

# The 24<sup>th</sup> Annual Pharmacy Congress

BEIRUT 17 | 18 | 19 November 2016

UNDER THE HIGH PATRONAGE OF HIS EXCELLENCY  
The Prime Minister  
**MR. TAMMAM SALAM**

**ADVANCING THE PHARMACIST'S ROLE  
TOGETHER WE MAKE A DIFFERENCE**

**تطوير دور الصيدى  
معاً نحدث الفرق**



**THE LEBANESE ORDER  
OF PHARMACISTS**

**18  
CREDITS**

## WELCOME LETTER



The Lebanese Order of Pharmacists is proud to announce the program of the 24th Annual Congress under the theme: "Advancing the Pharmacist's Role: Together We Make a Difference".

The scientific program involves several sections that cover all the emerging roles of the pharmacist to better serve our dear profession, thriving to lead in health care and become more patient- than product-oriented. The program also promotes the application of scientific knowledge in real practice.

According to the World Health Organization, a Seven Stars pharmacist is a caregiver, decision maker, communicator, manager, leader, teacher and a life-long learner. On top of it, a modern pharmacist is also a researcher involved in academia and public health issues and a health care major player involved in medication therapy management (MTM) and safety.

I wish you fruitful moments attending our rich program, animated by international and national renowned speakers.

**Dr. Georges Sili**

President,  
Lebanese Order of Pharmacists

A handwritten signature in blue ink that reads "Georges Sili".

## **PRESIDENT OF THE CONGRESS**

Georges Sili

## **PRESIDENT OF SCIENTIFIC COMMITTEE**

Pascale Salameh

## **SCIENTIFIC COMMITTEE**

Ayman Alameddine

Souraya Domiaty

Chady Maroun

Pascale Salameh

Soha Sinno

Hassan Zaraket

Rony Zeenny

## **ORGANIZING COMMITTEE**

Dany Hayek

Eliza Helou

Nathalie Lahoud

Antoine Saade

Hala Sacre

Pascale Salameh

Rony Zeenny

**THURSDAY NOVEMBER 17, 2016**

08:30	<b>Registration</b>	
08:55 - 09:00	Soft Opening	Pascale SALAMEH
	<b>Session 1: Disease Management</b> ( 2 C.E. Credits )	<b>Moderator:</b> Michelle CHERFAN
09:00 - 09:30	Implementing Medication Therapy Management Services: "The Hows and Whys?"	Ghada KHOURY, PharmD, BCACP
09:30 - 10:00	Preventing Diabetic Vascular Complications: What We Know and Where the Future Lies	Ahmed EL YAZBI, BPSc, PhD, BCPS, RP
10:00 - 10:30	The Continuum of Care for the Type 2 Diabetic Patient (Sponsored by Lilly)	Rita NEMR, MD
10:30 - 11:00	The Links Between Erectile Dysfunction and BPH (Sponsored by Lilly)	Raja KHAULI, MD
11:00 - 11:30	<b>Signature of Agreement with SGBL</b>	
11:30 - 12:00	<b>Coffee Break</b>	
12:00 - 13:00	<b>OPENING CEREMONY</b>	
13:00 - 15:00	<b>Lunch Break</b>	
	<b>Session 2: Specialty Pharmacy</b> ( 1.5 C.E. Credits )	<b>Moderator:</b> Sanaa AWADA
15:00 - 15:30	Pharmacogenomics: A Driving Force to Personalized Medicine	Yolande SAAB, PharmD, PhD
15:30 - 16:00	Bioequivalence and Therapeutic Equivalence	Soula KYRIACOS, B.Pharm, PhD
16:00 - 16:30	Rising Costs of Specialty Medication: Impact on Healthcare	Zeina ABOU JAOUDE, PharmD, MBA
16:30 - 17:00	<b>Coffee Break</b>	
	<b>Session 3: Medical Biology</b> ( 1.5 C.E. Credits )	<b>Moderator:</b> Marc Antoine ZABLITH
17:00 - 17:30	Coeliac Disease: Epidemiology and Diagnosis	Salam SAMAD, PharmD, Clinical Lab Specialist, MBA
17:30 - 18:00	High Sensitive Troponin: Time to Save Lives	Marcel ACHKAR, PharmD, Clinical Lab Specialist
18:00 - 18:30	Pregnancy and Haemostasis	Myrna GERMANOS, PharmD, Clinical Lab Specialist

**FRIDAY NOVEMBER 18, 2016**

08:30

**Registration****Session 4: Research** ( 1.5 C.E. Credits )**Moderator:**

Aline HAJJ

09:30 - 10:00

Validation of Asthma Control and Quality of Life Scales in Lebanon

Souheil HALLIT,  
PharmD, MS, MPH,  
PhD Candidate

10:00 - 10:30

Treatment and Prevention of Varicella Zoster Virus Infections

Hassan ZARAKET,  
BS Pharm, PhD

10:30 - 11:00

Délivrance des antibiotiques à l'officine: un défi à la portée des pharmaciens

Krikor SAHAKIAN,  
PharmD, PhD

11:00 - 11:30

**Coffee Break****Session 5: Soft Skills - Keynote Speaker** ( 1.5 C.E. Credits )**Moderator:**

Marwan AKEL

11:30 - 13:30

Enhancing Accountability in the Workplace

Elie WAKIL, PharmD

13:30 - 15:30

**Lunch Break****Session 6: Public Health** ( 1.5 C.E. Credits )**Moderator:**

Pascale SALAMEH

15:30 - 16:00

A Revolutionary Technique in Recycling Expired Pharmaceutical Pills

Ziad ABI CHAKER,  
Environmental &  
Industrial Engineer

16:00 - 16:30

Motivation to Quit Smoking and Acceptability of Shocking Warnings on Cigarette Packages in Lebanon

Nelly LAYOUN,  
PharmD, PhD Candidate

16:30 - 17:00

Antibiotics Use and Misuse: An Awareness Campaign

Nathalie LAHOUD,  
PharmD, PhD

17:00 - 17:30

**Coffee Break****Session 7: Hospital Pharmacy - General Session** ( 1 C.E. Credits )**Moderator:**

Lama SOUBRA

17:30 - 17:45

Dosing of Direct Oral Anticoagulants in Obese Patients

Anna-Maria HNEINEH,  
PharmD, PhD

17:45 - 18:00

New Definitions of Sepsis and Septic Shock

Souraya DOMIATI,  
PharmD, MS

18:00 - 18:15

Efficacy and Safety of Ketoprofen IV vs. Paracetamol IV in the Management of Fever in Adults

Omar TABBOUCHE,  
BS Pharm, MS

18:15 - 18:30

Inventory Management

Youssef AKIKI,  
PharmD, MBA

**SATURDAY NOVEMBER 19, 2016**

08:30	<b>Registration</b>	
	<b>Session 8: Community Pharmacy</b> ( 1.5 C.E. Credits )	<b>Moderator:</b> Dalal HAMMOUDI
09:30 - 10:00	Extemporaneous Formulations for Pediatrics and Geriatrics	Ayman ALAMEDDINE, PharmD
10:00 - 10:30	Introduction to Medication Error Prevention Strategies	Abeer ZEITOUN, PharmD
10:30 - 11:00	Pharmacist's Implications in Common Gastro-Intestinal Disorders (Sponsored by Sanofi)	Antoine GEAGEA, MD
	<b>Parallel Session: Hospital Pharmacy - Special Session</b> ( 2 C.E. Credits )	<b>Moderator:</b> Sylvia SAADE
09:00 - 09:15	Morphine interference with antiplatelet effect of P2Y12 receptor blockers in patients with acute MI	Katia ISKANDAR, PharmD, MHS
09:15 - 09:30	Evaluation of Professional Practice and Key Performance Indicators in Hospital Pharmacy	Nibal CHAMOUN, PharmD, BCPS
09:30 - 09:45	How Wise is Early Dialysis in Critically Ill Patients?	Lamis KARAOUI, PharmD, BCPS
09:45 - 10:30	Mode and Effect Analysis Workshop: Medication Reconciliation Upon Admission	Ulfat USTA, PharmD, MS, BCPS
10:30 - 11:00	Optimizing Treatment Management of Gastric Cancer (Sponsored by Lilly)	Fadi NASR, MD
11:00 - 11:30	<b>Coffee Break</b>	
	<b>Session 9: Professional Development - Keynote Speaker</b> ( 1 C.E. Credit )	<b>Moderator:</b> Rony ZEENNY
11:30 - 12:30	Global Trends and Opportunities for the Pharmacy Profession	Wafaa DAHDAL, PharmD, BCPS
12:30 - 13:00	<b>POSTER SESSION</b>	
13:00 - 15:00	<b>Lunch Break</b>	

**SATURDAY NOVEMBER 19, 2016**

<b>Session 10: Quality in Pharmacy Practice ( 1.5 C.E. Credits )</b>		<b>Moderator:</b> Jihan SAFWAN
15:00 - 15:30	Quality in Pharmacy Setting: Impact of Accreditation on Quality	Ali ELHAJ, LLM, PhD
15:30 - 16:00	Lebanese Code of Ethics: Components and Implementation	Rasha HAMRA, PharmD, MPH, PhD Candidate
16:00 - 16:30	Good Pharmacy Practice: FIP Perspective	Luís Miguel LOURENÇO, PharmD
16:30 - 17:00	<b>Coffee Break</b>	
<b>Session 11: Updates and Medication Safety ( 1.5 C.E. Credits )</b>		<b>Moderator:</b> Fadi HDEAB
17:00 - 17:30	Empowering Cancer Patients Through Ambulatory Chemotherapy	Racha HAWASLI, PharmD, PhD Candidate
17:30 - 18:00	Medication Safety Review and Updates	Elsy RAMIA, PharmD, MPH, BCPS
18:00 - 18:30	Scaling Up the Pharmacy Workforce and Evolving Role of the Pharmacist	Mahendra PATEL, PhD, FRPharmS, HEA
18:30	<b>CLOSING CEREMONY</b>	
		<b>President Georges SILI</b>

Abstracts and conferences will be available for download from OPL website (e-library) starting January 2017



## **GHADA KHOURY**

Clinical Assistant Professor - Lebanese American University

After receiving the Doctor of Pharmacy degree from LAU, Ghada El Khoury completed an Ambulatory Care Pharmacy Practice residency at Florida Hospital, which was focused on preventive medicine and community health. Later, she earned specialty board certification in ambulatory care pharmacy from the Board of Pharmacy Specialties and became certified in Immunization delivery, Travel-Health services and Medication Therapy Management. In 2014, she was selected along with 30 other international candidates to participate in the Global Health Delivery Intensive Program at Harvard School of Public Health, from which she graduated with a certificate in Global Health Delivery. In 2015, she got accepted at the Johns Hopkins Bloomberg School of Public Health and is currently pursuing her Master's of Public Health.

Dr. Khoury is licensed to work in the US and Lebanon and her training and practice revolve around advancing patients' and population health and well-being.

### **Implementing Medication Therapy Management Services: "The Hows and Whys?"**

The objectives of this presentation are to:

Define what MTM services consist of.

Describe the step-by-step implementation of the MTM services in outpatient settings.

Report MTM's impact on patients' health and drug costs.

Share with the audience real-life case scenarios of successful MTM interventions.

Open the floor for questions pertaining to MTM.





## AHMED EL-YAZBI

Assistant Professor of Pharmacology and Therapeutics - American University of Beirut

Ahmed graduated from the Faculty of Pharmacy, Alexandria University, Egypt in June 2001 with top honors. He moved on to get his PhD degree in Pharmacology from the University of Alberta in Edmonton, Alberta, Canada, which was awarded in 2008. After the conclusion of his PhD, Ahmed accepted a position as a Canadian Institutes for Health Research and Alberta Innovates-Health Solutions Fellow at the Faculty of Medicine in the University of Calgary, Canada. He is also a licensed Clinical Pharmacist and a Board Certified Pharmacotherapy Specialist. Ahmed owned and operated two ambulatory hospital pharmacies in Calgary offering highly specialized pharmaceutical services. Dr. El-Yazbi has a very solid university-level teaching and research track record evident in over 15 years of experience teaching to pharmacy and medical students in Canadian, Egyptian, and Lebanese universities and multiple national (Egyptian/Canadian) and international awards in recognition of his achievements in teaching and research. He also has over nine years of experience as a clinical pharmacist. He has 24 original research articles published in international peer-reviewed journals and serves as an independent reviewer for a number of scientific journals. In the field of patient care, his most significant contribution would be the successful development and implementation of new procedural and business models to run the outpatient/ambulatory pharmacies at two of Calgary's largest hospitals facilitating the operation in a very intricate environment at the interface of public and private sectors. Ahmed's current research and teaching interests at University level focus on the different mechanisms regulating vascular dysfunction in diabetic patients in addition to various therapeutic and practice issues including a strong commitment to continuing education and policy development.

### **Preventing diabetic vascular complications: what we know and where the future lies.**

A significant number of developments in the field of diabetes care have arisen recently. New information emerged with potential impact on how we view therapy options to prevent or delay micro- and macro-vascular complications. Yet, the gold standard for prevention/delay of diabetic microvascular complications remains through achieving a tight glycemic control. However, examination of patient cohorts from the DCCT and EDIC studies who have maintained similar HBA1C control for as long as 10 years, shows a distinct discordance in the patterns of development of the said disorders directing our focus to the concept of "metabolic memory" and the importance of instituting proper therapeutic management at a much earlier stage. As such, it is high time the traditional paradigm of a common care goal for type 2 diabetes patients came under keen scrutiny. Particularly in light of newer clinical evidence showing differential abilities of various oral anti-hyperglycemic drugs in delaying/preventing the development of vascular complications in type 2 diabetic patients, sometimes independent of their effects on blood glucose level. Nevertheless, the polygenic nature of the disorder in question and the stark contribution of environmental and epigenetic components in its prognosis, a blanket recommendation of one class of medications over the other is hardly viable. The purpose of this session is to review the evidence adopted in forging the current clinical practice guidelines and assess new findings in the field regarding therapeutic option efficacy. As well, we intend to raise the audience awareness of the importance of early interventions and tailored therapeutic plans/goals for different patients.



## **RITA NEMR**

### Current position:

Rita Nemr is assistant professor of endocrinology at the Lebanese American University and Past President of the Lebanese Society of Endocrinology Diabetes and Lipids 2010-2012.

### Scientific and professional societies:

She is member of the Endocrine Society, the American Diabetes Association and the European Society of Endocrinology.

### Academy and Professional career:

Dr Nemr received her medical education at the French Faculty of Medicine in Beirut and postgraduate training in Hotel Dieu de France Hospital, Beirut, with a special training in lipidology at Pitie-Salpetriere Hospital-Paris.

She is an invited speaker in many local and regional congresses, and has many publications in the field of genetics of type 2 diabetes in Lebanon.

## **The Continuum of Care for the Type 2 Diabetic Patient**



## **RAJA KHAULI**

### PRESENT POSITION:

Professor of Surgery  
Head, Division of Urology  
Director, Renal Transplantation Program  
American University of Beirut Medical Center  
Beirut, Lebanon

Adjunct Professor of Surgery (2000-2008)  
University of Massachusetts Medical School  
Worcester MA

### UNDERGRADUATE EDUCATION

\*American University of Beirut  
Degree: Doctor of Medicine, M.D., June 1978  
Board of Regents, State of New York  
\*American University of Beirut  
Degree: B.S. (Biology-Chemistry), Oct 1974  
Board of Regents, State of New York  
\*International College  
Diploma: Experimental Sciences, June 1971  
Beirut, Lebanon - 1965-1971

### **The Links Between Erectile Dysfunction and BPH**



**YOLANDE B. SAAB**

Associate Professor - Lebanese American University

EDUCATION:

- \* Ph.D.: Pharmacology/ Pharmacogenetics, Brighton University, UK, July 2004
- \* Doctor of Pharmacy: Lebanese American University, Byblos, Lebanon, 1999
- \* Bachelor of Sciences in Pharmacy: Lebanese American University, Byblos, Lebanon, 1998

POST- DOC EXPERIENCE:

- \* Research in Pharmacogenomics: University of Florida, School of Pharmacy, Center for Pharmacogenomics, 2007.

DISSERTATIONS:

- \* Ph.D. Thesis. Renin- Angiotensin- associated gene polymorphism frequencies in the Lebanese population and their association with depressive disorders. 2004; University of Brighton.
- \* Pharm D Thesis. Acetylator Status in Lebanon. 1999; Lebanese American University.

**Pharmacogenomics: A Driving Force to Personalized Medicine**

Define pharmacogenomics.

Discuss how to stratify patients based on drug response and genetic make up.

Illustrate on FDA pharmacogenomics recommendations.

Identify challenges facing pharmacogenomics in clinical practice.

Describe the role of pharmacist.



## SOULA KYRIACOS

Head of Research and Development - Pharmaline

Dr. Soula Kyriacos earned her PhD degree in Pharmaceutical Sciences from the University of Montreal, Canada in 1997 after she received her Bachelor's degree in Pharmacy in 1992. During her graduate studies, Dr Kyriacos received many awards and scholarship from several pharmaceutical companies.

Dr Kyriacos was the founding Chair of the Department of Pharmaceutical Sciences at the School of Pharmacy at the Lebanese American University, the first school outside the United States to be accredited by ACPE (Accreditation Council for Pharmacy Education). She was associate professor of pharmaceutics.

Dr Kyriacos joined Pharmaline in 2010 as Research and Development manager. Headed by a strong pool of scientists and researchers, the team successfully designed several generic products for both local and export markets, strengthening the product portfolio with delivery of niche and complex products.

Dr. Kyriacos has published several articles and book chapters. Her research interests focus on oral drug delivery, physicochemical characterization, bioavailability and quality control. She is involved in research collaboration with academic institutions and private CROs.

### **Bioequivalence and Therapeutic Equivalence**

To be safe and effective, generic drugs must meet the same rigid standards as the reference drugs. The two products must be "therapeutic equivalents" (have the same clinical effect and safety profile when administered to patients under the conditions specified in the labeling). Drugs are considered to be therapeutic equivalents and thus suitable for substitution (generic equivalents) if, among other factors, they are both pharmaceutical equivalents and bioequivalent.

The regulatory and scientific framework for the policies and requirements for generic drug products are reviewed with an emphasis on bioequivalence studies and BCS based biowaivers. The BCS (Biopharmaceutics Classification System) is a scientific framework for classifying drug substances into one of four biopharmaceutical classes according to their water solubility and membrane permeability characteristics. Despite the complexity of drug absorption from the gastrointestinal tract, the work of Amidon et al. revealed that the fundamental events controlling oral drug absorption are the permeability of the drug through the GI membrane and the solubility/dissolution of the drug dose in the GI milieu. The BCS has been effectively implanted by drug regulatory agencies around the world in setting bioavailability/bioequivalence standards for immediate-release oral drug product approval. Accordingly, certain drug products can be considered for biowaivers (i.e., product approval based on in vitro dissolution tests rather than bioequivalence studies in human subjects). With continued industry emphasis on more efficient processes, the BCS provides an invaluable tool in drug regulation.



## **ZEINA ABOU JAOUDE**

Senior Brand Manager - AbbVie Biopharmaceuticals

Zeina Abou Jaoude is a pharmacist graduated in 2004 from USJ, holding an MBA degree in Health Management from the same university. She has more than 12 years of experience in the pharmaceutical industry. She held several positions in different local and multinational companies, working in different fields from sales to marketing, handling specialty products, like oncology drugs and immune modulators medications. Zeina has proven records of successfully launching and managing product life cycle of expensive drugs in Lebanon and in the region. She recently got a diploma in market access at EMAUD (European Market Access University Diploma) one of the first curriculum in this field, in partnership with Aix-Marseille and Pierre et Marie Curie Universities, covering several topics including Pharmaco-economics, Value-based pricing, cost-containment strategies, Health Technology Assessment, Pricing and Reimbursement, Patient-Related-Outcomes and Real World Evidence Data, Health Care Sustainability...

### **Rising Costs of Specialty Medication: Impact on Healthcare**

Prices for specialty drugs are out of control nowadays, with spending rising very fast, to constitute one of the fastest growing areas in healthcare expenditure. This is driven by the cost of new drugs for complex diseases such as Cancer, Multiple sclerosis and Hepatitis C, for which annual therapy or one course of treatment can cost nearly \$100,000, impacting enormously the healthcare budget.

Many health economists around the world are encouraging a new potential solution: paying for drugs according to how well they actually work; A drug that works is worth something; one that doesn't is not. If a new drug works no better than an older one, the two have equal worth. If a drug costs a lot, that's OK only if it makes people so healthy that it reduces their spending on other forms of health care. This all sounds like a move toward paying smarter or, "paying for value."

Value-based price (also value optimized pricing) is a pricing strategy which sets prices primarily, but not exclusively, in the value, perceived or estimated, to the customer rather than on the cost of the product or historical prices.

How VBP works for pharmaceutical products? What are the advantages of this model? What are the drawbacks? Is it applicable in all therapeutic areas?



## SALAM SAMAD

Pharmacien Biologiste - Chef de Département du laboratoire et de la banque de sang

### EXPERIENCES PROFESSIONNELLES

Juin 1997 – 2014: Centre Hospitalier du NORD

Chef de Département du laboratoire et de la banque de sang

- \* Organiser, surveiller et valider les résultats des examens faits sur des échantillons biologiques
- \* Dialoguer avec les cliniciens dans le but d'aider les médecins dans leur démarche diagnostique
- \* Etablir le processus de travail (personnel, équipement et produits).
- \* Etablir le plan stratégique, la mission et la vision du département
- \* Mettre en place et appliquer des procédures de travail (pré-analytiques, analytiques et post-analytiques, circuit de travail)
- \* Veiller sur l'amélioration continue de la qualité (le système de contrôle de qualité analytique et non analytique, les indicateurs de performance).
- \* Etablir, implémenter, surveiller et améliorer la sécurité du personnel, des patients et les mesures d'hygiène
- \* Préparer le budget et interpréter les rapports d'activité du laboratoire.
- \* Assurer la formation et la validation des compétences de l'équipe de travail.
- \* Prendre les décisions nécessaires pour effectuer un travail d'équipe.
- \* Président du comité de transfusion sanguine au CHN.
- \* Membre du CLIN (comité de lutte contre les infections nosocomiales)

### FORMATION

1990-1994: Diplôme interuniversitaire de spécialisation en Biologie médicale Université René DESCARTES- PARIS-France

1984-1990- Docteur d'Etat en Pharmacie Université de Picardie- AMIENS- France

2000 : attestation de formation en immuno-hématologie : Zurich-SUISSE

2004 : attestation de formation sur la « cytologie des hémopathies malignes »: HDF : Beirut-LIBAN

2006 : attestation de formation « diagnostic des Myélodysplasies » : HDF- Beirut LIBAN

Depuis 2008 : formation continue en hématologie : e-hematimage France.

2007 : membre de l'ADHET

2009 : attestation de formation en cytométrie en flux et en cytologie hématologique : Hôpitaux de Toulouse. France .

2012 : Membre du syndicat des biologistes du Liban

2013 : Master management hôpital et santé. ESA (ecole supérieure des affaires) beyrouth. Liban.

### **Coeliac Disease: Epidemiology and Diagnosis**

La maladie coeliaque est l'une des pathologies digestives les plus fréquemment rencontrées.

Cette intolérance au gluten provoque un syndrome de malabsorption qui non traitée peut avoir des conséquences graves sur la santé du patient.

La symptomatologie est très hétérogène : douleurs abdominales, diarrhée, asthénie, et anémie...) le diagnostic est donné par la biopsie intestinale et par une batterie de tests de laboratoire.

Très souvent sollicité par les patients pour ces troubles digestifs récurrents, le pharmacien d'officine doit pouvoir identifier les patients à risque et les orienter vers un médecin spécialiste pour se faire dépister.

Une fois le diagnostic confirmé, le pharmacien doit, par ailleurs, reconnaître les médicaments contenant du gluten et les proscrire chez ces patients.



## **MARCEL ACHKAR**

Chairman of Laboratory & Blood Bank Department - Nini Hospital

### Position/Title:

Chairman of Laboratory & blood Bank Department

### Experience:

- \*14 years experience in laboratory medicine
- \* 5 years experience in teaching at Balamand University-faculty of public health main campus.
- \* Lecturer at several congresses (SDBL,LOP,OPL ...)

### **High Sensitive Troponin: Time to Save Lives**

Heart attacks and heart failure are two of the leading causes of morbidity and mortality. Prevention and early diagnosis of these disorders have been shown to improve patient outcomes. The price of delayed or inaccurate diagnosis can be high. Heart failure symptoms are non-specific and may include shortness of breath exercise intolerance and swelling of the legs. High sensitive Troponin are now a day a powerful tool that allow us to reduce time to diagnose a heart attack, hence improving patient care contributing in saving coasts.

In this lecture we will introduce the 1 hour rule out Algorithm proposed by the ESC Guidelines of 2015.





## **MYRNA GERMANOS**

Chef des Laboratoires d'Hématologie et d'Immunologie à l'Hôtel-Dieu de France de Beyrouth

- \* Chef des Laboratoires d'Hématologie et d'Immunologie à l'Hôtel-Dieu de France de Beyrouth
- \* Enseignante à l'Université Saint Joseph de Beyrouth Membre du Comité Directeur et Présidente de la Commission Scientifique au Syndicat des Biologistes du Liban
- \* Activité de recherche : pathologies hémorragiques rares
- \* Centre d'intérêt : Promotion de l'Assurance Qualité dans les laboratoires au Liban

### **Grossesse et troubles de la coagulation**

Les changements hémostatiques liés à la grossesse sont très importants, ils favorisent l'installation d'un état d'hypercoagulabilité par augmentation de la synthèse de certains facteurs de coagulation comme le fibrinogène, les facteurs VII, VIII et de Von Willebrand. Cet état est renforcé par la diminution des inhibiteurs de la coagulation comme l'antithrombine, les protéines C et S, de l'activateur du plasminogène, et de l'activité fibrinolytique.

Les coagulopathies liées à la grossesse comme la thrombopénie gestationnelle, la pré-éclampsie, et le HELPP syndrome, la coagulation intravasculaire disséminée, et rarement le purpura thrombotique thrombocytopenique, créent des situations d'urgence et disparaissent à l'accouchement.

Des pathologies à risque thrombotique peuvent exister, être héréditaires comme les déficits en inhibiteurs de la coagulation, les mutations du facteur V et du facteur II, ou acquises (anticorps antiphospholipides)

Les parturientes peuvent également présenter des pathologies à risque hémorragique pré-existantes à la grossesse ou découvertes à cette occasion : pathologies congénitales comme la maladie de Willebrand, les thrombopathies ou les femmes conductrices d'hémophilie, ou bien des pathologies auto-immunes, comme le purpura thrombopénique immunologique.

Chaque patiente devra bénéficier d'une anamnèse et d'un examen clinique orienté à la recherche d'éléments évocateurs d'un trouble de l'hémostase et la prise en charge en sera alors adaptée.

**SOUHEIL HALLIT**

Part time faculty instructor - UL, USEK, USJ

Dr. Souheil Hallit earned his doctor of pharmacy degree at Saint Joseph University, Lebanon in 2002, his Masters of Science degree in pharmacology and therapeutics at AUB in 2005, his Pharm.D. degree from LAU in 2006 and a masters in research in Clinical Pharmacy and Pharmacoepidemiology from Lebanese University in 2015. He is currently a PhD candidate in Public Health and Epidemiology in Bordeaux Segalen University, France.

Dr. Hallit is American Board certified in 2 states (Florida and New Jersey). Dr Hallit is a part-time faculty member in USEK, USJ and Lebanese University. He teaches didactic and experiential courses. His main research interests focus on asthma, allergic and atopic diseases in children.

**Exposure to toxics during pregnancy and asthma in children; validation of asthma control and quality of life scales in Lebanon**

**Objectives:** To evaluate the association of exposure to toxic substances in utero and during infancy (alcohol, tobacco including cigarette and waterpipe (WP) smoke, pesticides, and detergents) with asthma. Validate the asthma control and quality of life questionnaires in Lebanese children.

**Methods:** A case-control study was conducted between December 2015 till April 2016, using a sample of Lebanese students from all districts of Lebanon.

**Results:** The multivariate analysis showed that children living in North and South Lebanon and the child living in an area with frequent pesticides use had an increased risk of asthma (ORa = 1.625, CI 1.034-2.554, p = 0.035, ORa = 13.65, CI 3.698-50.385; p <0.001 and ORa = 3.307, CI 1.848-5.918, p <0.001 respectively). Smoking WP during pregnancy and cigarette smoking during lactation by the mother would increase the risk of asthma in children (ORa = 6.11; CI 1.244-30.008; p = 0.026 and ORa = 3.44; CI 1.024-11.554; p = 0.046 respectively). Furthermore, we could identify some factors related to a worse quality of life in asthmatic children. The most significant were waterpipe smoking during pregnancy, cigarette smoking during breastfeeding and maternal smoking in general, as well as the lower education level and most importantly the poor control of asthma. Both scales were validated among the Lebanese pediatric population.

**Conclusion:** The origin of asthma may be due to the interplay of genetic predisposition and environmental exposure such as pesticides, tobacco (cigarettes and WP), alcohol or drugs during pregnancy and lactation. Spreading awareness by health professionals about these preventable causes, as well as reinforcing health education, seem to be a huge step toward a better asthma control and consequently a better quality of life in asthmatic children and prevent asthma and its exacerbation.



## **HASSAN ZARAKET**

Assistant Professor - Faculty of Medicine American University of Beirut

Dr Hassan Zaraket is an assistant professor of virology at the Faculty of Medicine, American University of Beirut (AUB). He received his B.Sc. in Pharmacy from Beirut Arab University in 2004. Following his graduation, he received a scholarship from the Japanese Government to continue his graduate studies in Japan. In 2009, he completed a PhD degree in Community Disease Control from Niigata University, Japan. He then moved to the United States where he completed his postdoctoral training at the WHO collaborating Center for Influenza Virus Research and Surveillance at St Jude Children's Research Hospital. At the same time, he co-founded and served as the chief technology officer of US Biologic, a company which develops wildlife vaccines for vector-borne diseases. Since 2014, he moved to AUB where he is teaching virology and leading a research group investigating the epidemiology and evolution of respiratory and gastroenteric viruses as well as pathogen-pathogen and host-pathogen interactions and antimicrobial drug resistance.

Dr. Zaraket has published over 40 papers in the field of microbiology. He serves as a reviewer for several international peer-reviewed journals and is an associate editor of BMC Infectious Diseases Journal. Dr. Zaraket is also a board member of the International Society of Influenza and other Respiratory Viruses and a member of several international scientific societies including the American Society for Virology. He also serves as a member of the Central Scientific Committee of the Lebanese Order of Pharmacists (OPL).

### **Treatment and Prevention of Varicella Zoster Virus Infections**

Varicella-zoster virus (VZV) is a member of the human alpha-herpes viruses. Primary VZV infection leads to varicella or chickenpox. VZV establishes latency in dorsal root ganglia and can reactivate later in life causing herpes zoster (shingles). VZV is highly contagious. It transmits from person to person by direct contact or inhalation of aerosols from infected patient. It has an incubation period of two weeks and a contagious period of one week. Symptoms of varicella include fever, malaise, headache, and abdominal pain, and rash. The vast majority of varicella cases occur in children and they can lead to hospitalizations and death. It is estimated that 140 million cases occur worldwide each year. Varicella can lead to neurologic, pulmonary, and hemorrhagic complications as well as pneumonia and sepsis. Risk groups include children, elderly, immunocompromised, and pregnant women. Acyclovir can be used in treatment of varicella and zoster. Varicella vaccines are highly effective in preventing varicella and its complications and have very safe profiles. Recommendations for treatment and vaccination against VZV will be discussed.



## **KRIKOR SAHAKIAN**

Associated Professor - Faculty of Pharmacy - USJ

Professeur de Chimie Thérapeutique et Coordinateur du DU d'Homéopathie à la Faculté de Pharmacie de l'Université Saint-Joseph

Chargé de cours de Conseil à l'officine, d' Homéopathie et de Phytothérapie à la Faculté de Pharmacie de l'Université Libanaise

Pharmacien titulaire d'officine – Pharmacie Hôtel-Dieu

Ex-membre du Conseil de l'Ordre des Pharmaciens

Travaux de modélisation moléculaire en collaboration avec la Centre d'Etudes et de Recherches sur le Médicament de Normandie (Caen/France)

Articles et publications dans diverses revues

### **Délivrance des antibiotiques à l'officine : un défi à la portée des pharmaciens**

Avec l'industrialisation croissante, le pharmacien voit petit à petit son rôle réduit au fait de dispenser des médicaments qu'il ne prépare plus. Le centre de préoccupation du pharmacien devra glisser du médicament vers le patient, dont il faudra prendre soin et gérer l'état et les éléments de santé.

Nous avons cherché à mettre en évidence ce rôle, et sa projection sur l'avenir de la profession à travers une étude portant sur la délivrance d'antibiotiques dans 400 pharmacies réparties à travers le territoire libanais, dans le cadre de six pathologies couramment traitées à l'officine : les angines, les otites, les rhino-bronchites, les abcès dentaires, les gastro-entérites et les infections urinaires.

A partir du résultat de l'étude, et en nous appuyant sur les guide-lines et les consensus internationaux, nous pouvons émettre des recommandations quant à la délivrance d'antibiotiques hors ordonnances.



## **ELIE WAKIL**

Pharmacien/Conferencier - Entrepreneur/Proprietaire pharmacie

Dr. Elie Wakil is an experienced trainer/facilitator and coach. He graduated from the French School of Pharmacy in Beirut and joined the Swiss pharmaceutical company, F. Hoffmann-La Roche Ltd. in 1982. He soon became a Training Manager and Human Resource Consultant for the Roche Pharma International division and his training activities encompassed numerous countries around the globe in which Roche Pharma International held offices.

Throughout his lengthy career Dr. Wakil attended and still attends various seminars in prestigious management schools such as Ashridge in the United Kingdom, INSEAD in France and Management Centre Europe in Belgium & France as well as programmes on psychometrics (16PF-Institute of Personality and Ability Testing) and the 360° feedback process. Consequently, he continues developing many executive workshops for managerial positions mainly in the fields of Communication and Leadership. As a qualified therapist for managing stress and a certified consultant for the 360° feedback process he primarily focuses on "Stress Management" and "Human Relations". His lectures are targeted to active business people with pressured jobs and a busy life-style. He is also a certified practitioner in behavioural style analysis related to the International Ensize Dynamic Centre, an approved expert in Interpersonal Communication by the ETF (European Training Foundation, an EU agency based in Torino) and an approved Trainer-facilitator by The Cyprus Chamber of Commerce.

### **Enhancing Accountability in the Workplace**

#### 1-Benefits:

Enhance performance and productivity through reinforcement of the staff accountability.

Alignment with the institution procedures.

Reinforce relationships in the workplace.

#### 2- Objectives

Managers and staff will come closer to identify the same values and goals of the institution

Building a strong and sincere rapport at all levels.

Initiating a better transparency.

Identify appropriate relationships with all.

Describe accountability (internally-externally) in a team.



## **ZIAD ABI CHAKER**

Ziad is a multi-disciplinary engineer who specializes in building Municipal Recycling Facilities on the communal level going against the trend of a central Mega recycling Plant. While doing research at Rutgers University in New Jersey, USA his team developed a technology to accelerate the composting cycle of organic waste in an odorless manner to produce high grade fertilizer.

After returning to Lebanon in 1996, Ziad started Cedar Environmental, an environmental & industrial engineering organization that aims to build recycling plants to produce organically certified fertilizers and leave no waste material to be disposed of, but instead recycled into a new form of product to be used again and again.

Most municipalities in Lebanon and the middle east cannot afford to buy recycling plants, so Ziad worked out a three way contract where local banks give his company soft loans to build the recycling facilities and municipalities pay only for the service of recycling/composting in comfortable monthly installments not exceeding 5 US Dollars per household per month. Recently, Ziad and his engineering team, after four years of research, developed a new technology which transforms plastic bags into solid plastic panels, dubbed ECO-BOARD, used in the outdoors to replace wooden and steel panels. They have won the 2013 International Energy Globe Award for this revolutionary process. Currently, they are transforming that technology from using fossil fuels to generate the required energy to biomass a renewable energy source.

He is the recipient of an American Society of Agricultural Engineers (ASAE) design award in 1993 for his design linking municipal waste management to agriculture. In 2001, he received the Ford Motor Company Environmental & Conservation award for the Middle East. In 2011, he was named Arab World Social Innovator by Synergos institute in New York City, USA. In February 2014, he was awarded by the World CSR Congress the Green Future Leadership Award.

In April 2014, he was named to the fourth annual GOOD 100 list of global citizens and creative changemakers by GOOD Magazine, a US based publication.

In June 2003, he was awarded the certificate of appreciation and recognition by the Syrian Government for his overall plan to make Syrian Food industries compliant with Clean Production Protocols. He expanded his study to be implemented all over the Middle-East and North Africa region and received the certificate of recognition of the Arab League in April 2006. His work in the advancement of the Zero Waste Societies earned him a speaking slot at the TEDxBeirut conference in September 2011. He has made numerous TV appearances for his innovative social work promoting environmental protection and green jobs creation. He holds a patent in a technology to compost organic materials dynamically with no pollution and has written extensively on environmental policies, issues and future trends.

### **A Revolutionary Technique in Recycling Expired Pharmaceutical Pills**



## NELLY LAYOUN

Docteur - Lebanese University, University Libre of Brussels

Profile: A pharmacist and Fourth year Phd student in epidemiology in the Lebanese University and University Libre of Brussels in Belgium (ULB). I have experience in teaching and precepting Pharm D students in hospital (clinical pharmacists). I am a caring, self-motivated individual with a passion for helping people and improving their quality of life.

Education: School of Public health University Libre of Brussels (ULB) and Ecole Doctorale des Sciences et de Technologie (EDST) Lebanese University (LU) - Fourth year Phd student in Epidemiology and Biostatistics 2013 - Present

Experience: Precepting Clinical pharmacy students - Faculty of Pharmacy at Lebanese University; Hadath Full-time Pharmacist - Pharmacy Pharmacy – Jal el Dib

\* Management.

\* Patient counseling.

\* Providing the best treatment for patients.

\* Provide advice in cosmetics.

### **Motivation to Quit Smoking and Acceptability of Shocking Warnings on Cigarette packages in Lebanon**

Introduction: Health warnings on tobacco packages have been considered an essential pillar in filling the gap of knowledge and communicating the health risks of tobacco use to consumers. Our primary objective was designed to report on the perception of textual health warnings already implemented on tobacco packages in Lebanon versus shocking pictures about health related smoking consequences, and to evaluate their impact on smoking behaviors and motivation. Methods: A pilot cross-sectional study was undertaken between 2013 and 2015 in 5 hospitals in Lebanon. Participants answered a questionnaire inquiring about socio-demographic characteristics, chronic respiratory symptoms, smoking behavior and motivation to quit smoking. Only-text warning versus shocking pictures was shown to the smokers during the interview. Results: 66% of the participants reported that they thought shocking pictorial warnings would hypothetically be more effective tools to reduce /quit tobacco consumption compared to only textual warnings. 31.9% of the smokers, who are motivated to stop smoking, reported to actually having stopped smoking for at least one month secondary to the textual warnings effects. A higher motivation to quit cigarette smoking was seen among male smokers (OR=1.8, p=0.02), who had stopped smoking for at least 1 month during the last year due the textual warning (OR=2.79, P 0.001), who considered very important to report health warning on cigarette packs (OR=1.92, p=0.01), who had chronic expectoration (OR=1.81, P=0.06) and who would change their favorite cigarette pack if they put shocking images on the pack (OR=1.95, p=0.004). Conclusion: Low dependent and highly motivated to quit smokers appeared to be more hypothetically susceptible to shocking pictorial warnings. Motivation to quit was affected by sensitivity to warnings, but not to the presence of all chronic respiratory symptoms.

**NATHALIE LAHOUD**

Assistant Professor of Epidemiology - Lebanese University, Faculties of Pharmacy and Public Health

Dr. Lahoud is an epidemiology and clinical assistant professor at the Lebanese University (LU), faculties of Pharmacy and Public Health (sections I and II).

She earned her Doctor of Pharmacy degree from LU in 2010. In 2011, she earned a Master degree in Epidemiology and Biostatistics from LU, Doctoral School of Science and Technology (EDST).

In November 2015, she concluded her PhD degree in Pharmaco-epidemiology from the Paris Est University, Ecole doctorale Sciences de la Vie et de la Santé (SVS, Créteil, France) and the LU, EDST (Hadat, Lebanon).

Her main areas of interest in clinical research are: cerebrovascular and cardiovascular diseases.

**Antibiotics Use and Misuse: An awareness campaign**

In a country where 4 antibiotics (ATBs) out of 10 are given without a medical prescription (Saleh et al., 2015), and where 7 out of 10 people still believe that ATBs fight viruses (Mouhieddine et al., 2014), the need to conduct a national ATB awareness campaign is an imperative matter.

In this context, a group of academic pharmacists decided to volunteer and launch the "ATB awareness campaign". The campaign will be made as national as possible with radio/tv spots, brochures, posters, T-shirts and pins, all adapted to the general population.

Its main objective is to alert people on: What is an ATB? What is the difference between infection and inflammation? What is ATB misuse? What are its repercussions (Introduce Antimicrobial Resistance AMR)? And finally how to prevent or limit AMR (the correct use of ATB)?

The campaign's impact will be quantified in a before-after study and results will be published.

We might not be targeting the full origin of ATB misuse in the country but we are hopefully increasing knowledge among people and knowledge is the first step towards a better future.





## **ANNA MARIA HNEINEH**

Assistant Professor in Pharmaco-economics - Lebanese University-School of Pharmacy- Department of Clinical Pharmacology

Anna Maria Henaine, PharmD, MB, PhD; is a Dr. of Pharmacy since 1993 (LU), with a Master degree in biochemistry since 2012 (USEK) and a PhD degree in Pharmaco-economics since 2015 (Claude Bernard University Lyon1/France).

Assistant Professor in the clinical pharmacy department in the Lebanese University (School of Pharmacy).

From 1995 till present: Clinical Pharmacy Preceptor at the Lebanese University, exercising in many Lebanese hospitals with a high experience in clinical research, pharmacology, and clinical trials.

Owner of Ste Emilie Pharmacy (Jdeideth Ghazir-Kesrouan) since 1995.

Furthermore, Associate Member in the ANEPC, Member in the Lebanese Academy of Pharmacy and Scientific Committee in the Lebanese Order of Pharmacy and Reviewer in many journals (LMJ, FWO).

### **Dosing of Direct Oral Anticoagulants in Obese Patients:**

Long-term oral anticoagulation with vitamin K antagonists (VKA) could contribute to the risk of hemorrhagic or thromboembolic complications. Periodic laboratory testing of international normalized ratio (INR) and a subsequent dose adjustment are therefore mandatory.

Four direct-acting oral anticoagulants (DOACs)-dabigatran, apixaban, edoxaban and rivaroxaban- are approved for the treatment of venous thromboembolism (VTE), prevention of VTE after hip and knee arthroplasty and ischemic stroke prevention in patients with non-valvular atrial fibrillation. Because of their fixed dosing and limited dietary interactions, they're used as a convenient anticoagulant alternative to VKA.

In the product labeling of the approved DOACs, none has a dose adjustment for high weight (>40 kg m<sup>-2</sup>) or body mass index in obese categories (between 30 kg m<sup>-2</sup> and 40 kg m<sup>-2</sup>). However, there's uncertainty about their efficacy and safety in the obese population and phase III trials that compared DOACs and VKA included a moderate number of obese patients and most included a subgroup analysis of efficacy by weight. The conclusions are limited by inconsistencies across studies and none reported the number of patients enrolled or their clinical outcomes. Guidance statements were then developed to provide guidance for clinicians regarding the use of DOACs in obese patients

Keywords: oral anticoagulation, vitamin K antagonists, direct-acting oral anticoagulants, efficacy, dosing, obese patients.

**SOURAYA DOMIATI**

Pharm D coordinator - Beirut Arab University

Souraya Domiati received her PharmD in 1999 from the Lebanese American University and her master degree in Pharmacology from Beirut Arab University in 2013. She has fifteen years of experience in community pharmacy working as manager and sixteen years of experience in teaching clinical pharmacy and supervising students Clerkships in different Hospitals. She supervised more than 45 PharmD theses. She attended more than 30 national and international conferences. She is now the PharmD coordinator at Beirut Arab University. She has 7 publications.

**New Definitions of Sepsis and Septic Shock**

The diagnosis of sepsis is not a new concern. It dates back to the 700BCE, when the Greeks recognized it as a life-threatening condition associated with infection and high risk of death. There was no clinical definition till 1991 when consensus panel convened by the American College of Chest Physician and the Society of Critical Care Medicine published a clear definition of sepsis, severe sepsis and septic shock. This definition was revised in 2001 during the International Sepsis Definitions Conference. In February 2016, the third international Consensus Definitions for Sepsis and Septic Shock was released. Accordingly, sepsis is now defined as evidence of infection plus life-threatening organ dysfunction clinically characterized by an acute change of 2 points or greater in the SOFA score. The new clinical criteria for sepsis shock includes sepsis with persisting hypotension requiring vasopressors to maintain MAP $\geq$  65 mmHg and having a serum lactate level $>$  18mg/dL despite adequate volume resuscitation. Nowadays incidence of both sepsis and septic shock is still increasing. Therefore, progress in identifying and treating those conditions is recommended to decrease the mortality rates.

**OMAR TABBOUCHE**

Dr. - Head Of Pharmacy Department - New Mazloun Hospital

Dr. Omar Tabbouche is the Head Of Pharmacy Department in New Mazloun Hospital, Tripoli. He is also a part-time instructor in Manar University Of Tripoli & Jinan University of Lebanon. Dr. Omar holds 10 post-graduate degrees including a Pharm.D, M.Sc in Molecular Biology (Staffordshire University – UK), & another M.Sc degree in Clinical Pharmacy (Queen’s University Belfast – UK). He is also a specialist in Pain management, wound management, & anticoagulation therapy management. During the last couple of years, Dr. Omar has written scientific papers published in 7 local & International journals like the Molecular Genetics & Metabolism Reports “El-Sevier” & the Journal of Taibah University Medical Sciences (El-sevier). His research is mainly based on the quality control of drugs & Molecular Genetics.

**Efficacy and safety of ketoprofen 25 mg I.V. versus paracetamol 1 g I.V. in the management of fever in adults: A pilot, double-blind, parallel-group, randomized controlled trial.**

To compare the antipyretic efficacy and safety of ketoprofen 25 mg I.V. to that of paracetamol 1 g I.V.

Design: Double blind, parallel group, randomized controlled trial.

Setting: New Mazloun Hospital, Tripoli, Lebanon.

Subjects: 180 patients with fever of infectious origin.

Primary and secondary outcomes: The primary outcome of our study is fever reduction after 30 minutes of medication administration. The secondary outcomes are: fever reduction after 15 minutes of medication administration, the rate and severity of the adverse drug events.

Results: Ketoprofen reduced the fever by 24.5% more than paracetamol ( $p=0.012$ ) within the 15 minutes window. Ketoprofen and paracetamol reduced fever by a similar extent. Likewise, the rate of adverse drug events in the ketoprofen group was similar to that of the paracetamol group (6.6%). The mean of the severity of the adverse drug events was lower in the ketoprofen group (1 versus 1.16).

Conclusion: Ketoprofen 25 mg I.V. is a more cost-effective antipyretic treatment than paracetamol 1 g I.V.

**YOUSSEF AKIKI**

Chief Pharmacist – Saint Georges Ajaltoun Hospital

Youssef Akiki is a chief pharmacist at St Georges Ajaltoun Hospital which is related to the same Congregation of Maronite Sisters of St Therese that includes St Louis and St Therese hospitals. He has devoted his practice to the prescription review, clinical interventions, medications supply and leading many pharmaceutical projects for the last ten years. He is also practicing as part time at the Cedars Medical Association with its seven branches to help providing treatment with the most efficient way in the primary health care. After earning his PharmD degree at the Lebanese University in 2004, he completed a Master 1 in "Pharmacology" and a university diploma in "Clinical Pharmacy" at St Joseph University (USJ). In 2012 he achieved a diploma in "Economic Health" at ESA (Ecole Supérieure des Affaires) and last year (2015) he finished his Pharmaceutical MBA from the Lebanese University. Recently he is completing a DBA (Doctorate in Business Administration) from Balamand University affiliated with University of Jean Moulin 3-Lyon France. Youssef Akiki's research interest focuses on purchasing in hospitals and how to improve the managerial skills for pharmacists in all the field work.

**Inventory Management**

The inventory management in a hospital is one of the big challenges that faces all hospital pharmacists especially when the academic program is not focusing to improve such managerial skill.

Understanding supply and demand is initial, as the main objective of inventory management is to have the minimum quantity of goods to meet demands.

Many equations help in evaluating an inventory management by examining the ITR (Inventory turnover rate), the EOQ (Economic order quantity) as well as other formulas that facilitate the implementation of many KPI (Key performance Indicators). The ABC and Pareto's analysis will be presented as well as many terminologies related to the topic.

Finally a brief description will clarify the technology role is the development of the inventory management in business.

**AYMAN ALAMEDDINE**

Community Pharmacist - Aldiya Pharmacy

Dr Ayman Alameddine earned his degree of doctor of Pharmacy from the University of Parma, Italy in July 2004 and later got his CE Board in December 2004. His thesis in analytical chemistry exploited the correlation between health and nutrition. After graduating, Dr Alameddine joined Clemenceau Medical Center in Beirut where he worked as a clinical pharmacist from June 2005 through October 2007. During this period, he attended a D.U in clinical pharmacy at St Joseph University, Lebanon.

In January 2008, Dr Alameddine started running his own pharmacy, Al Dia, in Tripoli, Lebanon, but his academic interest continued growing. He was appointed as adjunct preceptor at LAU in 2012 and also taught a course in biotoxicology at Beirut Arab University in years 2013-2014.

Dr Alameddine's research interest focus on extemporaneous formulations and drug-drug interactions, subjects that he continuously lectures about in various seminars for Pharmacists and Physicians with different specialties; he is also very well known with his specialty of compounding extemporaneous pediatric and geriatric oral solutions.

**Extemporaneous Formulations for Pediatrics and Geriatrics**

The Purpose of this educational session is to explain to the Pharmacists that not all Commercial available tablets like (Anti hypertensives, antibiotics,ect) are soluble in water.. Therefore arises the need for preparing extemporaneous solution or suspension inside the Pharmacy.

Extemporaneous formulations were prepared from commercially available tablets using compounded suspending vehicles. There were no substantial changes in the appearance (color and consistency) or odor of the formulation. The pH values, the micro-biologic stability of the formulation were measured.

Conclusion: Extemporaneously compounded suspensions or solutions were stable for at least 15-30-60 days when stored in glass bottles protected from light at controlled temperatures. These compounded suspensions are better suited for administration to children and adults who cannot swallow tablets.

They may provide an alternative in situations where the marketed suspension is unavailable.



## **ABEER ZEITOUN**

Former Clinical Assistant Professor - LAU, School of Pharmacy

Abeer Zeitoun is a certified clinical doctor pharmacist in medication safety from MCPHS, Boston. Beside being a former clinical assistant professor at the LAU school of pharmacy for more than 10 years, Dr. Zeitoun was the founder of the medication safety service at LAUMCRH-RIZK hospital and the clinical medication safety rotation for Pharm D student at the LAU, school of Pharmacy. As the chair of the medication safety committee at LAUMCR-RIZK, she led on many safety projects including: establishing Safety and just culture, improving communication as a mean of improving safety culture, medication reconciliation, CE series for nurses on high alert medication, and several other safety projects.

### **Introduction to Medication Error Prevention Strategies**

Below is an outline of The aim of this presentation is to introduce the audience to the concept of medication and patient safety as an important mean for improving the overall health practice at our health institutions.

Below is an outline of the topics that will be covered during this presentation

I. Introduction

II. Error prevention strategies for:

Prescribing

Dispensing

Administration

Monitoring

III. Strategies that staff can use to prevent medication errors

High Risk Situations

Self and peer checking

Avoiding confirmation bias, dangerous abbreviations

Clarifying questions

Phonetic and numeric clarifications

Speak up for safety

Recognize and avoid workarounds

Control the environment the topics that will be covered during this presentation

V. Define the following terms for preventing medication errors:

Human factors / Human factors engineering

Design principles



## **ANTOINE GEAGEA**

Chef de Département de service de Gastroenterologie, Clinique Du Levant

Gastro-entérologie Hépatologie

Spécialiste HGE

Doctorat en Médecine

Doctorat en Médecine Légale

Maîtrise en Sciences Biologiques

Diplômes et Etudes Universitaires :

Juin 1998 : Maîtrise en sciences Biologiques et Médicales : Certificat Génétique Université Saint Joseph-Beyrouth Liban

Juin 1999: Maîtrise en sciences Biologiques et Médicales :Certificat Immunologie Université Saint Joseph-Beyrouth Liban

Juin 1999: Diplôme d'éducation publique sur le SIDA - Université Américaine de Beyrouth

Juin 2002: Doctorat en Médecine Generale - Université Saint Joseph-Beyrouth Liban

Juin 2005: Diplôme Universitaire de Médecine Légale - Université Saint Joseph-Beyrouth

Université de Rouen-Hôpital Charles Nicole (Professeur Bernard Proust)

Juin 2007: Diplôme Inter Universitaire de Maladies Inflammatoires Intestinales - Université de Lille,Lille,France

Novembre 2007: Capacité de formation en Vidéocapsule endoscopique - Institut Arnauld Tzank. Saint Laurent du Var – France

Novembre 2007: Diplôme Inter Universitaire de Proctologie Médico Instrumentale - Université Paris V, Paris,France

Juin 2008: Diplôme d'Etudes Spécialisées en Hépatogastro-Entérologie - Université Saint Joseph Beyrouth , Liban

Septembre 2008: Diplôme Inter-Universitaire d'Endoscopie Interventionnelle - OMED, Saint Laurent De Var, Marseille, Nice , France

Juillet 2009: Diplôme de Nutrition et de prise en charge des Malabsorptions - Université Claude Bernard , Paris France

### **Pharmacist's Implications in Common Gastro-Intestinal Disorders**

**KATIA ISKANDAR**

Chief Pharmacist, Dr. – Lebanese Canadian Hospital

Holds both a Pharm.D. degree from the Lebanese University (UL), Dekwaneh, Lebanon and 2 International Master 'Management de L'Hopital et de la Santé ' (MHS) and Master 2 « AMES -Analyseet management des établissements de Santé, Paris Diderot-Paris 7 and (EHESP) (Ecole des Hautes etudes en Santé Publique) validated by the French Ministry of Education.

Katia is a PhD student at Paul Sabatier University in Toulouse

She is currently the chief pharmacist at the Lebanese Canadian Hospital and the chair of the P&T committee as well as the Patient safety committee

Katia is also a part time Clinical Assistant Professor at the Lebanese International University (LIU) - School of Pharmacy and at Beirut Arab University (BAU) , Pharmacy practice and Management and at the Lebanese University , School of Pharmacy, Master II Pharmaceutical Marketing and Master II Advanced Hospital Pharmacy practice.

She has 12 posters and 2 publications

**Morphine interference with antiplatelet effect of P2Y12 receptor blockers in patients with acute MI**

Unstable angina and acute non-ST elevation myocardial infarction (NSTEMI) are medical emergencies requiring the simultaneous application of multiple therapies. As part of initial interventions, morphine may be given for the relief of chest pain. However, due to evidence of worse outcomes especially in patients with unstable angina/non-ST elevation MI as compared to ST elevation MI cases, morphine use is reserved for patients with uncontrolled ischemic pain.

While the mechanism(s) by which morphine might be associated with decreased survival is not known, at least two studies have raised the possibility that it acts by interfering with the antiplatelet effect of the P2Y12 receptor blockers.

In the IMPRESSION trial, Morphine lowered (active) ticagrelor plasma concentration and impaired its antiplatelet effect and in another study morphine significantly delayed clopidogrel resorption and reduced the area under the curve levels of its active metabolite by 52 percent.

In the setting of acute myocardial infarction, it is recommended to avoid intravenous morphine use if possible and reserve its use for patients with an unacceptable level of pain, persistent discomfort or anxiety related to myocardial ischemia.





## **NIBAL CHAMOUN**

Clinical Assistant Professor - Lebanese American University

Clinical Coordinator - Lebanese American University Medical Center- Rizk Hospital

### EDUCATION:

2009 Doctor of Pharmacy - Lebanese American University - Byblos, Lebanon

2008 Bachelor of Science in Pharmacy - Lebanese American University - Byblos, Lebanon

### TRAINING:

2010- 2011 PGY-2 Cardiology Specialty Resident (ASHP-accredited) UMass Memorial Medical Center Worcester, MA

2009- 2010 PGY-1 Pharmacy Practice Resident (ASHP-accredited) Beth Israel Medical Center New York, NY

### LICENSURE:

2010-Present Pharmacy State of Massachusetts (license number PH233001)

2010-Present Pharmacy State of New York (license number 20-054434)

2009-Present Pharmacy Lebanon (license number 18908/2/2009)

### PROFESSIONAL ORGANIZATIONS MEMBERSHIP

2008-Present American Society of Health-System Pharmacists (ASHP)

### **Evaluation of professional practice and key performance indicators in hospital pharmacy**

Pharmacy involvement as a part of the multidisciplinary team has become more common throughout Lebanon. As such, it is important for Pharmacy leaders to become involved in reporting on and adopting well-established clinical outcome measures linked to medications. Involvement in the Quality Department's initiatives such as evaluation of professional practice (EPP) and key performance indicators (KPIs) pertaining to medication outcomes is an important initiative, positioning the Pharmacy Department as a key member for the evaluation of medication related outcomes.

#### Objectives:

List the measures that address preventable harm linked to medications reflecting pharmacy accountability in the literature.

Discuss the importance of utilizing well established medication related outcome measures.

Share the experience of Pharmacy's involvement in medication related outcome measures at LAUMCRH.

**LAMIS KARAOUI**

Clinical Associate Professor and Director of Experiential Education - Lebanese American University - School of Pharmacy

Dr. Lamis Karaoui is a Clinical Associate Professor of Pharmacy Practice and the Director of Experiential Education at the Lebanese American University – School of Pharmacy. She completed her Doctor of Pharmacy degree at the Lebanese American University followed by a pharmacy practice residency at the Saint Michael's Medical Center in Newark, New Jersey. Dr. Karaoui is a Board Certified Pharmacotherapy Specialist. Her main interests revolve around critical care pharmacy, women's health and pharmacy education and resonate with her teaching of the pharmacotherapeutics series and advanced pharmacy practice experiences. Dr. Karaoui is the author of several publications featured in *Pharmacotherapy*, *Annals of Pharmacotherapy* and the *American Journal of Health-system Pharmacists*, and serves as a peer reviewer for those journals. She actively serves on the American College of Clinical Pharmacy Practice and Research Networks and the American Society of Health-system Pharmacists.

**How Wise is Early Dialysis in Critically Ill Patients?**

Renal replacement therapy (RRT) refers to either hemodialysis, peritoneal dialysis hemofiltration or hemodiafiltration. Optimal timing of initiation of renal replacement therapy (RRT) for severe acute kidney injury (AKI) but without life-threatening indications is still controversial.

The AKIKI trial was conducted on medical or surgical patients with sepsis, did not show statistical significance with the hazard ratio of death at day 60 was 1.03 (95% CI 0.82 to 1.29; p-value = 0.79).

The ELAIN trial was a single-center trial, conducted on surgical intensive care patients and did demonstrate a statistical difference with the hazard ratio of death at day 90 was 0.66 favoring the early initiation strategy (95% CI 0.45 to 0.97; p-value = 0.03).

The role the pharmacist in the ICU multidisciplinary team consists of ICU cost savings, adjusting medication doses for patients receiving RRT, screening for adverse drug event rates and complications of chronic kidney disease.



## ULFAT USTA

Pharmacy Director - AUBMC

Educational Background: ESA certificate: Evidence-Based Decision Making in Healthcare Management

October 2015 – May 2016

ESA program Diplôme Inter Universitaire « Sciences Economiques

Et Sociales en Santé SESS » November 2012

Leadership Institute at ASHP November 2010

Board Certified Pharmacotherapy Specialist December 1, 2009

Board Certified Pharmacist in Nutrition Support November 2005, recertified November 2012

Masters in Clinical Pharmacy, 2004- Queen University, Belfast

Diplome de Docteur en Pharmacie ,1982 - U.S.J License to practice pharmacy in Lebanon, 1982

Member of the Order of Pharmacists, 1983

Professional Experience:

May 2010 - Director of Pharmacy at AUBMC

December 2005 till now - Chief Pharmacist at AUBMC - Pharmacy Supervisor at AUBMC

November 1997 to November 2005 - Assume overall responsibility of the department in the absence of the director and make sound decisions in a timely manner.

- Assist the director in developing operational systems in accordance with JCI. Reaccreditation March 2014
- Work with other departments and healthcare professionals to achieve professional and organizational goals.
- Instruct, train, supervise and monitor the progress of employees.
- Maintain a long-term and overall view of the work, translate strategies in practical goals.

### **Mode and Effect Analysis Workshop: Medication Reconciliation Upon Admission**

Learning Objectives: After completing this session, pharmacists will be able to

Explain the concept of medication reconciliation.

Explain the role of each team member (physicians, RNs, and pharmacists) as well as the role of the patient and family members in the medication reconciliation process.

State why medication reconciliation is important for patient safety.

Devise a process for medication reconciliation.

Apply FEMA safety technique to identify process medication reconciliation problems .

Medication reconciliation is creating the most complete and accurate list possible of all home medications for each patient and then comparing that list against the physician's admission, transfer, and/or discharge orders. Discrepancies are brought to the attention of the physician and, if appropriate, changes are made to the orders. Any resulting changes in orders are documented

The ultimate goal of medication reconciliation is to prevent errors such as omissions, duplications, and adverse interactions. During transitions of care, medication reconciliation is especially important and challenging.

The Joint Commission underlines the importance of this process by designating it National Patient Safety Goal (NPSG) 8 and requiring that hospitals demonstrate compliance in order to maintain accreditation.

Even with the understanding of the importance of medication reconciliation, it is difficult to achieve due to many barriers and time constraint.

The Failure Mode Effects and analysis (FMEA) is a proactive safety technique that helps to identify process and product problems before they occur. It is one of several types of proactive risk assessment that can be used in healthcare settings for the medication reconciliation process.

Auditing the new process to ensure compliance is mandatory to identify areas for improvement.



**FADI NASR**

Head of Hematology and Oncology Department  
Lebanease Hospital Geitaoui-University Medical Center

Dr Nasr is currently Head of Hematology and Oncology department at Lebanease Hospital Getaoui and Lecturing Professor at St Joseph University, Lebanease University and Kaslic University , Lebanon.

Dr Fadi Nasr earned his medical degree from Saint Joseph University – Beirut (1991) where he completed his internal medicine and oncology residency (1994) and diploma (1996). Whent to Gustave Roussy Cancer Campus Paris 1994-1998,then to MD Anderson Cancer Center Houston Texas 1998-2000.

He holds a Diploma in Oncology from University Kremlin Bicetre –Paris (1995), Hematology Diploma from the University of Pierre and Marie Curie- Paris (1996) and a Bone Marrow Transplant Certificate from MD Anderson- Texas USA.

**Optimizing Treatment Management of Gastric Cancer**

**WAFAA DAHDAL**

Director of International Programs – American College of Clinical Pharmacy

Dr. Wafa Y. Dahdal, Pharm.D., BCPS is Director of International Programs and Associate Director of Professional Development at the American College of Clinical Pharmacy (ACCP). In this position, she oversees publications, recertification programs for board certified specialists in pharmacy, and international programs. Prior to joining ACCP, Dr. Dahdal was professor of pharmacy practice and pharmacotherapy specialist. She has extensive experience in clinical pharmacy, initiating services and providing care to patients in the acute care (adult medicine and critical care) and ambulatory care settings across various specialty areas. As professor of pharmacy practice, Dahdal assumed leadership positions in curricular development, learning methodologies, and assessment as well as the professional development of practitioners and pharmacy practice faculty members.

Dr. Dahdal has published and presented internationally on issues related to cardiovascular medicine, clinical pharmacy services, curricular reform, abilities-based education, professional standards and pharmacy education, and clinical practitioner and pharmacy practice faculty development. Dahdal is the editor of ACCP International Clinical Pharmacist, a publication focused on current, future, and innovative developments in pharmacy education and practice worldwide.

Dr. Dahdal has assumed several professional leadership positions including President of the Gateway College of Clinical Pharmacy and President of the Illinois Chapter of the National Arab American Medical Association. She served two terms as Secretary of the Academic Pharmacy Section and member of the Board of Pharmaceutical Practice of the International Pharmaceutical Federation (FIP). Most recently, Dr. Dahdal served on FIP's Working Group on Defining Responsible Use of Medicines and is currently serving as Co-chair of FIP's Working Group on Pharmacy Vision.

**Global Trends and Opportunities for the Pharmacy Profession**

In view of the increasing complexities in health systems and demand for efficient, quality, and outcomes-oriented patient care, pharmacist services are progressively shifting from product- to patient-oriented. Services that focus on clinical activities are being developed in all practice settings, including but not limited to the hospital and community settings. The scope of practice is expanding in many countries around the globe to enable pharmacists to provide much needed patient care. The types of services range from promotion of wellness and prevention, to patient education, activities related to a particular aspect of patient care, and the highly advanced and specialized services, where pharmacists provide comprehensive medication management either independently or as members of interprofessional, team-based practices. This presentation will (1) highlight select global advancements with national and/or regional implications on clinical pharmacy education and practice and (2) discuss some of the challenges faced in relation to pharmacist qualifications and practice readiness for the new pharmacist roles, (3) propose steps needed to ensure successful advancement of the profession, and (4) discuss key components of ACCP's Standards of Practice for Clinical Pharmacists, which delineates the qualifications, credentialing, continuing professional development, and the services and processes for the provision of care that patients, other health care professionals, administrators, and policy makers should expect of clinical pharmacists.



## **ALI EL HAJJ**

Chief Executive Officer / Scientific Committee Chief - Medrar Medical Center / HCQM Graduate Program, GATE/LU

Over the past 30 years, Elhaj worked as a Chief Executive Officer in several healthcare systems throughout the United States and Lebanon.

He completed his study in Educational Psychology, Healthcare Management and Human Rights Law at Wayne State University, The University of Michigan and Saint Thomas University

Elhaj is the Founding Governing Board member and Chief Executive Officer of Medrar Medical Center, previously, Managing Director for Health Care Management. Oversaw the management and development of a full healthcare system in Lebanon and the Region, Chair of the scientific committee program (Norms/Health and Technology Management) at the Lebanese University, and a Healthcare Subject Matter Expert. Advisor to the Ministry of Health, and a member of the Ministry of Health National Accreditation and standard development committee. Co-Author of the proposed Universal Healthcare Coverage proposal by MoH. Recently Appointed by the Lebanese Ministry of Health to co-coordinate the restructuring of the hospital accreditation standards and audit.

Elhaj served on the Board of Directors of several healthcare systems, most notably the National Association of Healthcare Systems in USA.

Elhaj received several awards including the CEO of the Year award for outstanding clinical and operational excellence from Charter Medical Corporation, Outstanding Services to the field of healthcare from the University of Nevada, and the President awards for outstanding services to support and promote the nursing profession from the American Psychiatric Nursing Association

### **Quality in Pharmacy Setting: Impact of Accreditation on Quality**

Perception and acceptability are two important factors when evaluating the efficacy and sustainability of the accreditation impact on quality.

Evidence based intervention proven to be a savior, however, the continuity of the intervention will remain a good incident unless supported by a systematic quality process.

Regaining public trust in the age of avoidable medical errors, and concern about patient safety is a must, in order to move forward and achieve desired outcomes.

Accreditation might be the single most important platform to consider, however it will be rendered ineffective when implemented without considering relevant resources and stakeholders.

**RASHA HAMRA**

Director of Health Education Department - Ministry of Public Health

Dr. Hamra is currently working at the Lebanese Ministry of Public Health as the Director of Public Relations and Health Education Departments as well as the focal point for clinical trials regulations. She received her BS and doctor of pharmacy from Lebanese American University. She is also a holder of MPH from the Faculty of Health and Sciences at American University in Beirut. Currently, she is doing a professional doctorate in health at Bath University in the UK and her research focus is on improving the quality of health system governance through the development of a guidance tool. She is a consultant with the World Health Organization-Geneva on issues related to health system governance in general and to Good Governance of Medicine in particular.

Since she started work at the Ministry of Public Health in 2007, she was involved in several national projects and the most recent ones are the development of a national code of ethics for drug promotion and the development of standards for authorization of Institutional Review Boards (IRBs) in the country.

**Lebanese Code of Ethics: Components & Implementation**

To introduce pharmacists from different fields about the newly developed code of ethics for drug promotion. The presentation will go over the importance of having a code of ethics, its components, how it will be implemented, and how deterring violations will be handled.

The code of ethics for drug promotion is meant to serve as a set of principles to govern all medicines marketing phases, and to monitor all parties involved in production, importation, marketing, prescription, and dispensing of medicines.

It is developed in the form of guidelines for health professionals on how to manage their interactions with pharmaceutical industry and how pharmaceutical industry should implement marketing practices to establish transparency and accountability

Presentation will end with a practical examples of what is acceptable & not acceptable based on code.



## **LUIS MIGUEL LOURENCO**

Pharmacist from Portugal - Managing his community pharmacy.

Luís is a 36-year-old community pharmacist from Portugal who is currently managing his community pharmacy. Luís has been involved in the International Pharmaceutical Federation (FIP) since 2006, when he was part of the Annual Congress staff team. In the last few years he has been active in the Young Pharmacists' Group (YPG), having served as Project Coordinator and Chairperson. Since September 2013 he is the YPG Leadership Project Coordinator and also the Community Pharmacy Section (CPS) Executive Committee (ExCo) Secretary.

### **Good Pharmacy Practice: FIP Perspective**

By definition, Good Pharmacy Practice (GPP) is the practice of pharmacy that responds to the needs of the people who use the pharmacists' services to provide optimal, evidence-based care.

One of the goals of FIP, as an international organization with close relationship with the World Health Organization (WHO), is to establish international standards for community pharmacy practice.

In this lecture, we will discuss how the international scope of the GPP standards developed by FIP and WHO can be adapted to different countries, by analyzing in depth the path that led to the development on this document and by showcasing some implementation examples.

At the end, participants should be aware of the scope of action of FIP in the international arena and how its work can impact national organizations and the daily practice of community pharmacists.





## **RACHA HAWASLI**

PhD Researcher - Kingston University, London

Racha Hawasli, a clinical pharmacy graduate from the Lebanese American University, has worked in community and hospital pharmacy settings before going into research.

She is currently a PhD researcher at Kingston University London, looking into the diffusion of innovation in health, more specifically, the feasibility of ambulatory chemotherapy in Lebanon. Additionally, Racha expanded her research topic to include occupational exposure to cytotoxic drugs in academic and healthcare settings.

Racha's expertise lies in quantitative and qualitative methodologies and pharmacoeconomic modeling as she has conducted several assessments in this context over the past 4 years.

She has also established strong connections with experts from the UK in occupational exposure, and is currently working on setting guidelines for the safe handling of cytotoxic drugs in academic research laboratories.

Racha has several publications in international journals, and presented part of her work as posters at two annual meetings for the British Oncology Pharmacy Association (BOPA), at which she is a member.

Racha is also a member of the International Society of Oncology Pharmacy Practitioners (ISOPP).

Today, Racha will present the barriers for the adoption of ambulatory chemotherapy in Lebanon, and the role of this treatment modality in empowering cancer patients.

### **Empowering cancer patients through ambulatory chemotherapy**

It has been often reported that cancer patients experience a sense of loss of control towards their fluctuating symptoms and disease management.

Studies have shown that shared decision making can empower patients, improve adherence and overall quality of life. One innovation in this context is ambulatory chemotherapy (AC), delivering chemotherapy to patients outside the hospital using a portable elastomeric infusion pump. AC is renowned for decreasing cost of care, enhancing quality of life, and empowering patients to regain control and normalcy. AC has become the standard of care for certain cancers in most developed countries. In Lebanon, AC is not widely adopted yet despite the substantial demands for healthcare services and outstanding expenses. This presentation will highlight the main findings of semi structured interviews conducted with patients, in two hospitals in Lebanon, on their perception of AC. The results of this research study will also accentuate the pharmacists' role in counselling patients to meet their needs, and overcoming the barriers to innovation.

The first identified barrier for AC is the cultural understanding of cancer as a stigmatized disease. A remarkable contributor to identity threat is cancer visibility, there was an explicit fear of their diagnosis becoming known to others whereby carrying the pump in public would "expose them".

Second, the dominating paternalistic approach of care is further restricting the uptake of AC. This concept comes in tune with the lack of patient empowerment. Introducing shared decision making as a model for clinical practice is paramount to overcoming this barrier.

Third, the lack of infrastructure for adopting AC and its absence from national reimbursement schemes make it less appealing to oncologists and patients.

There is a huge potential for AC in Lebanon to empower patients and nurture their personal development, and pharmacists can lead a paramount role in fostering this practice.

**ELSY RAMIA**

Clinical Assistant Professor - Lebanese American University

Dr. Ramia is a clinical assistant professor at the Lebanese American University (LAU) School of Pharmacy. She earned her Bachelor of science in pharmacy degree followed by a Doctor of Pharmacy degree from LAU in 2008 and 2009 respectively. In 2010, Doctor Ramia worked as a clinical Pharmacist at Centre Hospitalier du Nord, Zgharta where she assisted in developing medication use protocols and implementing several safety measures.

In 2011, she earned a Diploma in medical research from the Lebanese University School of Medicine. Dr. Ramia achieved and maintains her certification as board certified Pharmacotherapy specialist (BCPS). Her scholarly interests include Pharmacy Education and Medication Safety. She is currently completing a Masters degree in Public Health – Epidemiology and Biostatistics. Additionally, Dr. Ramia is currently enrolled in patient safety certificate program offered by Armstrong Institute for Patient Safety and Quality, Johns Hopkins Medicine. She recently attended medication safety intensive workshop offered by the Institute of Safe Medication Practices (ISMP).

Dr. Ramia is a member of several professional societies including the American Society of Health-System Pharmacists, and the Lebanese Order of Pharmacists.

**Medication Safety Review and Updates**

This educational session will cover the below learning objectives:

Review medication safety terminologies and respective practice guidelines.

Recognize, classify and assess Adverse Drug Reactions.

Identify the different ADR international reporting mechanisms.

Review and provide updates on the OPL Adverse Reaction (Drug/Product) Reporting Form.



## MAHENDRA PATEL

National Pharmacy Board Member & Principal Enterprise Fellow (Academic) in Pharmacy Practice – Royal Pharmaceutical Society & University of Huddersfield (UK)

Dr Mahendra G Patel University of Huddersfield and National Pharmacy Board Member of the Royal Pharmaceutical Society (RPS). Principal Enterprise Fellow in Pharmacy and Academic pharmacist with a national and international profile. Honorary Senior Lecturer at the Medical School University of Sheffield, and Adjunct Professor of Pharmacy Wilkes University Pennsylvania USA. Since graduating and gaining his PhD in Pharmacy Practice, his career has spanned community practice, health promotion, academia, research, guideline development work with NICE, and accreditation of organisations producing guidance as Vice-Chair of the NICE Accreditation Committee, as well as a range of voluntary and charity work. His specialist interest revolves around the health status of Black and Minority Ethnic (BME) groups and health inequalities - especially relating to cardiovascular disease (CVD) and diabetes, and barriers to accessing treatment.

Main research interests focus around health inequalities and the health of black and minority ethnic groups, as well as improving medicines adherence. As one of fifteen national Pharmacy Research Champions for the National Institute of Health Research (NIHR), Mahendra supports and facilitates national research and its delivery to help drive up standards and improve health outcomes. His own work around prescribing variations most notably has been published in the BMJ.

Mahendra is leading the way forward for the pharmacy profession, being appointed the first Fellow of National Institute for Health & Care Excellence (NICE). His early pioneering work with NICE and NHS Evidence involving students is now represented in over thirty medical, nursing and pharmacy schools nationally as the NHS Evidence Student Champions Programme. He leads a similar UK-wide programme with the RPS and British Pharmaceutical Students Association (BPSA), the RPS Student Champions Programme, to encourage students to take advantage of the Society's support and resources from an early stage in their journey to become highly qualified pharmacists. This programme is now present in every School of Pharmacy in England, Scotland and Wales bar one.

Through his experience with developing the NICE Medicines Adherence Clinical Guideline (CG 76), he was instrumental in working with the British Heart Foundation (BHF) to help produce online information in reducing heart disease alongside a national educational toolkit - the Healthy Hearts Toolkit (winner of the BMA Patient Information Resource of the Year Award 2012).

Mahendra has played a significant role within the British Heart Foundation (BHF) for many years, championing awareness within both the patients and pharmacist/pharmacy groups. Dr Patel is an advisor in pharmacy matters relating to the health of BME groups, and now has also become member of the BHF House of Care Steering Committee. To support the charity he has also launched a regional BHF branch and sustains his involvement with this as Chair to help raise money. Further voluntary work includes the Mouth Cancer Foundation, of which Mahendra is a founding member and director. Mahendra was also appointed to the Health and Well Being Committee within the Special Olympics Group GB which involves identifying strategies to improve the health and well-being of athletes.

Mahendra has a longstanding association with the South Asian Health Foundation (SAHF) and has been Chair of Cardiovascular Disease (CVD) Working Group for many years, and only lately has been appointed as its CEO. He has been instrumental in helping develop and deliver numerous health education programmes throughout the country spanning nearly two decades – engaging and involving a diverse range of minority ethnic groups most prone to diabetes and CVD risk. He further helped produced two Bollywood-type DVDs, 'Matters of the Heart' and 'Sweet Talk' for tackling and preventing heart disease and diabetes specific to this population. Both were launched at the House of Lords and culminated in receiving the BMJ Diabetes Team Award 2015.

Mahendra has been re-elected by his peers to the National Pharmacy Board for the Royal Pharmaceutical Society (RPS) representing the academic sector and has also represented the RPS Assembly. His enterprising and entrepreneurial approach has also been recognised by the University of Huddersfield – and in the first of its kind been awarded a Principal Enterprise Fellowship in Pharmacy.

### **Scaling up the pharmacy workforce within the UK through supporting education and training to meet the needs of the rapidly evolving role of the pharmacist. Royal Pharmaceutical Society (RPS) UK.**

Transformative scaling up of health professionals' education and training is defined as the sustainable expansion and reform of health professionals' education and training to increase the quantity, quality and relevance of health professionals, and in so doing strengthen the country health systems and improve population health outcomes.

To develop the capacity of the pharmacy workforce we need:

Sufficient funding.

Adequate training facilities.

Right pharmacy staff, with the right skills, in the right place, at the right time in the right numbers.

National policies and plans.

Needs based workforce development.

Pharmacy workers roles are evolving worldwide and pharmacy education needs to be flexible enough to respond to educational needs. The education system needs to have the flexibility to respond to the evolving nature of the profession, as roles become more clinical. In order to meet current and future needs, existing CPD and postgraduate programmes should be developed to enhance competencies. Transforming and scaling-up health professionals' education is required to attain the right mix of skills and competencies of health professionals who can respond to ever changing and evolving needs of populations around the world. We need to move from a traditional focus on tertiary hospitals to initiatives that foster community engagement i.e. move away from developing advanced specialists to advanced generalists. From day 1 as a student to career end the Royal Pharmaceutical Society has: Programmes of support underpinned by evidence based frameworks.

# The 24<sup>th</sup> Annual Pharmacy Congress

BEIRUT 17 | 18 | 19 November 2016

## POSTERS

ADVANCING THE PHARMACIST'S ROLE  
TOGETHER WE MAKE A DIFFERENCE

تطوير دور الصيدى  
معاً نحدث الفرق



THE LEBANESE ORDER  
OF PHARMACISTS

18  
CREDITS

**Aline Hajj**

PharmD, PhD

**Medication Safety Knowledge, Attitude and Practice among Community Pharmacists in Lebanon.**

The Lebanese Order of Pharmacists (OPL) conducted a survey aiming to evaluate the Knowledge, Attitude/perception, and Practice of medication safety among community pharmacists in Lebanon. The main purpose was to assess the educational needs of community pharmacists in relevance to pharmacovigilance and adverse events reporting, and enhance medication safety culture in Lebanon. The survey revealed a good knowledge on medication safety including pharmacovigilance (definition and purpose) as well as adverse drug reactions (ADR). All community pharmacists agreed on their role, along with the physician, in reporting ADRs. They even consider that this activity should be compulsory for them. The survey noted a lack of practice and training regarding pharmacovigilance. Nonetheless, the pharmacists agreed on the role of the OPL and the Ministry of Health in promoting this practice and helping them be more involved in reporting ADRs. The pharmacists think they are well positioned regarding patient's safety practice in their pharmacies and the results were not statistically different between pharmacy owners and pharmacy staff.

**Elsy Ramia**

PharmD, BCPS

**Patients Knowledge Regarding Their Medication Use and Risks: A cross-sectional study of Lebanese outpatients.**

Introduction: This is a cross-sectional observational study designed to evaluate the knowledge of Lebanese outpatients related to medication use and risks.

Methodology: A self-administered questionnaire was used. Data is analyzed using SPSS version 21 software. Descriptive statistics were used to calculate all participants' responses. The association between categorical variables were evaluated using Pearson  $\chi^2$  test or Fisher's exact test. Binary logistic regressions were performed to identify factors associated with medication knowledge.

Results: Results for 921 patients were presented. Eighty-five percent of the study population were receiving 2 to 7 medications per day; and purchase those medications from the same pharmacy. Analysis of the patients answers per category of information showed the following: around 82% of the patients knew the names of all the medications they were taking, 54.2% knew the strengths of all medications they were taking, 74.4% knew all their dosage regimens, 54.8% knew all their indications, and only 2.1% knew the potential adverse drug reactions (ADRs) of all of their medications. In total, around 56% of our patients showed sub-optimal medication knowledge. In multivariable analysis, patients' higher educational level, number of chronic diseases, and patient-physician interaction were significantly associated with higher medication knowledge.

Conclusion:

This study showed suboptimal total medication knowledge, with a particular deficiency in knowledge of potential ADRs of their medications.

**Hani Dimassi**

MPH, PhD

**Job Satisfaction of Community Pharmacy in Lebanon: A National Study.**

Job satisfaction is an important element in every professional, more so the health profession. Many studies have look at the satisfaction of health professionals including physicians, nurses, and pharmacists and correlated it to professional outcomes such as intention to quit. This study looks at the job satisfaction of a nationally representative sample of community pharmacists in Lebanon. A total of N=300 community pharmacy were contact and interviewed over the phone. The sample was a stratified random sample according to size using the 5 Lebanese governorates as stratum. Two trained fresh pharmacy graduates conducted all telephone calls. Data was entered into computer and analyzed using SPSS. Results of job satisfaction questions will be presented. Factors associated with higher job satisfaction will be investigated and presented. Factors including gender, age, whether owner or employee, years of experience, ever exposed to violence during work, and other factors will be explored.

**Ibrahim Zaraket**

Pharm D, MBA, M2 clinical pharmacy and pharmacoepidemiology

**Attitude and knowledge of athletes on the effects of energy drinks and anabolic products on the health.**

Introduction: Dietary supplements are often marketed with the claim that performance may be enhanced, including energy drinks that is expected to stimulate central nervous system. Also anabolic steroids are used to enhance athletic performance and physical appearance. This cross-sectional study aimed to determine energy drinks consumption, variables affecting their consumption, side effects, addiction and anabolic steroid use.

Materials & Methods: A pilot cross-sectional survey was conducted among 5 gyms with athletes in Lebanon over a 5 months period. Statistical analyses were performed on SPSS 17.

Results: 218 athletes were studied, of whom 170 were males .A total of 45 % consumed energy drinks and 63 (28.9%) used anabolic steroids from coach source (63.5%). In total, 73.9% believed that energy drinks provide physical energy. The highest side effect reported was tachycardia (75%) among energy drink consumers and testicle shrinkage (49.2%) among anabolic steroids users. Energy drinks consumption was significantly ( $p < 0.05$ ) higher among males, who smoke more than 4 nargiles per week, bodybuilders, those who gave physical energy definition for energy drinks and oral steroids users. Side effect of energy drinks were significantly more prevalent when there is dependence on it, actual smokers, during exams period and when taken at both gym and outdoor places. Dependence on energy drinks were significantly more prevalent when consumed by university athletes, who consume ED on daily basis, anabolic steroids users, who expend more than 20 \$ per month on energy drinks, who take them before exercise, athletes who combines ED with caffeinated beverages, who were satisfied after drinking them and around significance for those who define ED as drink that provide physical energy. Anabolic steroid use was significantly more prevalent among those aged  $> 31$  years, males than females, those who hold university degrees, cigarette smokers, nargile smokers, athletes whose aim is to maintain body fitness and limit weight gain.

**Jawad Malaeb**

PharmD

**Comparative Biowaver Study of Ciprofloxacin Innovator (Ciprobay®) With Other Generics of Ciprofloxacin in the Lebanese Market: Microbiological & Analytical Approach.**

Background: The demand of the generics is increasing and is expected to grow higher in the coming years. The price of generic drugs is generally lower than that of the brands. Still, people consuming generic drugs experience similar effectiveness as that of brands. Any generic drug produced, should mandatory meet the international standards as the innovator product, in means of quality, identity, strength, purity and potency. Thus, a generic drug should be bioequivalent to its innovator. However, the color, taste, shapes and packaging of generics is different from the innovator product. When an innovator drug is introduced to the market, no one have the right to copy it unless its patency had expired. After patent expiration, pharmaceutical companies have the right to manufacture generic drugs that must be bioequivalent to the innovator.

Ciprofloxacin, a fluoroquinolone antimicrobial agent, is considered as one of the mostly used and prescribed antibiotics nowadays due to its broad spectrum antimicrobial coverage and due to its proven efficacy to treat Gram-negative infections such as osteomyelitis, lower respiratory tract infections and urinary tract infections... Ciprofloxacin was initially marketed under the name Ciprobay®, and now the market is loaded with more than 13 generics of different origin and price variability. Aim of the work: This study aimed to ensure that the five Ciprofloxacin generic drugs obtained from the Lebanese market, are bioequivalent to the innovator product (Ciprobay®). Our study also aimed to compare and evaluate the tested brands and generics by applying quality control tests including microbiological assay and physicochemical tests following US pharmacopoeia.

Materials and methods: According to FDA, ciprofloxacin is classified as BCS class 2 & 3 (highly soluble, low permeable), as the drug is highly soluble below pH 6 and is poorly soluble above this pH. Biowaver dissolution testing done on generics and innovator of ciprofloxacin HCL was estimated in 3 different pH media (1.2, 4.5, 6.8) at temperature 37°C with samples withdrawn at different time intervals (5,10,15,30,45,60 min). The tablets were analyzed for their thickness, hardness, disintegration, dissolution, uniformity of weight, content uniformity and assay using standard procedure of the USP 34NF 29 pharmacopeia(1). In the meanwhile, microbiological testing was also carried out on different ciprofloxacin HCl brands and generic tablets in order to compare the microbiological efficacy of each.

Results and discussion: The results of all generics comply with USP specification limits of disintegration, uniformity of

weight and hardness tests. While, in each of thickness and content uniformity tests, only one generic result was not within USP limitations. In the assay test, 3 generics showed borderline results according to WHO limits (98-102%). Regarding the dissolution test, only 2 generics showed bioequivalence to the original innovator Ciprobay® having  $f_2 \geq 50$  in 3 dissolution media. While in post-hoc analysis, 3 generics showed significant difference compared to the innovator. Regarding the microbiological assay, 3 generics showed significant difference in the sensitivity in comparison to the innovator (Ciprobay®) when testing against different microorganisms.

Conclusion: Generics of ciprofloxacin varied in their bioequivalency to the innovator (Ciprobay®). This variation could be explained by the presence of different excipients, and manufacturing conditions. The significance of the observed in vitro differences must be confirmed by an in vivo bioequivalence study that should be conducted to confirm that the innovator could be safely interchangeable with the brand and this variation won't affect the safety and efficacy of the drug.

### **Mohamad Ismail**

BS, Pharm.D

#### **Assessment of Potassium Disorders in Critically-ill Hospitalized Patients.**

Background: Potassium is the most abundant cation in the body, making it the most common electrolyte disorder either as hypokalemia or hyperkalemia in critically-ill hospitalized patients. Potassium balance is present in both intracellular and extracellular fluids, in order to maintain homeostasis and a serum potassium level between 3.5-5mEq/L. Such cation is required for the normal functioning of all excitable cells, particularly those in the heart (contractility and rhythm), brain and intestinal muscles. Any disturbance can lead to threatening cardiac conductions and neuromuscular dysfunction. Although potassium disorders are commonly encountered, several studies had investigated both disorders, changes in data is still recorded due to demographic variation, increase in life expectancy, increase rate of multi-drug use and change in dietary habits.

Objectives: The aim of the study is to determine the prevalence, etiology, treatment modalities and its outcomes of potassium disorders (hypokalemia and hyperkalemia) for critically-ill hospitalized patients.

Materials and Methods: This is a retrospective, observational and case-control study. Over a one-year period from January 2015 till January 2016, all hospitalized patients admitted to cardiac care unit and intensive care unit at Rafic Hariri University Hospital who were above 18 years old and underwent at least one measurement of serum potassium level were included. A data collection sheet was used to collect the following: demographic characteristics, serum electrolytes level, cause(s) of admission, medication taken, etiology and treatment modalities of potassium disorders along with its outcomes from the hospital patients' files.

Results: Out of 1,357 hospitalized patients, 548 (40.4%) patients had a serum potassium disorders; 290 (53%) had hypokalemia and 258 (47%) had hyperkalemia in critical care units. Higher incidence of hypokalemia disorder is seen during hospital stay compared to admission state while the incidence of hyperkalemia is the same in both time state. Moreover, the percentage of the patients discharged with ongoing dsykalemia is 20.3% and 10.9% for hypokalemia and hyperkalemia respectively. In hypokalemic patients, the highest cause of hypokalemia was loop diuretic use (51%) and for hyperkalemic patients the beta-blockers and angiotensin converting enzyme inhibitors use were the frequent causes for hyperkalemia with a percentage of 48.8 and 46.9 respectively. The most common treatment modality is replacing potassium deficit by both oral and intravenous potassium chloride for hypokalemic patients whereas more than 75% of the hyperkalemic patients were treated with kayexalate. In addition, 58.7% and 54.5% of the patients have good response as an outcome of treatment for hypokalemia and hyperkalemia respectively.

Conclusion: The results of the current study show a high prevalence of potassium disorders among critically-ill hospitalized patients. Although the outcomes of treatment were adequate in most of the cases, some carry inadequate potassium or reverse potassium level. For this purpose, further monitoring of serum potassium level is warranted.

**Olfat Hamade**

Pharm D, M2 clinical pharmacy and pharamco epidemiology

**Enquête sur l'utilisation des produits amaigrissants chez la population Libanaise : Prévalence et Facteurs de risque.**

Contexte : L'obésité demeure un problème de santé publique dans le monde notamment au Liban où la prévalence est en augmentation continue. Peu sont les données publiées concernant la consommation des produits amaigrissants au Liban. L'objectif de cette étude est d'évaluer la prévalence de l'utilisation des produits amaigrissants auprès de la population libanaise, de mesurer le profil et le niveau de connaissance de ces produits et d'identifier les facteurs prédictifs ayant une influence sur le recours aux produits amaigrissants.

Méthodologie : Nous avons mené une étude transversale auprès d'un échantillon de 282 adultes libanais visitant une pharmacie communautaire en utilisant un questionnaire rempli face-à-face par un enquêteur entre Avril et Juillet 2016. Les participants ont été interrogés sur leurs caractéristiques sociodémographiques et économiques, les antécédents médicaux et style de vie, la perte du poids et les produits amaigrissants. Les données ont été traitées à l'aide du logiciel statistique SPSS version 23.

Résultats : La prévalence d'utilisation des produits amaigrissants au Liban est de 19,9%, 28,2% des femmes et 8,4% des hommes ( $p < 0,05$ ) avaient utilisé un produit amaigrissant même pour une seule fois dans leur vie. Les femmes libanaises ont plus recours aux produits amaigrissants (OR : 7,3 ; IC: 2,308-23,420). Les personnes obèses (OR : 10,488 ; IC: 1,902-57,815) sont plus concernées par la consommation des produits amaigrissants par rapport à ceux ayant un IMC normal. Les sujets utilisant en moins ces produits comparativement aux autres sont ceux satisfaits du résultat d'un régime alimentaire déjà suivi (OR: 0,18 ; IC: 0,044-0,714) et ceux qui mangent moins fréquemment (OR : 0,03 ; IC : 0,01-0,16). Cependant, les fumeurs de narguilé consommaient plus de produits amaigrissants comparés aux non-fumeurs (OR : 6,0 ; IC : 1,94-18,43). Les produits naturels (17,4%) étaient plus fréquemment utilisés que les médicaments amaigrissants (8,2%). Plus de la moitié des consommateurs (62,5%) avaient présenté des effets indésirables. La grande majorité (82,1%) ne connaissent pas la composition de leur produit consommé et 54,7% respectaient la posologie recommandée pour chaque produit. 89,3% des consommateurs ont utilisé les produits amaigrissants sans avoir une prescription par un professionnel de soins de santé.

**Racha Aaraj**

Doctorate of Pharmacy, MSc, MPH

**Smartphones and medical applications use among Lebanese students and residents in pharmacy and medicine: survey.**

Objectives: Primary: to determine the prevalence of use of medical applications on smartphones for education and clinical professional development among students and residents in pharmacy and medicine at Saint Joseph University (USJ) and Hôtel-Dieu de France University Hospital. Secondary: to assess the duration and frequency of their use and to define the participants' perception about the medical applications.

Methods: The survey was conducted between 02 October 2015 and 31 March 2016. Participants completed a three-page questionnaire about the possession of a smartphone, use of medical applications, purpose and duration of use. Statistical analysis was descriptive with a two-sided significance level of 5%. The study was initiated after the approval of the Ethics Committee of USJ and the Dean of the Faculty of Medicine (FM).

Results: Data were collected from 164 students (response rate [RR]=53.2%) and 6 residents (RR=100%) in pharmacy, 198 students (RR=33.7%) and 17 residents (RR=7%) in medicine. Women accounted for 64.6% of the 363 students versus 56.5% of the 23 residents. All medicine students have a smartphone versus 99.4% for pharmacy students ( $p=0.02$ ). 4.3% of all residents have no smartphone. 53.3% of all students have 1-5 applications: 88 (54.3%) students of the Faculty of Pharmacy (FP) and 104 (52.5%) of FM ( $p=0.358$ ). 78.3% of all residents have 1-5 applications on their smartphones. Students of both faculties use medical applications mainly for studying ( $n=115$ ; 31.7%): 53 (32.3%) students of FP versus 62 (31.3%) of FM ( $p=0.11$ ). 13.2% of both faculties' students reported using rarely medical applications, and 49 (13.5%) use them 1-2 times/day. 56% of residents consult medical applications several times/day. All students spend 1-10 minutes versus 21-30 minutes for 30.4% of the residents, consulting medical applications. Students and residents use the applications because they are user-friendly, simple, reliable, up-to-date and usable offline.

Conclusions: Our study shows the involvement of technology in pharmacy and medicine. Lebanese health professionals should be informed of all new developments in their field, mainly through telemedicine.



**RACHEL ABDO**

PhD(c), MPH, PharmD

**Cost of stroke in Lebanon.**

**Objective:** The aim of this study is to provide detailed financial data on the direct in-hospital cost and outcomes of patients admitted with an acute stroke and to find out predictors of high cost care in Lebanon.

**Background:** Acute stroke is a leading cause of morbidity and mortality. It is one of the most demanding public health problems to be faced in the upcoming years, particularly because of population aging. There is no published literature on cost of stroke care in Lebanon to date.

**Setting:** Adult patients with stroke were recruited prospectively in a one year period from eight tertiary care hospitals having the potential to accommodate stroke cases distributed throughout Beirut and Mount Lebanon.

**Methods:** We designed an observational, prospective, incidence-based, multi-centre cost of illness study. Demographic and clinical data were recorded consecutively in enrolled patients. Direct medical costs were calculated, additionally cost per life saved and per life-year saved were calculated for stroke patients.

**Results:** The study group consisted of 203 patients, 57.6% were males and mean age was 68.8±12.9 years. Median/Mean length of hospital stay was 7 days (range, 1 to 94 days) / 11.8±14.2 days respectively. Around fifty percent were admitted to an intensive care unit (ICU). Mean length of ICU stay was 5.1±10.4 days (range, 0 to 82 days). Mortality rate was 13.3%, NIHSS mean at admission was 10.8±9.9, the mRS score of the patients at discharge was 3.4±1.9 and the mBI score of the patients at discharge was 58.6±38.9. The direct in-hospital cost for all stroke cases was US\$ 813,821 for a total of 1966 days (US\$ 414 per day

In-hospital). The average in-hospital cost per stroke patient was US\$ 6,309±8,998 (27.5% room & board, 13.5% laboratory, 1.4% radiology, 1.4% operating room, 0.4% rehabilitation 24.5% general exams, 10.6% drugs, 1.2% serum, 3.7% paramedical supplies, 15.7% doctors' fees, 0.1% other). Mean costs by stroke types were US\$ 1,525 for TIA; US\$ 3,921 for ischemic strokes; US\$ 6,945 for ischemic with hemorrhagic transformation, US\$ 14,200 for intracerebral hemorrhage and US\$ 23,487 for subarachnoid hemorrhage. Cost significantly increase with a higher NIHSS and mRS scores and lower mBI. The length of stay was highly correlated with in-hospital total cost. Cost per life saved and per life-year saved were US\$ 4,624 and US\$ 4,817 respectively.

**Conclusion:** This is the first study to determine direct medical cost of stroke in Lebanon, therefore, it may be guideline for disease-cost management of stroke.

**SIBA JNEID**

Pharm D - MS pharmacology

**Everolimus in Clinical practice for Metastatic or Locally Advanced Breast Cancer: An Observational Study-EMAB study.**

**Background:** Worldwide, everolimus (Afinitor®) is indicated for hormone receptor-positive, HER2/neu-negative metastatic breast cancer (MBC) in menopausal women without symptomatic visceral disease after recurrence or progression following aromatase inhibitors. But everolimus experience, use and efficacy in different lines of therapy among Lebanese women with metastatic breast cancer need to be more reported.

**Methods:** Multi-centre, observational, retrospective study investigated 69 MBC patients collected from five regions in Lebanon were analyzed for efficacy, response, progression free survival (PFS) and overall survival (OS).

**Results:** Median age at initiation of everolimus was 60 years. 58% had visceral involvement, and 100% had hormone-sensitive disease, 50.73% were postmenopausal women. The median follow up was 31.1 months.

Prior to starting everolimus; Non-steroidal aromatase inhibitor was the most common treatment used in the first line (72.7%) and second line (80%). Regarding the third line, exemestane was the most common treatment option (45%). As for the fourth and fifth line chemotherapy was the most common option with 75% and 100% respectively.

The most common major side effects were stomatitis (30.84 %), fatigue (10.3%), dyslipidemia (8.4%), diarrhea (7.5%), hyperglycemia (5.6%), non-infectious pneumonia (4.5%) and skin disorders (4.5 %).

The median PFS for the use of everolimus plus exemestane in the first, second, third and fourth line was 4.94 months, 6.17 months, 9.14 months and 9 months respectively. There was no significant difference in PFS for the four first lines of everolimus, p-value=0.7507.

And also there was no significant difference in the median OS regarding the line of everolimus used for the four first lines, p-value=0.5979

Conclusion: No significant differences were observed in favor of everolimus compared to all other treatment options. However, everolimus in the 3rd and 4th line sittings had a median PFS (9.1 and 9 months) almost comparable to the PFS of the BOLERO-2 study (11 months) . Also as in the BOLERO-2 study, our analysis showed that everolimus did not confer a statistically significant improvement in OS as well.

### **SOUHEIL HALLIT**

Pharm.D., MS, MPH

#### **Medication Safety Knowledge, Attitude and Practice among Hospital Pharmacists in Lebanon.**

The Lebanese Order of Pharmacists (OPL) conducted a survey aiming to evaluate the Knowledge, Attitude/perception, and Practice of medication safety among hospital pharmacists in Lebanon. The main purpose was to assess the educational needs of hospital pharmacists in relevance to pharmacovigilance and adverse events reporting, and enhance medication safety culture in Lebanon.

The survey revealed that the concept of medication error (ME) is better understood than the Adverse Drug Reaction (ADR) concept. The majority of the respondents heard about pharmacovigilance, but in reality, there is a misconception of the concept. Twenty five percent of the respondents considered that ADR/ME reporting is not a Pharmacist's obligation, though pharmacists are the major reporters (89%) in hospitals. Some believe it is the physician's responsibility. Most of the respondents (>90%) were interested in participating in a national pharmacovigilance program to report ADRs, and support its establishment. However, some respondents (15%) consider having financial incentives, as a reporting compensation, because they believe it is time-consuming (13%). As for practice assessment, the survey revealed that not all hospitals have a Medication Safety or Safety committee and when available, it is not always chaired nor overseen by a Medication Expert (Hospital Pharmacist). In addition, more than 50% of the respondents have never had any workshop related to pharmacovigilance, and haven't attended any Medication Safety seminar in the last year.

### **YARA SHANOUHA**

BS, Biology- BS, Pharmacy- PharmD

#### **Assessment of Kidney Toxicity of Combined Vancomycin and Piperacillin/Tazobactam.**

Aim of work: Vancomycin has been associated with an increased risk of nephrotoxicity ever since its introduction. However, beta-lactams including Piperacillin/tazobactam are not usually incriminated. This study sought to determine whether the addition of Piperacillin/tazobactam to Vancomycin increases the risk of Acute Kidney Injury (AKI) more than Vancomycin monotherapy and to explore potential confounding factors. Methods: This is a single centered retrospective cohort observational study that included patients with a minimum age of 18 years who received either Vancomycin alone or in combination with Piperacillin/tazobactam for a minimum of 48 hours and with at least 3 recorded creatinine values. AKI was defined as either: Increase in serum creatinine  $\geq 0.5$  mg/dl OR  $\geq 1.5$ -fold creatinine increase from admission baseline. Results: A total of 129 patients were included in this study where 27 were allocated to the Vancomycin group and 102 to the Combination group. AKI occurred in 15 out of 102 patients in the Combination group compared to no patients in the Vancomycin group ( $P=0.03$ ). The percentage of increase in creatinine showed marginal significance ( $10.91 \pm 12.49\%$  for Vancomycin vs.  $48.04 \pm 97.86\%$  for the Combination,  $P=0.0519$ ). Binary and multivariable logistic regression, were used to study the effect of the other confounding factors. It was determined that starting therapy with Piperacillin/Tazobactam significantly increased death rate ( $P=0.022$ ) and the addition of concomitant nephrotoxic agents can significantly hasten AKI onset ( $P=0.01$ ). Patients without comorbidities or with low scores tend to have a significantly higher AKI onset ( $P<0.001$ ). Conclusion: Those results substantiate the findings of other studies which state that combining Vancomycin and Piperacillin/tazobactam is associated with more nephrotoxicity than with Vancomycin alone. Prevention and early detection of AKI is essential. Pharmacists play a pivotal role by adjusting doses, monitoring trough levels and controlling the modifiable risk factors like addition of concomitant nephrotoxic agents and starting therapy with Piperacillin/tazobactam.