

First Annual Lebanese Pharmacy Schools Symposium

United in Action: Pharmacy Education and Practice Advancement

Day 2: Sunday, February 18, 2024 - Irwin Hall Auditorium, LAU Beirut Campus

Speakers

Biographies

Abstracts

Theme III: Innovation in Pharmacy Practice

Presentation 1: Pharmacy Continuing professional education facts and challenges

Speaker: Dr. Souraya Domiati (BAU)



Dr. Domiati studied pharmacy at the Lebanese American University from where she got her Pharm D degree. She earned also a PhD degree from Beirut Arab University after fulfilling her doctorate research entitled "Investigation of the Pharmacological Effects of Some Selected Agents on Pain and Inflammatory Processes in Experimental Animal Models". She worked as community pharmacy manager for fifteen years. She has around twenty-four years of teaching experience in therapeutics, pharmacology, and pharmacy practice. She supervised more than 70 Pharm. D theses. She has several publications on pharmacology and epidemiologic studies. She was a member of the scientific committee and continuous education at the Order of Pharmacist of Lebanon for several years. She is now a member of the Emergency medication registration committee at the ministry of Public Health. She is an associate professor of pharmacology and therapeutics as well as the Pharm D coordinator at Beirut Arab University. Her research interest is in clinical research as well as preclinical animal studies on anti-inflammatory/analgesic agents.

Presentation 2: Global and National Development in Pharmacy Practice: Poison Control Center

Speaker: Prof. Hayat Azouri (USJ)



Professor Hayat Azouri Tannous is the Vice-Dean of the Faculty of Pharmacy at Saint-Joseph University Lebanon and a Correspondent member of the National Academy of Pharmacy in France. She is a teacher at USJ since 1993. She is also head of the Toxicology Laboratory and the Poison Prevention Center of the Faculty of Pharmacy, USJ, since 1995. She has a doctor of pharmacy degree (doctorate of practice, USJ, 1984), a DEA (Diplôme d'Etudes Approfondies en Toxicologie/1985) and a University Doctorate in Toxicology from the Faculty of Pharmacy of University Paris SUD (1989). Professor Azouri is mainly interested in clinical toxicology (24/7 Poison Control Center), immuno-toxicology, food toxicology and drug addiction. She is the author of several international publications and several national and international oral communications.

Presentation 3: Safely Automating the Medication Use Process in Healthcare Organizations

Speaker: Dr. Elsy Ramia (LAU)



Dr. Ramia is a Clinical Associate Professor at the Lebanese American University (LAU) School of Pharmacy and Clinical Pharmacy Coordinator at LAU Medical Center – Rizk Hospital (LAUMC-RH). She obtained her PharmD degree from LAU in 2009 and holds a masters' degree in public health (MPH), with an emphasis on epidemiology and biostatistics. Dr. Ramia is a Board Certified Pharmacotherapy Specialist since 2013 and has been a Certified Professional in Patient Safety since 2021. Through her Patient and Medication Safety practice at LAUMCRH, Dr. Ramia proactively leads the development and implementation of institutional policies, self-assessments, and medication events reporting and investigation. In addition, Dr. Ramia serves as a key member on several hospital committees and taskforces including, but not limited to, the Patient Safety Taskforce and the Pharmacy and Therapeutics (P&T) Committee.

The medication use process is a complex and error-prone clinical care process. It involves several steps and many caregivers from different healthcare disciplines. Technologies are available to improve medication safety across the entire medication use process, but implementation can be challenging. In this presentation, Dr. Ramia aims to showcase how embracing automation can significantly improve patient outcomes and reduce the risks associated with medication errors in healthcare organizations. By sharing insights from the practice and lessons learned, the presentation also addresses the challenges faced and useful strategies for successful implementation.

Presentation 4: Building Safer Tomorrow: Unveiling Lebanon's Pharmacovigilance Journey, Achievements, and Future Prospects in Pharmacy Education.

**Speakers:
Dr. Rita Karam**



and

Dr. Rita Karam, a Pharmacist with a Ph.D. in Pharmaceutical Sciences, is a Professor at the Lebanese University and holds key roles in healthcare governance as the Director of Quality Assurance of Pharmaceutical Products Program (QAPPP) and National Pharmacovigilance Program Coordinator. She is an active member of ISoP (International Society of Pharmacovigilance) and chairs the ISPOR-Arabic Network (The Professional Society for Health Economics and Outcome Research). With more than one hundred scientific articles and reports, her contribution span various fields in healthcare, including Health Technology Assessment, Health Economics, and Pharmacovigilance. This extensive body of work establishes her as a significant figure in academia and public health.

This presentation by Professor Rita Karam will introduce the National Pharmacovigilance System, offering insights into its mission, vision, and values. The roadmap to success will be outlined, with emphasis on program implementation, partners, stakeholders, and activities. The presentation will highlight academia's crucial role in cultivating a vigilant mindset, contributing to the safety of medications and patient well-being. Dr. Abeer Zeitoun will build on this foundation by emphasizing the significance of integrating pharmacovigilance into healthcare curricula. Drawing on evidence, she will illustrate how this integration empowers future practitioners, enhancing the Adverse Event reporting process. Together, these presentations emphasize the essential role of education in fortifying pharmacovigilance practices and ensuring a safer healthcare practices.

Dr. Abeer Zeitoun



Dr. Abeer Zeitoun is a skilled specialist in Medication and Patient Safety with extensive experience in the field of public safety. Currently, Dr. Zeitoun holds the position of Clinical and Technical Manager at the Lebanese National Pharmacovigilance Program. She has more than 15 years of educational expertise, having held the role of Clinical Pharmacy Assistant Professor at the Lebanese American University (LAU). Her academic background includes a Pharm D degree from the Lebanese American University, complemented by a Master's degree in Patient Safety from Massachusetts College of Pharmacy and Health Sciences. Additionally, Dr. Zeitoun is credited as an author in numerous publications

Theme IV: Novel Pharmacy Practice Settings

Presentation 1: Pharmacy Profession towards Specialization: Role of Pharmacist in the Ambulatory Care Setting

Speaker: Dr. Maya Zeineddine (LAU)



Dr. Zeineddine is currently a Clinical Associate Professor at the Lebanese American University. She is a Lebanese Senior Clinical/Ambulatory Care Pharmacist specialized in neurology and multiple sclerosis. Winner of the "Best Clinician" and "Positive Attitude" awards, she completed several internships at major hospital and community pharmacies in Lebanon and the US and graduated from LAU with a Doctor of Pharmacy degree with distinction in June 2011. In August 2015, she successfully passed the Multiple Sclerosis Specialization examination and became the first and only Multiple Sclerosis Certified Pharmacist in Lebanon and the Middle East. From September 2011-August 2020, she worked as the ambulatory care pharmacist of the Multiple Sclerosis Center of the American University of Beirut Medical Center (AUBMC). In December 2015, she was appointed as Executive Secretary of the Middle East North Africa Committee for Research and Treatment in Multiple Sclerosis (MENACTRIMS).

Dr. Zeineddine is an active researcher and a public speaker. She has multiple publications, is involved in several international clinical trials in the field of neurology and multiple sclerosis and is a member of several national and international professional organizations. From 2015 and until 2022, she was also the fund coordinator at the National Multiple Sclerosis Society of Lebanon (MSSL). She is currently the leader of the Neuropsychiatry Listserv at IVPN-Network and is a PhD candidate in "Epidemiology of Chronic Diseases" at the Tropical Institute of Neurology at Limoges University, Limoges, France. In May 2023, she was invited by the Multiple Sclerosis International Federation to join their International Medical and Scientific Board, representing the Middle East and North Africa region in the aim of improving the quality of life of people affected by multiple sclerosis.

Ambulatory care pharmacy practice is defined as the provision of integrated, accessible healthcare services by pharmacists who are accountable for addressing medication needs, developing sustained partnerships with patients, and practicing in the context of family and community. This is accomplished through direct patient care and medication management for ambulatory patients, long-term relationships, coordination of care, patient advocacy, wellness and health promotion, triage and referral, and patient education and self-management. The ambulatory care pharmacists may work in both an institutional and community-based clinic involved in direct care of a diverse patient population.

A variety of specialty clinics are available for allergy and immunology, pulmonology, endocrinology, cardiology, nephrology, neurology, behavioral health, and infectious disease. My presentation will focus on the role of the ambulatory care pharmacist in a specific disease area which is multiple sclerosis based on my 12-years-experience as senior ambulatory care pharmacist in the first multiple sclerosis center of excellence in the Middle East.

Presentation 2: Evolving Role of Pharmacists in the Community Setting

Speakers:

Dr. Faraj Saade (LIU)



and

Dr. Nabil Hassan



A dedicated and patient-oriented service pharmacist, Dr. Faraj Saade has a long career highlighted by a dedication to community service and healthcare. Holding a Doctor of Pharmacy degree from the Lebanese American University in 2004, and recognized as a Board Certified Pharmacotherapy Specialist, Dr. Saade is the proud owner of Farmedica Pharmacy in Ghazir. Since 2006, Dr. Saade has been imparting knowledge and expertise as a clinical associate professor at the School of Pharmacy at the Lebanese International University where he teaches the Pharmacology courses, contributing to the development of the next generation of pharmacists. In addition to his academic pursuits, Dr. Saade expanded his impact by becoming a faculty member at the School of Nursing at the Lebanese American University in 2022, where he teaches Pharmacology for Nursing.

A registered Pharmacist in the Lebanese Order of Pharmacists, Dr. Saade assumed a leadership role within the organization by being elected as a board member in November 2021 for the ensuing three years, from 2021 to 2024. Beyond the realm of pharmacy, Dr. Saade has demonstrated a strong commitment to community service through serving as the Vice President of the municipality of Ghazir in 2010 and 2016. This dual responsibility underscores his dedication to public health and community well-being. Driven by a passion to help people, Dr. Saade has cultivated an excellent background in clinical pharmacology and patient medication therapy management. At Farmedica Pharmacy, he is at the forefront, serving the patients of his community with care and expertise. Dr. Saade's multifaceted career is a testament to his unwavering commitment to healthcare, education, and community Service.

Dr. Nabil Hassan is an experienced community pharmacist and public health practitioner, deeply involved in health sector reform and community development. He co-founded Beyond Group, a multinational consulting firm specializing in policy research, public management, and capacity building. His area of expertise extends to policy analysis, organizational development, and development of civil society, working extensively across more than 22 countries with various governments and international organizations.

In his role, Nabil has contributed significantly to projects in health reform, social protection, empowerment of youth and women, and local governance. As a community pharmacist, he strives to innovate in his field, reinforcing the pharmacist's role in health education. He's an honorary member of the Delta Omega Public Health Society and has been instrumental in several health policy initiatives across the region. Nabil holds a Master of Public Health, with a focus on Health Behavior and Education, from the American University of Beirut, and a Bachelor of Science in Pharmacy from Beirut Arab University, blending his academic knowledge with practical experience to make a meaningful impact in public health and community services.

The community pharmacist's position is evolving dynamically as the healthcare sector continues to experience revolutionary transformations. The presentation delves into the complex aspects of this shift, looking at the growing possibilities, challenges, and opportunities that pharmacists encounter in their important role in the community. The presentation explores the many roles that pharmacists play in promoting medication management, patient-centered care, and public health. It places special emphasis on the intersection of clinical expertise and community engagement.

Three main areas of emphasis include integrating advanced clinical services into community pharmacy, collaborating with healthcare practitioners, and using technology to improve patient outcomes. The expanding significance of pharmacists as educators, advocates, and active participants in community-based preventative care programs will also be covered in the presentation.

Attendees will gain a comprehensive understanding of the challenges faced by pharmacists in adapting to this dynamic environment and the innovative strategies employed to optimize their impact on public health. Ultimately, this presentation seeks to inspire dialogue and reflection on the evolving role of pharmacists in the community setting, encouraging stakeholders to collaborate in shaping a future where community pharmacists are indispensable contributors to holistic, patient-centered healthcare.

Presentation 3: Pharmacy Practice in the Lebanese Military

Speaker: Captain Nisrine Hatoum



Nisrine HATOUM, Pharm.D., MS, Head of Central Military Hospital Pharmacy Department.
Captain Pharmacist Nisrine HATOUM earned her Doctor of Pharmacy degree (PharmD) from the Saint Joseph University USJ, in 2012, her University Diploma in Clinical Pharmacy from USJ in 2013 and her Masters degree in microbiological quality control of food products, pharmaceuticals and cosmetics from USJ, in 2014.
She began her career as a Clinical Pharmacist at Hotel Dieu de France Hospital in Beirut, where she worked from 2013 to 2015. She then worked as a community pharmacist in Beirut from 2015 to 2017 before joining the Lebanese Armed Forces.
Since 2017, Captain Hatoum has been serving in the military, first as the Head of Pharmacy Department at Mount Lebanon Military Medical Central in Sarba from 2017 to 2020. Currently, she serves as the Head of Central Military Hospital Pharmacy Department in Badaro.
In addition, Captain Hatoum is a member of a committee responsible for purchasing laboratory products, solvents, and reagents and a member of a committee responsible for studying patients' requests with the aim of approving treatment with intravitreal injections.

The healthcare system within the Lebanese Armed Forces (LAF) plays a pivotal role in safeguarding the health and operational efficiency of its personnel. Recognizing the significant sacrifices made by military members, the establishment of a robust healthcare infrastructure is imperative. This presentation focuses on the critical role of the pharmacy domain within the LAF healthcare system, emphasizing its contributions to patient care, drug management, and overall healthcare delivery.
Within this system, pharmacies, particularly the Central Military Pharmacy and the Hospital Pharmacy, serve as essential pillars of support by ensuring the timely provision of vital medications and pharmaceutical services to all beneficiaries.
Adhering to stringent quality control measures, including proper storage, handling, and dispensing of medications, guarantees the delivery of safe and effective pharmaceutical products to military personnel and their families.
A key strength of the pharmacy domain lies in its highly skilled workforce, comprising well-trained pharmacists and pharmacy technicians. These professionals offer expert advice and guidance, augmenting the overall quality of pharmaceutical care provided to LAF personnel. Furthermore, the pharmacy domain contributes to the optimization of healthcare resources and the financial sustainability of the system by efficiently managing drug formularies, implementing cost-containment strategies, and identifying affordable alternatives.
In conclusion, the pharmacy domain within the LAF healthcare system plays a crucial role in ensuring the availability, safety, and quality of medications, thereby safeguarding the health and well-being of military personnel. This presentation underscores the strategic importance of pharmacy services in enhancing overall healthcare delivery within the context of a military healthcare system.

Presentation 4: Innovation in Hospital Pharmacy Practice

Speaker: Dr. May Fakhoury (USJ)



Dr. Fakhoury is a pharmacist, holder of a PhD in Clinical Pharmacology and Pharmacogenetics from Paris 5 University as well as many diplomas in clinical pharmacy, pharmaco-epidemiology and clinical research from the Universities of Paris 5, Paris 7 and Bordeaux and in quality management. She also has an MBA from Saint Joseph University, Sorbonne and Dauphine in France.
She has worked as a researcher at INSERM, France as well as a clinical pharmacologist at Robert Debré Hospital in Paris.
She has presented her research at International meetings and published articles in renowned peer-reviewed journals in fundamental and clinical pharmacology and pharmacogenetics.
Dr Fakhoury is currently the head of the Pharmacy department at Hotel Dieu de France de Beyrouth Hospital.

We have been living in a fast-changing environment for some years now. Health care system has been under pressure following the successive crises in our country. Hospital pharmacists had no choice but to adapt in order to maintain normal healthcare services.
The hospital pharmacy practice is evolving. Innovations, from technologies applied to stock management, medication prescription, preparation or dispensation to novel approaches of clinical pharmacy are empowering the pharmacist to provide increased quality patient-centered care.
This presentation will review the new roles and tasks of the hospital pharmacist as well as the most relevant innovations already in use in Lebanon or to come in future years that would reshape the pharmacy profession.

Theme V: Scholarly Activities and Research in Pharmacy

Presentation 1: Incorporating Research in Education and Inflicting it to the Industry

Speaker: Dr. Jana Wattar (LIU)



Dr. Jana Al-Wattar is an assistant professor at the Lebanese International University, School of Pharmacy department of pharmaceutical sciences. In 2022, Graduated from Beirut Arab University with a Doctor of Philosophy in Industrial Pharmacy and Pharmaceutical Technology. Dr. Al-Wattar received the Jamal Abdel Nasser Award for Academic Distinction and Awarded pre-doctorate scholarship by Lebanese National Council for Scientific Research.

Dr. Al-Wattar focuses her research interest at nanotechnological and micro-pharmaceutical level. Research applications revolved around anticancer and targeting through investigations of various lipid, polymer-based nano-carriers to explore their cytotoxic performance on molecular and animal models. As for the micro-pharmaceutical level, research was emphasized on non-invasive drug delivery systems by tailoring carriers for alleviation of drug bioavailability. Dr. Al-Wattar published several research articles in the field of drug delivery in Scopus indexed journals with high impact factor.

This abstract highlight the significance of research in undergraduate studies and its potential impact on the industry. Undertaking research during undergraduate studies not only enhances academic learning but also cultivates critical thinking, problem-solving skills, and a deep understanding of one's field of study. As students engage in hands-on research, they develop the ability to apply theoretical knowledge to real-world scenarios, fostering a bridge between academia and industry. Moreover, the practical experience gained through research projects equips undergraduates with valuable skills sought after by employers in various industries. The integration of research findings into industrial practices facilitates innovation, efficiency, and adaptability within professional settings. In this presentation emphasize on the symbiotic relationship between undergraduate research and industry advancements, showcasing how the knowledge and skills acquired during academic pursuits can be seamlessly translated into meaningful contributions to the workforce.

Presentation 2: Impact of Research on Pharmacy Practice

Speaker: Dr. Rony Zeenny (INSPECT-LB)



Dr. Rony Zeenny is the Director of Pharmacy and the Founding Director of the first PGY1 Pharmacy Residency Program at the American University of Beirut Medical Center, Beirut, Lebanon. He received a Bachelor of Science degree in Pharmacy and a Doctor of Pharmacy degree from the Lebanese American University. He completed a Pharmacy Practice Residency at the University Of Tennessee Medical Center, Knoxville, affiliated to the University of Tennessee College of Pharmacy, Memphis, Tennessee. Dr. Zeenny achieved and maintains his certification as a board-certified pharmacotherapy specialist. He has a University Diploma in principles of clinical research and earned a Master of Public Health in epidemiology and biostatistics.

Throughout his career, he has successfully implemented many pharmacy initiatives, taught in the classroom and practice settings, served on numerous university/hospital-based and national committees. He is the Co-founder of the Antimicrobial Stewardship program at the LAU-MC in 2012 and AUBMC in 2017.

Dr. Zeenny has invested every opportunity to promote clinical pharmacy and residency training at the national and international levels. He has a passion for pharmacy practice advancement and innovative education. He founded the first pharmacy residency program in Lebanon and got accredited for an 8 years term by the American Society of Health-System Pharmacists (ASHP) on U.S. based accreditation standards.

Dr. Zeenny has authored more than 69 publications in international peer-reviewed journals. He has given more than 55 posters and 35 podium presentations on a national and international level. He is an active member of local and international professional societies. Dr. Zeenny is a global on DG 7 – Integrated Service in the FIP, and serve as the secretary of the Lebanon Chapter of ISPOR.

The dynamic evolution of the pharmacy profession in Lebanon is a reflection of the step-by-step changes in pharmacy practice. In addition to embracing new technologies and growing in their positions, pharmacists are responding to the needs of the modern healthcare system. This revolutionary change places pharmacy profession at the forefront of innovative and patient-centered practices and is a proactive reaction to the changing needs of the healthcare industry.

Research is the dynamic force driving this shift, fusing the disclosure of actual data, practices, and trends in a seamless manner. Its importance lies in its ability to both demonstrate clinical utility and direct significant practice breakthroughs. Within the healthcare sector, research functions as a guide through revolutionary change, providing verifiable data and priceless insights that cogently mold the changing terrain of clinical procedures.

The purpose of this presentation is to highlight the important contribution INSPECT-LB has made to improving pharmacy practice in Lebanon. We will examine how these initiatives have specifically improved various aspects of pharmacy practice by exploring the strategic goals of INSPECT-LB, which include conducting focused research and practice projects, developing public education and awareness, training Lebanese researchers, proposing strategic solutions for healthcare gaps, and setting research priorities. With its focus on observable advantages and favorable results, INSPECT-LB emerges as a driving force positively shaping the landscape of pharmacy practice within the Lebanese healthcare system.

In November 2018, he received Distinguished Service Award from the OPL during the 26th Annual Pharmacy Congress "in recognition of sustained contribution to the improvement of pharmacy practice and outstanding services to the Order of Pharmacists of Lebanon". In 2020, he was named Fellow of ASHP, "in recognition to the successful demonstration of sustained practice excellence for at least 10 years, contributed to the total body of knowledge in pharmacy practice, demonstrated active involvement and leadership in ASHP, and have been actively involved in and committed to educating practitioners and others".

Presentation 3: Exploring the Pharmacist's Contribution to Research

Speakers:

Prof. Marianne Abi Fadel (USJ)



and

Professor Marianne Abi Fadel is the elected Dean of the School of Pharmacy at USJ since 2013, the director of the laboratory of Biochemistry and Molecular Therapeutics (LBTM) at the School of Pharmacy, and a professor of biochemistry and molecular biology at USJ. She is also an invited researcher at INSERM U1148 at Bichat hospital and Paris Cité University in Paris, and the director of the Laboratory Rodolphe Mérieux in Lebanon since 2018 providing diagnosis to migrants and vulnerable populations.

She obtained her Pharmacy Diploma in 1996, and her Laboratory Medicine and Clinical Biochemistry Specialization Diploma from USJ, then her PhD in Molecular Genetics in 2003 and the French accreditation to supervise research in 2009 from the University of Paris Descartes. Her main scientific achievement is the discovery of the implication of PCSK9 in Familial Hypercholesterolemia by identifying its first gain of function (GOF) mutations (Abifadel et al. Nature Genetics 2003). This was the seminal paper linking PCSK9 to cholesterol metabolism and was the starting point of the PCSK9 adventure from gene to a new therapeutic class: the anti-PCSK9.

With several publications in journals with high impact factor (ex: 3 in Nature Genetics IF41, 3 in Lancet IF168...), she was awarded several national and international distinctions for her work on Familial Hypercholesterolemia FH : The Chancellery of Paris Universities: Nathalie Demassieux prize in 2004, the CNRS-L (National Council for Scientific Research, Lebanon)

Award in Recognition of Distinguished Scientific Researchers in 2012, the 'Société des Membres de la Légion d'honneur' Scientific Excellence Award in 2016, the prestigious Christophe Mérieux Prize 2021 from the "Institute de France" in Paris and the Golden Award of the Italian Society of Atherosclerosis in 2022. She is a Principal Investigator of several working groups, invited speaker in international scientific meetings and member of advisory boards. She is an elected member in the National French Academy of Pharmacy as international correspondent since 2019 and honored with the Medal of the French National Academy of Pharmacy, National Lead of Lebanon at EAS-FHSC; Member of the International Society of Atherosclerosis representing MENA region, and member of the Saint Joseph University of Beirut and HDF hospital government boards.

Her research focuses on PCSK9, the genetics of Familial Hypercholesterolemia (FH), dyslipidemia, aneurysms, cardiovascular and metabolic diseases in Lebanon (LBTM in collaboration with Hotel Dieu de France (HDF) hospital), in the Middle East and in the French population at INSERM U1148, Bichat Hospital. She works in collaboration with INSERM U1148 team in Paris, as well as other international teams at IRCM Montreal, Karolinska Institute, the FHSC/EAS, and collaborators in the MENA region. Besides her discovery of PCSK9 in FH, she has also identified the implication of THSD4 in thoracic aortic aneurysm, studied PCSK9 as a modifier gene in FH Lebanese patients carrying the same mutation of the LDLR, identified

At the Saint Joseph University of Beirut (USJ) school of Pharmacy, each laboratory leads specific research projects, encompassing fundamental, translational, or applied aspects. Additionally, every laboratory offers clinical diagnostic tests essential for hospitals, public institutions and the general public. In this presentation, we will outline the research activities of both the laboratory of Biochemistry and Molecular Therapeutics (LBTM) and the laboratory of Toxicology (LabTox) of the USJ school of Pharmacy.

At the LBTM, we focus on the genetics of familial hypercholesterolemia, dyslipidaemia, and cardiovascular diseases, providing genetic diagnosis and biochemical characterization of familial hypercholesterolemia, a common genetic disease with a high frequency especially in Lebanon. Our research in collaboration with INSERM teams in Paris allowed the discovery of the implication of PCSK9 mutations in familial hypercholesterolemia (Abifadel et al., Nature Genetics 2003). This was a major breakthrough linking PCSK9 to cholesterol metabolism and was the starting point of the PCSK9 adventure that led from PCSK9 studies to a new therapeutic class: the anti-PCSK9 drugs that lower LDL-C to unprecedentedly reached levels and are very efficient in fighting high cholesterol levels and their cardiovascular complications. Based on this successful example of translational studies and collaborations, we are strengthening through our internationally recognized expertise and research, the inclusion of Lebanese patients and researchers in international consortia, and diagnostic studies or clinical trials, as well as providing opportunities for our masters' and doctoral fellows.

At the immunotoxicology section of LabTox we are currently assessing the clinical characteristics and diagnostic workup of reported drug hypersensitivity reactions (DHR) in Lebanon. DHR accounts for 15% to 20% of adverse drug reactions and can be potentially life-threatening. The increasing incidence of DHRs poses a significant challenge for physicians in accurately diagnosing and managing these reactions. Our research focuses on evaluating DHRs in Lebanon related to molecules administered in ambulatory care, chemotherapy drugs, iodinated contrast media as well as perioperative hypersensitivities (Dagher,

<p>Dr. Diane Antonios (USJ)</p> 	<p>PCSK9 mutation in familial combined hyperlipidemia, studied Tangier disease, hypobetalipoproteinemia, hypertriglyceridemia and other rare metabolic and cardiovascular diseases in patients from Lebanon and the Middle East. She works on improving the diagnosis of non-communicable diseases but also of communicable and infectious diseases (COVID19, tuberculosis...) in collaboration with the Mérieux Foundation and Gabriel Network.</p> <p>Dr Diane Antonios-Gholam is an Associate Professor of Toxicology specialized in immunotoxicology and clinical analytical toxicology at the USJ school of Pharmacy.</p> <p>Dr Antonios-Gholam earned her D. Pharm in 2005 from USJ and her PhD in 2009 jointly from both Paris Saclay (formerly Paris XI) and USJ. In 2022, she was registered in the European Register of Toxicologists (ERT), which comprises a list of toxicologists excelling in high standards of education, skills, experience, and professional standing. She is actively involved in several research projects including drug hypersensitivity reactions, clinical and occupational toxicology, fundamental and applied immunology and vaccination. She has presented her research at national and international conferences and has numerous peer-reviewed publications, showcasing her contributions to the fields of toxicology and immunology.</p>	<p>Antonios et al., JACIG 2024). Additionally, we are actively involved in implementing in vitro techniques, which serve as complementary methods for diagnosing DHR and providing a safer alternative personalized for each patient. Moreover, our results provide a more comprehensive analysis of DHRs on an international level.</p>
<p>Presentation 4: How Global Trends Are Sharpening the Pharma Industry</p> <p>Speaker: Dr. Ayman Semaan</p> 	<p>Ayman Semaan leads the Market Access Department at Biologix, covering 18 markets of the Middle East and North Africa (MENA); and holds a principal role in the group's pricing committee.</p> <p>His experience includes ~18 years of functional and leadership positions in sales, marketing and market access/pricing in various business models (in-licensed brands, generics and specialized biotech products).</p> <p>In a highly evolving and diversified healthcare environment, Ayman's responsibility focuses on securing treatment access through tailored and innovative solutions in the areas of Rare Diseases, Hemato/Oncology, Neurology, Immunology and CardioMetabolic.</p> <p>Ayman holds a Master's Degree in Health Sciences from the Lebanese University and The Joseph Fourier (Grenoble Alpes) University, as well as a General Management Program Certificate from the Ecole Superieure Des Affaires (ESA). He is serving a two-year tenure as Director of Communications for ISPOR Lebanon Chapter, and takes part of several panels in regional and global Market Access, Pricing and Health Economics congresses.</p> <p>Biologix (www.biologixpharma.com) helps multinational pharmaceutical manufacturers bring innovative drugs to market in the MENA region. Positioned across 17+ key strategic locations in the Gulf Cooperation Council (GCC), Egypt, North Africa and the Levant, Biologix pioneers in regional distribution and promotion of innovative products and solutions for difficult-to-treat diseases.</p> <p>LinkedIn: https://www.linkedin.com/in/ayman-semaan-20256840/</p>	<p>It's not the strongest or most intelligent of the species that survives but the one that's most adaptable to change.</p> <p>The healthcare environment is undergoing a real transformation underlined by an acceleration of innovative platforms, the sophistication of economic sciences and the development of evidence tools; highlighted through the below:</p> <p>New technologies (ATMPs) fueling medical breakthrough and precision medicine.</p> <p>RWE gaining significant traction supporting HTA & regulatory decision making.</p> <p>Artificial intelligence and machine learning expanding the horizons of analytics and digitalization.</p> <p>Accelerating drug approvals albeit limited evidence and advanced technologies features.</p> <p>HEOR beyond QALY integrating patient voice, value of hope & individual and societal perspectives.</p> <p>Questioning healthcare strategies in view of the challenged public health priorities changes.</p> <p>The raising ask of sustainability in healthcare.</p> <p>The constant evolution and transformation of healthcare are not just necessities; they are imperatives. In embracing change, we unlock the potential to revolutionize patient care, enhance medical outcomes, and build a healthcare system that is resilient, responsive, and truly patient-centric. While amid changes reside the most of opportunities, how are these shifts shaping the pharma industry, and how are companies and providers required to adapt?</p>

Presentation 5: Veterinary Pharmacy

Speaker: Dr. Elaine Blyth



Elaine Blyth completed coursework in animal science at Texas Tech University in Lubbock, Texas and then received her B.S. degree in pharmacy from Southwestern Oklahoma State University School of Pharmacy in 1992 in Weatherford, Oklahoma. She received her Doctor of Pharmacy degree in 2003 from Creighton University in Omaha, Nebraska. Dr. Blyth's area of expertise is educating pharmacy students and veterinary students in veterinary pharmacology and therapeutics. Dr. Blyth is an associate professor at St. Matthews University School of Veterinary Medicine on Grand Cayman Island in the Caribbean and teaches pharmacology to the veterinary students on the Island via distance education from her home in the USA. Dr. Blyth is also adjunct faculty at University of Florida College of Pharmacy where she teaches the premier online course in veterinary pharmacy for pharmacy students across North America. Over 4000 pharmacy students have taken her online course. In addition to her full-time teaching, Dr. Blyth has over 20 years' experience in regulatory affairs consulting services for veterinary drug distributors focusing on wholesale drug distribution and state pharmacy licensing requirements in the US. As her hobbies, Dr. Blyth enjoys cooking, reading and training/riding young horses with her husband in the USA.

The provision of pharmacy services to companion animal patients is becoming more common. Pharmacists and pharmacy students are interested in obtaining a knowledge base and skill set in veterinary therapeutics in order to safely care for animal patients. To best prepare pharmacists to function competently in this expanding role, educational offerings are needed to assist pharmacists in building in their veterinary pharmacy knowledge base and skill set.

Presentation 6: Nuclear Pharmacy: A brief History of Practice and Specialty Recognition

Speaker: Dr. Sam Augustine



Dr. Samuel C. Augustine earned the Bachelor of Science and Doctor of Pharmacy degrees from the University of Nebraska Medical Center's (UNMC) College of Pharmacy. He also completed a Hospital Pharmacy Residency at Nebraska's University Hospital in Omaha. Dr. Augustine also became one of the first Board Certified Nuclear Pharmacists awarded by the Board of Pharmacy Specialties. He worked as the first nuclear pharmacist at UNMC's college of pharmacy eventually becoming the Director of the Regional Nuclear Pharmacy. He left academia and founded Great Plains Nuclear Pharmacies in Omaha and Lincoln. He was also a founding member of Great Plains Nuclear Services a consulting firm that provided radioactive materials licensing and maintenance services. These entities were ultimately acquired by Cardinal Health. Dr. Augustine returned to UNMC with joint appointments in the College of Medicine and the College of Pharmacy. During that time, he became the Director of the Monoclonal Antibody Facility, the unit that prepared, tested and applied radiolabeled antibodies in certain cancer therapies. After leaving UNMC, Dr. Augustine continued his work with student pharmacists at Creighton University School of Pharmacy and Health professions heading the Pharmacy Skills Laboratory and focusing on teaching Pharmacy Practice Law. Dr. Augustine has authored and co-authored papers and book chapters on a variety of subjects ranging from development of radiopharmaceuticals to quality testing of compounded sterile preparations and development of pro-nutrient preparations. Dr. Augustine was a member of the United States Pharmacopeia's first Expert Committee on Compounding of Sterile Preparations. He has held several elected and appointed positions in state and national pharmacy organizations. He received numerous university, state and national honors and awards.

Pharmacists have been involved with preparation, quality testing and dispensing of radiopharmaceuticals. Since the early 1960s pharmacists have been working with physicians as Nuclear Medicine specialist. This reviews how pharmacists have worked as nuclear pharmacist throughout the inception of the practice to present day. Additionally, Nuclear Pharmacy is the first recognized specialty and the presentation will be reviewed.