIGATION

Pictorial Health Warnings on Cigarette Packages in Qatar: Preimplementation Awareness and Perceptions of Ever-Smokers Versus Never-Smokers

Ahmed Awaisu PhD, BPharm, Aisha Hagl BScPharm candidate, Marwa Atifa Ashour BScPharm candidate,
Nadira Kheir PhD, BPharm

<http://www.tobaccocontrol.bmj.com/content/32/1/17>

RESEARCH

Open Access

Impact of connecting tuberculosis directly observed therapy short-course with smoking cessation on health-related quality of life

Ahmed Awaisu¹, Mohamed Hani Nk Mohamed², Nooriza Mohamed Noor³, Abdul Razak Muttalif⁴,
Noorizan Abd Aziz⁵, Syed Athar Syed Sulaiman⁶ and Azah Ahmad Mahayiddin⁷





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Alla El-Awaisi MPharm, MRPharmS, MSc

Clinical Lecturer, Clinical Pharmacy and Practice

PhD Candidate, School of Pharmacy and Life Sciences, Robert Gordon University, Aberdeen, UK

Clinical Lecturer



Research Interests Include:

- ◆ Interprofessional Education & Collaborative Practice

Perceptions of Pharmacy Students, Pharmacists and Pharmacy Faculty in Qatar to Interprofessional Education and Collaborative Practice



RGU ROBERT GORDON UNIVERSITY ABERDEEN

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Interprofessional Education at Pharmacy Schools in Arabic-Speaking Middle Eastern Countries: An Investigative study

A Pilot Study of the Impact of Integrating Interprofessional Education in a Clinical Setting





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Dr. Bridget Paravattil Javed, PharmD

Assistant Professor, Clinical Pharmacy and Practice
Structured Practical Experiences in Pharmacy (SPEP) Coordinator
Clinical Pharmacy Specialist, Heart Hospital



Research Interests Include:

- ◆ Pharmacy education with a focus on experiential training, patient education, and pharmacy practice and clinical services in an ambulatory setting

American Journal of Pharmaceutical Education 2012; 76 (9) Article 169.

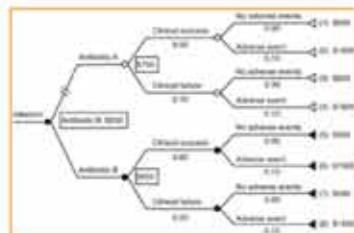
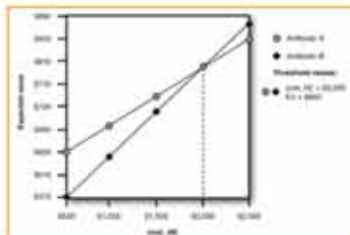
Research Preceptor' Self-Assessment of Their Ability to Perform the Learning Objectives of an Experiential Program

Bridget Paravattil, PharmD

College of Pharmacy, Qatar University, Doha, Qatar

Submitted April 25, 2012; accepted June 14, 2012; published November 12, 2012.





Trends of cardiovascular drug utilization and expenditures in qatar (2007-2011)

PHP47 The Economic Impact of a Cost-Effectiveness Threshold on the Innovative Drug Expenditure in Qatar

Pharmacoeconomic evaluation of voriconazole versus posaconazole for antifungal prophylaxis in acute myeloid leukaemia

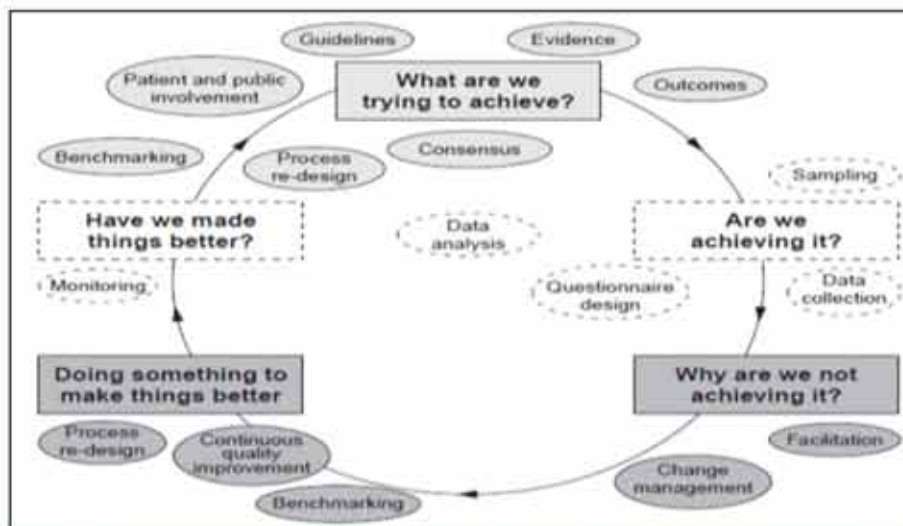
Research Interests Include:

- ◆ Cost-effectiveness/ benefit of medications and pharmacy services
- ◆ Clinical comparative studies of drugs
- ◆ Decision modeling
- ◆ Formulary drug selection
- ◆ Trend analyses
- ◆ Cardiovascular disease
- ◆ Smoking cessation
- ◆ Infectious disease
- ◆ Emergency medicine



Research Interests Include:

- ◆ Systematic review of care provided to patients with chronic diseases to improve its quality and outcomes
- ◆ Developing, validating and applying medication assessment tool (MAT), a novel approach in clinical audit
- ◆ CVD risk assessment and implementation of pharmaceutical care plan in clinical settings



Adherence to clinical guidelines in management of diabetes and prevention of cardiovascular disease in Qatar

Mohammad Issam Diab · B. Julianne Johnson · Steve Hudson

Int J Clin Pharm (2011) 33:285–467
Pharmaceutical care needs in patients on long-term corticosteroids: Analysis of risks of diabetes, osteoporosis and cardiovascular events

M. Issam Diab^{*}, M. alkuysi¹, A. Alhatareshah¹, I. Towle¹,

Int J Clin Pharm (2013) 35:866–1019 DOI 10.1007/s11096-013-9801-0
Targeting diabetic patients in Qatar for pharmaceutical care using cardiovascular risk analysis

M. Diab^{1,*}, P. Chandra², B. J. Johnson³





Research Interests Include:

- ◆ Practice-based research in infectious disease
- ◆ Antimicrobial stewardship
- ◆ Antibiotic utilization
- ◆ Health promotion
- ◆ Pharmacy education

Infectious Diseases

Vancomycin-Induced Neutropenia: Is it Dose- or Duration-Related?

Emily Black, Tim TY Lau, and Mary HH Ensom

Drug-induced neutropenia is a serious condition resulting in decreased absolute neutrophil count (ANC) and subsequent increased risk of infection. Anlex et al. summarized the literature in 2002 and reported drug-induced neutropenia in a broad range of drug classes including antineoplastic, analgesic, antipsychotic and sedative, anticonvulsants, anti-thyroid drugs, cardiovascular drugs, and antibiotics.¹ Mortality rates of non-chemotherapy drug-induced agranulocytosis were reported as high as 55% in a retrospective review.¹ Antibiotics have been implicated as a common non-chemotherapy drug-induced cause of neutropenia, with a mortality rate of 50%.^{1,2}

Vancomycin-induced neutropenia, defined as an ANC less than 1000/ μ L, has been reported to occur at rates of 2-12%.^{3,4} The first 2 case reports were published by Dargerfeld and colleagues in 1960, shortly after the introduction of the drug.⁵ Since these initial cases, vancomycin-induced neutropenia has continued to be reported in the literature. Earlier formulations of vancomycin had impurities that may have contributed to higher incidences of adverse effects, such as neutropenia.⁶ Although the path-

OBJECTIVE: To systematically evaluate the literature to determine whether vancomycin-induced neutropenia is dose- or duration-related and provide clinicians with useful treatment alternatives.

DATA SOURCES: A sensitive search of PubMed (1949-November 2010), MEDLINE (1900-November 2010), EMBASE (1965-November 2010), and Anatomical/Pharmacological Abstracts (1970-November 2010) was performed using the terms vancomycin, neutropenia, and leukopenia. Citations from bibliographies were reviewed for additional references.

STUDY SELECTION AND DATA EXTRACTION: Studies and case reports were included if they reported neutropenia with vancomycin administration and excluded if they did not describe vancomycin dosage and/or concentrations, or if neutropenia resolved while the patient was still receiving vancomycin. Cases with significant confounders and those in which authors provided minimal information about patients were also excluded.

DATA SYNTHESIS: Seven retrospective chart reviews (6, case series) and 35 case reports were identified. Of these, 3 retrospective reviews and 35 case reports met inclusion criteria. To our knowledge, no prospective studies have assessed the clinical complication. Data suggest that vancomycin-induced neutropenia may not be completely related to daily dosages, total cumulative dosage, or vancomycin-specific vancomycin concentrations. Furthermore, evidence suggests that neutropenia is more likely associated with therapy longer than 7 days, with the majority of episodes occurring beyond 20 days of therapy. Given these findings, a practical approach is to monitor white blood cell (WBC) count with a differential (including absolute neutrophil count) once a week in patients who are receiving vancomycin for more than 7 days.

CONCLUSIONS: Vancomycin-induced neutropenia is most likely associated with prolonged vancomycin exposure. Patients receiving vancomycin for longer than 7 days should have WBC counts, differentials, monitored weekly. Vancomycin should be discontinued if there is a high clinical suspicion of it causing neutropenia, and an alternative agent should be initiated. Prospective case-controlled studies are needed to better characterize this adverse event.

KEY WORDS: neutropenia, systematic review, vancomycin

Ann Pharmacother 2011;45:629-36

Published Online, 26 Apr 2011; www.annpharm.org; DOI: 10.1345/aph.17160

Author information provided at end of text.

www.annpharm.org

The Annals of Pharmacotherapy • 2011 May, Volume 45 • 629

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Dr. Elewa received several awards including a pre-doctoral fellowship grant from the American Heart Association.

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Early Atorvastatin Reduces Hemorrhage after Acute Cerebral Ischemia in Diabetic Rats

Hazem F. Elewa, Anna Kozak, Azza B. El-Remessy, Reginald F. Frye, Maribeth H. Johnson, Adviye Ergul, and Susan C. Fagan

Program in Clinical and Experimental Therapeutics, College of Pharmacy, University of Georgia, Augusta, Georgia (H.F.E., A.K., A.E.E., A.E., S.C.F.); Charlie Norwood Veterans Administration Medical Center, Augusta, Georgia (H.F.E., A.K., A.E.E., A.E., S.C.F.); College of Pharmacy, University of Florida, Gainesville, Florida (R.F.F.); and Departments of Biostatistics (M.H.J.), Physiology (A.E.), and Neurology (S.C.F.), Medical College of Georgia, Augusta, Georgia

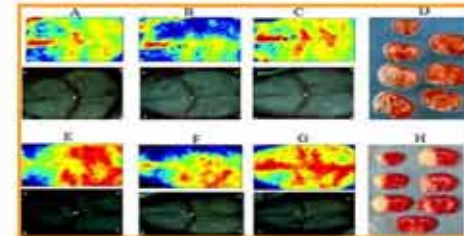
Received October 2, 2008; accepted May 26, 2009

Dr. Hazem Elewa, RPh, PhD., BCPS Assistant Professor, Clinical Pharmacy and Practice

Research Interests Include:

- ◆ Vascular protection
- ◆ Vascular damage is a hallmark in ischemic stroke and diabetes mellitus which is a major risk factor for stroke
- ◆ Pharmacogenetics and personalized medicine implementation
- ◆ Anticoagulation personalized medicine in cardiovascular diseases through the use of pharmacogenetics. Interpatient variability and lack of response to medications can cause serious adverse effects
- ◆ We study the use of pharmacogenetics as a tool to dose warfarin

Vascular Protection in Stroke and Diabetes Mellitus



Pharmacogenetics in Cardiovascular Diseases





Research Interests Include:

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

Evaluating Drug Prices, Availability, Affordability, and Price Components: Implications for Access to Drugs in Malaysia

Zaher Ud Din Babar^{1*}, Mohamed Izham Mohamed Ibrahim², Harpal Singh³, Nadeem Irfan Bukhari⁴, Andrew Creese⁵

¹ Discipline of Social and Administrative Pharmacy, School of Pharmaceutical Sciences, Universiti Sains Malaysia, Penang, Malaysia; ² School of Pharmaceutical Sciences, Universiti College Serdang International, Kuala Lumpur, Malaysia; ³ School of Pharmacy, International Medical University, Kuala Lumpur, Malaysia; ⁴ La Gélis, Les Ventes de Biotech, France

Effect of delay in diagnosis on the rate of tuberculosis among close contacts of tuberculosis patients

A.H.N. Aldhubhani¹, M.I. Mohamed Izham², I. Pazilah³ and M.S. Anoom¹

Dispensing Practices of General Practitioners and Community Pharmacists in Malaysia—A Pilot Study

Alamin Hassan MA Alabid, Mohamed Izham M Ibrahim, Mohamed Azmi A Hassali

Effect of privatization of the drug distribution system on drug prices in Malaysia

Z.D. Babar^{a,*}, M.I.M. Izham^b

^a School of Pharmacy, Faculty of Medical and Health Sciences, University of Auckland, 85, Park Road, Grafton, Auckland, New Zealand

^b Universiti Sains Malaysia, Penang 11800, Malaysia

Time to entry of generic medicines in Malaysia: implications for pharmaceutical cost containment

Omotayo Fatokun^{a,b}, Mohamed Izham M. Ibrahim^c and Mohamed Azmi A. Hassali^a

^aDiscipline of Social and Administrative Pharmacy, School of Pharmaceutical Sciences, Universiti Sains Malaysia, Penang, ^bFaculty of Pharmaceutical Sciences, UCSI University, Kuala Lumpur, Malaysia and

^cCollege of Pharmacy, Qatar University, Doha, Qatar



Incidence, severity and preventability of medication-related visits to the emergency department: a prospective study

Peter J. Zed PharmD, Riyad B. Abu-Laban MD MHSc, Robert M. Balen PharmD, Peter S. Loewen PharmD, Corinne M. Hohl MD, Jeffrey R. Brubacher MD MSc, Kerry Wilbur PharmD, Matthew O. Wiens BSc(Pharm), Leslie J. Samoy BSc(Pharm), Katie Lacaria BSc(Pharm), Roy A. Purssell MD

CMAJ 2008;178(12):1563-9

OPEN ACCESS [Freely available online](#)

PLOS ONE

Drug-Related Hospital Visits and Admissions Associated with Laboratory or Physiologic Abnormalities—A Systematic-Review

Kerry Wilbur*, Huda Hazi, Aya El-Bedawi
College of Pharmacy, Qatar University, Doha, Qatar

Drug Saf (2013) 36:25–30
DOI 10.1007/s40264-012-0001-y

SHORT COMMUNICATION

**Pharmacovigilance in the Middle East
A Survey of 13 Arabic-Speaking Countries**

Kerry Wilbur

Pharmacovigilance in Qatar Hospitals

Kerry Wilbur

College of Pharmacy, Qatar University, Doha, Qatar

Wilbur et al. *Globalization and Health* 2012, 8:12
<http://www.globalizationandhealth.com/content/8/1/12>

GLOBALIZATION AND HEALTH

Physician perceptions of pharmacist roles in a primary care setting in Qatar

Kerry Wilbur*, Amna Beniles and Arwa Hammuda



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QATAR UNIVERSITY جامعة قطر



Dr. Kyle John Wilby, BSP, ACPR, PharmD

Assistant Professor, Clinical Pharmacy and Practice
Clinical Pharmacy Specialist, National Center for Cancer Care &
Research (NCCCR)



المركز الوطني
لعلاج وأبحاث السرطان
National Center for
Cancer Care & Research

عضو في مؤسسة حمد الطبية
A Member of Hamad Medical Corporation



Research Interests Include:

- ◆ Practice-based research in Oncology, Pain Management, and Palliative Care
- ◆ International Health, Health Promotion, and Infectious Diseases
- ◆ International Education of Health Professionals
- ◆ Clinical Pharmacokinetics
- ◆ Non-traditional Approaches to Enhance Medication Understanding
- ◆ Collaborations in Qatar, Ghana, and Canada

Definitive Article

International variation in drug utilization: Antidepressant utilization in North America, Greece, and Ireland

Muhammad Mander¹, Kyle Wilby²

¹Senior Research Centre for the U to Drug Knowledge Institute, St. Wilfrid's Hospital, Toronto, Ontario, Canada; ²Faculty of Pharmaceutical Sciences, University of British Columbia, Vancouver, British Columbia, Canada

ABSTRACT

Background: Given significant regional differences globally in healthcare systems, policies, and culture, we questioned rates of pharmaceutical utilization among four developed nations using antidepressant drugs as a case example.

Methods and Results: Medication use (population-based) was determined for antidepressant utilization in Canada, the United States, Greece, and Ireland from January 2010 to December 2011, using electronic data (medication use 80%, ICD-10 prescription codes for 13 antidepressants: Paroxetine, Escitalopram, Fluoxetine, Venlafaxine, Sertraline, Citalopram, Duloxetine, Venlafaxine ER, Desvenlafaxine, Milnacipran, Mirtazapine, Nefazodone, and Trazodone). We used drug-specific analysis to identify trends in utilization patterns (i.e., antidepressant utilization increases steadily over time for all study regions, although regional differences exist) in the magnitude of antidepressant utilization and the rates of increase. While overall antidepressant utilization rates were similar between Canada (2.8% utilization per month) and the United States (2.8% utilization per month), Greece (2.8% utilization per month) and Ireland (2.8% utilization per month) were significantly higher than the other two countries. Although the use of SSRI, SNRI, and other antidepressants generally increased over time, the use of TCAs and MAOIs generally decreased over time. Utilization of specific drug classes varied widely between regions ranging from an 80% increase in SSRI utilization between the United States and Greece, to a nearly 70% increase in the utilization of MAOIs between Canada and the United States.

Conclusions: The findings of our study using antidepressants as the case example, are consistent with previous studies demonstrating significant variation in drug utilization levels internationally. Future studies are needed to document regional variation in drug utilization rates in other countries and to explore the reasons for these differences.

Keywords: Drug utilization, international, pharmacoepidemiology

INTRODUCTION

Pharmaceutical therapies are one of the cornerstones of modern medicine. Over the past few decades, there has been a significant increase in the use of pharmaceuticals. In 2010, the global pharmaceutical market was valued at \$1.2 trillion, with the United States accounting for approximately 30% of total sales. The global pharmaceutical market is expected to reach \$1.7 trillion by 2016. [1] However, regional rates vary considerably. In 2010, the United States accounted for 30% of total sales, while Europe accounted for 25%, and the rest of the world for 45%. [2]





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QATAR UNIVERSITY جامعة قطر



Dr. Nadir Kheir, PhD., MPS FNZCP

Associate Professor, Clinical Pharmacy and Practice
Coordinator of Continuing Professional Pharmacy Development

Current Research Projects:

- ◆ Characterization of interventions made by pharmacists conducting medication use reviews at primary health care center in Qatar
- ◆ Development and evolution of pictograms on medication labels for patients with limited literacy skills in a culturally diverse multiethnic population
- ◆ Pharmacists' knowledge and attitudes about natural health products in Qatar: A mixed-methods study

Medication Management:

- ◆ Status and evaluation of pharmacy practice and pharmaceutical care in Middle East
- ◆ Chronic disease management by pharmacists
- ◆ Pharmacists-run asthma and diabetes clinics.

Population-based and Quality of Life Studies:

- ◆ Adherence studies
- ◆ Health-related Quality of Life
- ◆ KAP Studies

Drug, Healthcare and Patient Safety

Open Access Full Text Article

An exploratory study on medications in Qatar homes



AVICENNA

Pharmaceutical care in the Arabic-speaking Middle East: literature review and country informant feedback

Nadir Kheir^{1*}, Dousa Al Saad, Shaikha Al Naimi

Kheir et al. BMC Research Notes 2013, 8:299
<http://www.biomedcentral.com/1750-0008/8/299>



RESEARCH ARTICLE

Open Access

Concerns and considerations among caregivers of a child with autism in Qatar

Nadir M Kheir^{1*}, Ola M Ghoneim^{1,2}, Amy L Sandridge³, Sara A Hawley⁴, Muna S Al Jassal⁵ and Fadhla Al Rawi⁶





CPJ 2010;143(4):170-5

PLoS ONE 8(6):e66698

Clin Pharmacokinet 2013;52:153-67

Opportunities for medication-related support after discharge from hospital

Priya S. Flanagan, BSc, PharmD; Shane Pawluk, BScPharm; Sanjeev Batins, BScPharm

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 Pawluk², Niranjana Kissoon^{4,5}, Elias Kumbakumba¹, J. Mark Ansermino³, Joel Singer², Andrew Ndamira¹, Charles Larson^{2,4,6}

Research Interests Include:

- ◆ Evaluation of pharmacist interventions to improve medication safety
- ◆ Pharmacotherapy and drug use in pediatric populations
- ◆ Pharmacokinetic analysis in pediatric populations
- ◆ Pharmacy education
- ◆ Advancing pharmacist scope of practice

Research Highlights:

- ◆ Pharmacist medication support post-hospital discharge
- ◆ Pharmacokinetic variability of antimalarial agents in the pediatric population
- ◆ Pediatric febrile neutropenia treatment protocol evaluation
- ◆ Post hospital discharge mortality of children in resource poor countries
- ◆ Evaluation of therapeutic options for pain in the emergency department



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Medicinal Chemistry Lab



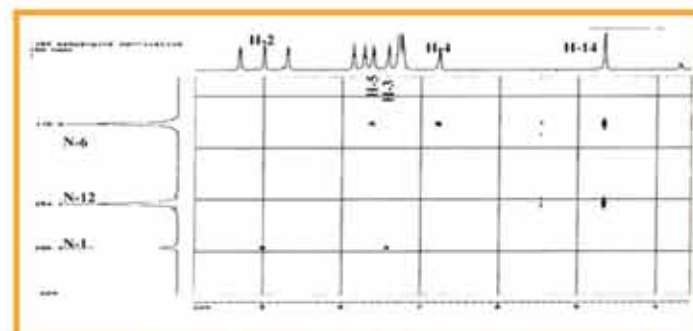
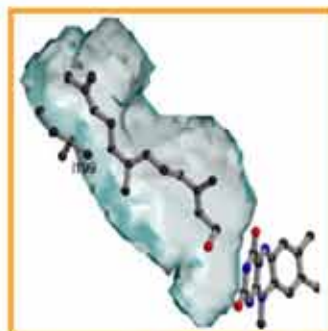
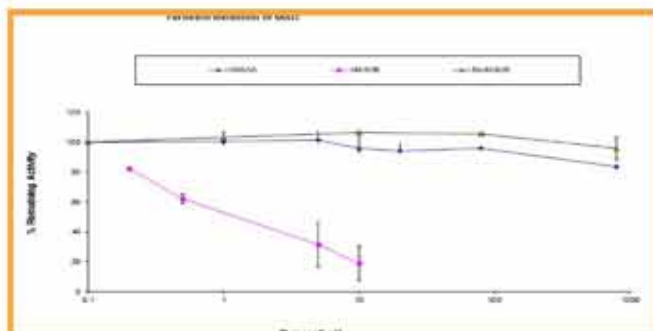
Isolation and Characterization of a Monoamine Oxidase Inhibitor
from Tobacco Leaves

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

Department of Chemistry, Virginia polytechnic institute and state university,
Blacksburg, Virginia 24061- 0212 health's

Research Interests Include:

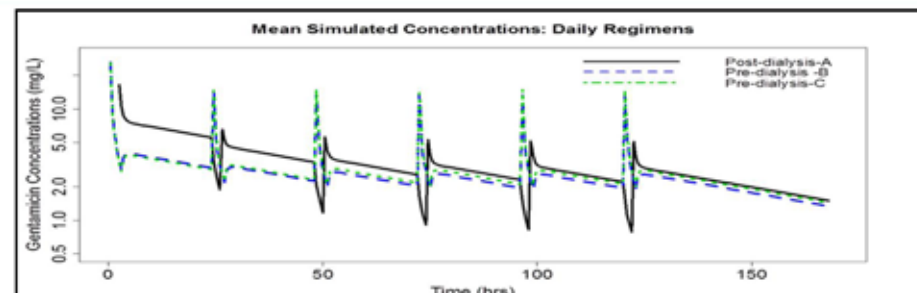
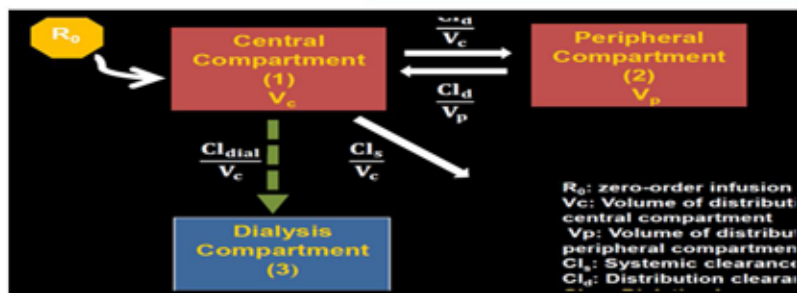
- ◆ Synthesis of Biologically Active Compounds
- ◆ Chemical modification of natural products
- ◆ Structural elucidation using 1D and 2D NMR, IR and Mass Spectrometry
- ◆ The discovery of new monoamine oxidase inhibitors
- ◆ Enzyme kinetics
- ◆ Evaluation of the effect of tobacco smoke on MAO





Research Interests Include:

- ◆ Current research interests include optimization of therapy in special patient populations with focus on sepsis, obese, cancer, and renal failure patients
- ◆ Works on optimization and individualization of patient therapy through the use of pharmacokinetic modeling and simulation techniques.
- ◆ Runs the pharmacokinetics lab utilizing NONMEM® and PHOENIX Win-Nonlin® PK softwares as well as chromatographic and cell culture facilities





Research Interests Include:

- ◆ Cardiovascular Cellular and Molecular Pathophysiology
- ◆ Cancer Biology and Therapeutics

Current Projects:

- ◆ Calcineurin-NFAT Signaling Pathway Mediates NHE1 Induced Cardiac Hypertrophy
- ◆ p90 Ribosomal S6 Kinase Contributes to the NHE1 Induced Hypertrophic Response Of H9c2 Cardiomyoblasts
- ◆ Osteopontin Promotes Cell Survival in H9c2 Cardiomyoblasts Through Akt-and HIF-1 Up-Regulation
- ◆ The Role of Topoisomerase II in Anthracycline Induced Cardiotoxicity
- ◆ Involvement of the Na⁺/H⁺ Isoform 1 (NHE1) in the Growth and Progression of Human Lung Adenocarcinomas





Biocompatibility and biodegradability of implantable drug delivery matrices based on novel poly(decane-co-tricarballoylate) photocured elastomers

Mohammed A. Shaker^{1,2}, Noriko Danematsuta¹, Jules J.E. Dore¹ and Husam H. Younes¹

Interleukin-2: Evaluation of Routes of Administration and Current Delivery Systems in Cancer Therapy

MOHAMMED A. SHAKER,¹ HUSAM H. YOUNES^{1,2}

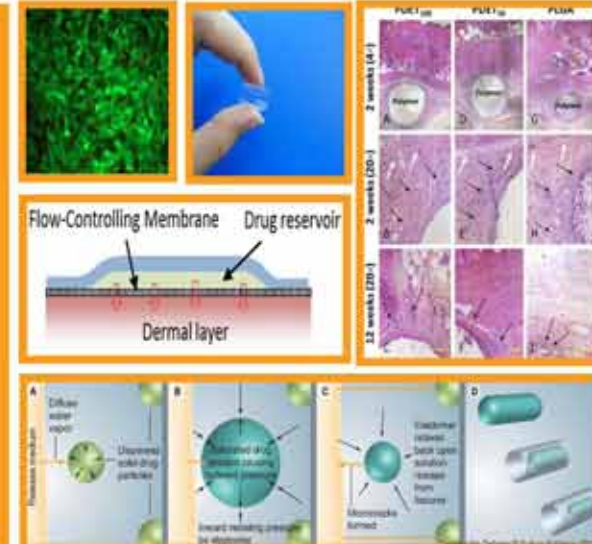
¹School of Pharmacy, Memorial University of Newfoundland, St. John's, Newfoundland, Canada A1B 3X9

²Department of Pharmaceutical Sciences, College of Pharmacy, Qatar University, PO Box 2713, Doha, Qatar

Published online 12 November 2009 in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/jps.22000

Research Interests Include:

- ◆ Synthesis & characterization of new biodegradable elastomers for controlled & targeted drug delivery of therapeutic proteins
- ◆ Tissue engineering applications of biodegradable polymers in cartilage repair & cardiovascular diseases
- ◆ Design, development & *in vitro-in/vivo* testing of controlled oral dosage forms & transdermal drug delivery systems for cancer and diabetes treatment
- ◆ Bioequivalence studies & *in vitro-in vivo* correlations





Research Interests Include:

- ◆ Mechanisms of Diabetes & Obesity-induced Nephropathy
- ◆ Novel Therapeutic Approaches to Treat Nephropathy





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