



MIDDLE EAST MEDICAL ASSEMBLY

MEMA 2016 UPDATES

PRECISION MEDICINE:
A NEW ERA TOWARDS
PERSONALIZED HEALTHCARE

MAY 12 - 14, 2016 - AMERICAN UNIVERSITY OF BEIRUT

SYLLABUS



In joint providership with



A Message from the Chairperson of the Assembly

On behalf of the MEMA 2016 Organizing Committee, I am honored and delighted to welcome you to the MEMA 2016 Updates at the American University of Beirut (AUB) which coincides with the 150th anniversary of AUB.

“Precision Medicine: A New Era towards Personalized Healthcare” is this year’s theme. Our program is rich with a variety of talks extending over three full days. Well-renowned national, regional and international speakers will be sharing their expertise in this new exciting field, novel to most of us. As such, the talks will focus on how this emerging concept will affect cancer treatment, nursing care, reproductive endocrinology and infertility, preventive medicine, cardiovascular disease and many other aspects of medicine. In addition to these talks, MEMA’s exhibit area will house several pharmaceutical and medical equipment companies and will open the opportunity for healthcare professionals to network with these supporters.

As the Chair of this year’s MEMA, I would like to give credit to all those who have worked with us in planning and organizing both the scientific program and supporting social arrangements. In particular, I thank the Chairs of the MEMA committees for their advice and ideas, the Continuing Medical Education Office and our sponsors for their invaluable support.

Again, welcome to MEMA 2016. In addition to you learning from us, we look forward to learning from your experiences and insights through our rich multidisciplinary program.

Anwar Nassar, MD

Chairperson – MEMA 2016

Professor of Obstetrics and Gynecology

Chairman – Department of Obstetrics and Gynecology

American University of Beirut Medical Center

Beirut, Lebanon

A Message from the Executive Vice President of Medical Affairs

It is with great pleasure that I welcome you all to the Middle East Medical Assembly (MEMA) 2016 Updates held at the American University of Beirut. With all of your support and participation, this year's MEMA looks to be an outstanding one, further strengthening the long-standing tradition of providing excellence in Medical Education throughout the region. This year, precision medicine is the main highlight of the program since it presents the latest revolution in the medical field and perhaps it is the most advanced field in healthcare that accounts for the individual variability in the genes, environment, and lifestyle of each person. It is with precision medicine that we seek to attain our vision and make significant strides in promoting disease prevention and offering highly effective targeted treatments.

MEMA is an integral part of the academic mission of our Faculty of Medicine and Medical Center and a proud part of our heritage in providing medical education to the region.

Although MEMA is a medical meeting rich in tradition and history, it is also one that is reflective of the changing needs of our communities and medical education. The MEMA Updates has taken on the form of a Global Health Forum covering numerous topics of extreme relevance to our local and regional populations including medical education and simulation, state-of-the-art genomic technologies, genetic epidemiology, pharmacogenomics, oncology, and cardiovascular diseases amongst others with the goal of presenting the latest updates and newest frontiers in precision medicine.

Under the guidance of our Continuing Medical Education (CME) Office, and the leadership of this year's Chairman, Dr. Anwar Nassar, I am confident that this year's MEMA Updates will build on MEMA's historic role and lay the foundations for an ever evolving system of healthcare that seeks to improve health outcomes through innovative standards of care and practice.

I would like to thank all of this year's participants and speakers from healthcare providers, policy makers, NGOs, experts, and the community at large for their support and engagement. To all of our international and regional participants, thank you for being a part of this year's event and welcome to Lebanon and AUB.

MEMA provides an unmatched platform for the exchange of medical expertise in the region. Every attendee will have the opportunity to learn, share and shape the delivery of healthcare to patients across the entire region.

Thank you for joining us and I hope that your experience at this year's MEMA is a rewarding one.

Mohamed H. Sayegh, MD

Raja N. Khuri, Dean - Faculty of Medicine
Professor of Medicine and Immunology
Executive Vice President of Medical Affairs
American University of Beirut

A Message from the President of the American University of Beirut

I am delighted to welcome all of you to the MEMA 2016 Updates. The annual Middle East Medical Assembly has a long and proud history of bringing together healthcare professionals and researchers to share ideas and explore topical issues in medicine since 1951.

This year's MEMA is taking place at a special time in our history, as AUB is celebrating the 150th anniversary of its founding. In 1867, just one year after the university opened, the Faculty of Medicine was established and, in 1905, the School of Nursing was founded as the first of its kind in the region. Along with College Hall, the Old Medical Building was one of the first buildings on campus. Medical education and practice have been a primary focus of this university's mission since its earliest days.

The tremendous history of the Faculty of Medicine began with the vision of three remarkable physicians and scholars. Cornelius Van Dyck taught pathology, biology, and chemistry, and in his spare time translated the Bible into Arabic and oversaw the astronomical observatory. John Wortabet taught pathology and anatomy and was also a skilled translator, producing an Arabic version of Grey's Anatomy and an Arabic-English dictionary along with Harvey Porter. Finally, George Post was chair of surgery and the first person to use chloroform on a human patient in Lebanon. Post was also an accomplished architect and botanist, publishing an important reference work on the Flora of Syria and Palestine and creating the first herbarium in the region. These founding doctors were not only skilled physicians and committed educators, they were multi-talented Renaissance men who understood that the best medical education has a humanistic foundation.

From its founding to the current day, the history of AUB's medical school and medical center is replete with physicians and educators who have made history by building healthcare capacity and knowledge in this country and beyond. AUB graduated its first woman MD in 1931, Adma Abu Shdeed, decades before most Ivy League universities even admitted women. In the same year, we graduated Zabih Ghorban, who came to AUB from Iran and later returned to his homeland to establish medical training schools, hospitals, and Shiraz University. Within Lebanon, AUB established the first residency program in 1942 and the first 24/7 Emergency Room in 1953. In the next decade, Edmond Shwayri performed the first renal dialysis in Lebanon and Ibrahim Dagher the first open heart surgery. More recently, AUBMC has opened cutting-edge programs and centers of excellence focusing on multiple sclerosis, women's breast health, heart and vascular health, neurology and neuroscience, oncology and cancer care, and mental health, to name a few.

Now, as we look toward the future and to the realization of the AUBMC 2020 Vision, we are recommitting ourselves to innovation and boldness. The titans of the past are our inspiration but so also is our vision for the future; a future which must look beyond narrow disciplinary fields and take a broad and encompassing view of health sciences. In my inaugural address, I spoke about developing a sustainable global health sciences initiative that can be the pride of Lebanon and of the Arab world. Partnership and collaboration, both within and outside the university, will be imperative to this effort. I hope you will join us in this exciting venture as we continue to make history and work for the greater health and wellbeing of our broader community.

Fadlo R. Khuri, MD

President, American University of Beirut

Committee and Faculty Lists

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General Information

General Information and Accreditation

Overview

Precision Medicine is increasingly being recognized for the major contributions and advances it is currently bringing to patient care. The MEMA 2016 Updates will not only introduce the various innovative technologies currently in use in genomics, both at the diagnostic and research levels, but also will approach Precision Medicine from the clinical utility side. The topics will discuss the utilization of state-of-the-art pharmacogenomics and genetic testing in the patient care setting. The latter is of utmost importance for physicians to tailor targeted therapy according to the best clinical and genetic association that is under the best genotype-phenotype correlation for available therapies.

Highlights

- Update on state-of-the-art genomic technologies in research and diagnostics
- Update on precision medicine in healthcare: Genetic epidemiology and big data analysis
- Update on precision medicine applications: Pharmacogenomics, oncology, and cardiovascular diseases

Learning Objectives

At the end of this activity, participants will be able to:

1. Describe the clinical applications of genomics
2. Discuss the difference between germline mutations, somatic mutations, and epigenetic modifications
3. Explore the current uses of precision medicine and future applications

Target Audience

This annual scientific meeting has been designed for physicians in all specialties, especially in cardiology, endocrinology, family practice, gastroenterology, hematology oncology, pathology, pediatrics, pharmacology, radiology, surgery and women's health, as well as nurses, nurse practitioners, pharmacists, dietitians, physician assistants, trainees, students and researchers.

Faculty Disclosure

In accordance with the Standards for Commercial Support issued by the Accreditation Council for Continuing Medical Education (ACCME), The Cleveland Clinic Foundation Center for Continuing Education requires resolution of all faculty conflicts of interest to ensure CME activities are free of commercial bias.

The following faculty members have indicated that they may have a relationship, which in the context of their presentation(s), could be perceived as a potential conflict of interest:

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Moussa Mansour, MD	St. Jude Medical	Consulting Membership on advisory committee or review panels
	Biosense Webster	Consulting Membership on advisory committee or review panels
	Boston Scientific	Teaching and Speaking
	Biotronik	Teaching and Speaking

Samia Mora, MD	Pfizer, Inc.	Consulting
	Eli Lilly	Consulting
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	Atherotech Diagnostics	Institutional research grant support to the Brigham and Women's Hospital
	Amgen	Consulting

The following faculty members have indicated they have no relationship which, in the context of their presentation(s), could be perceived as a potential conflict of interest:

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Ahmad Husari, MD	Father Boulos Wehbe
Nahla Hwalla, MD	Laila Zahed, MD

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Participants claiming CME credit from this activity may submit the credit hours to the American Osteopathic Association for Category 2 credit.

Local Accreditation

MEMA also complies with the Lebanese Order of Physicians, Order of Nurses in Lebanon and Order of Pharmacists in Lebanon's Continuing Education guidelines.

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7. Complete all the fields and hit "Save and View Certificate".
8. Your official CME certificate will appear. Please print and keep with your permanent files.

Please note: Be sure to print your CME certificate and keep in record . This is your permanent record; no other certificate will be generated.

Evaluation Forms

The speaker evaluation forms are located at the entrance of the conference room and available at the registration desks. Your comments and feedback are important for future planning. Please complete the speaker evaluation form and return it to the registration desk in order to issue your certificate.

Program

Thursday, May 12, 2016: Issam Fares Lecture Hall

Primer in Genomic Medicine

Moderators: Drs. Samira Kaissi, Deborah Mukherji and Laila Zahed

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|---------------|--|
| 14:00 – 14:05 | Welcome remarks
<i>Dr. Deborah Mukherji</i> |
| 14:05 – 14:25 | Introduction to genomics and next generation sequencing
<i>Dr. Rami Mahfouz</i> |
| 14:25 – 14:45 | Computational approaches to enable precision medicine
<i>Dr. Pierre Khoueiry</i> |
| 14:45 – 15:10 | Next generation sequencing: An update at AUB
<i>Dr. Georges Nemer and Dr. Ossama Abou Hassan</i> |
| 15:10 – 15:30 | Genetic counseling in the era of precision medicine
<i>Dr. Chantal Farra</i> |
| 15:30 – 15:50 | Genetics of inborn errors of metabolism: The Lebanese perspective
<i>Dr. Pascale Karam</i> |
| 15:50 – 16:30 | Panel discussion: Precision and personalized medicine in developing countries
<i>Drs. Hilal Lashuel (moderator), Rami Mahfouz, Pierre Khoueiry, Georges Nemer, Chantal Farra and Pascale Karam</i> |

Opening Ceremony (NON-CME)

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|---------------|--|
| 17:00 – 18:00 | Opening Ceremony at Assembly Hall, AUB |
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Friday, May 13, 2016: Issam Fares Lecture Hall

Session I: Introduction to Precision Healthcare: The Future is Now!

Precision Medicine: What, Why, How and When?

Moderators: Drs. Samia Khoury, Hilal Lashuel and Nagi S. El Saghir

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|---------------|--|
| 09:00 – 09:45 | Precision medicine: From genes to populations
<i>Dr. Muin Khoury</i> |
| 09:45 – 10:30 | Wilder-Penfield Memorial Lecture: Precision medicine applied to neurodegenerative disease
<i>Dr. Hilal Lashuel</i> |
| 10:30 – 11:00 | Application of precision medicine to the treatment of infectious diseases
<i>Dr. Ted Schutzbank</i> |
| 11:00 – 11:15 | COFFEE BREAK |
| 11:15 – 11:45 | Precision medicine in anticoagulation: Pharmacogenetics and pharmacogenomics
<i>Dr. Charles Hill</i> |
| 11:45 – 12:15 | Personalized therapeutics: Data from the Lebanese
<i>Dr. Nathalie Khoueiry Zgheib</i> |
| 12:15 – 12:45 | Nutrigenomics in the era of precision medicine
<i>Dr. Ahmed El Sohemy</i> |
| 12:45 – 14:00 | LUNCH BREAK |

Towards Precision Medicine: Lessons Learnt from Oncology

Moderators: Drs. Ali Taher, Arafat Tfayli and Joseph Kattan

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|---------------|---|
| 14:00 – 14:30 | Precision cancer medicine in the genomic era
<i>Dr. Fadlo Khuri</i> |
| 14:30 – 15:00 | From precision medicine to cancer control and prevention:
Challenges and opportunities
<i>Dr. Muin Khoury</i> |
| 15:00 – 15:30 | Next generation sequencing in the era of targeted therapy for cancer
<i>Dr. Charles Hill</i> |
| 15:30 – 15:45 | COFFEE BREAK |

New Frontiers in Precision Medicine

Moderators: Drs. Hassan El Solh, Miguel Abboud and Ali Bazarbachi

15:45 – 16:15	Precision medicine in childhood cancer <i>Dr. Tanja Gruber</i>
16:15 – 16:45	Epigenetics in the era of precision medicine <i>Dr. Lifang Hou</i>
16:45 – 17:15	Cancer stem cells targeted therapies <i>Dr. Rihab Nasr</i>
17:15 – 17:30	Panel discussion <i>Drs. Tanja Gruber, Lifang Hou and Rihab Nasr</i>

Hicham Jaroudi Auditorium

Session II: Transforming Care through Genomic Nursing

Moderators: Drs. Ali Taher, Nuhad Dumit and Ms. Iman Kouatly

09:00 – 09:05	Introduction to precision medicine and genomic science <i>Dr. Lina Badr</i>
09:05 – 09:45	Incorporating genetics and genomics into nursing practice - Standards of care and practice in genomic nursing <i>Dr. Kathi C. Huddleston</i>
09:45 – 10:15	Advancing nursing research through genomics to improve patient outcomes <i>Dr. Lina Badr</i>
10:15 – 10:45	Improving health outcomes through genomics nursing science <i>Dr. Kathi C. Huddleston</i>
10:45 – 11:15	COFFEE BREAK
11:15 – 11:45	Nursing transforming healthcare through genomics and big data <i>Dr. Kathi C. Huddleston</i>
11:45 – 12:45	Panel discussion: Ethical challenges in genomic nursing <i>Drs. Kathi C. Huddleston, Lina Badr, Thalia Arawi, Father Boulos Wehbe and Dr. Al Sayyed Jaafar Hussein Mohammad Fadlallah</i>
12:45 – 14:30	LUNCH BREAK

Session III: From Inception to Conception: Is Personalized Medicine Likely to Change the Landscape of Reproductive Medicine?

Moderators: Drs. Anwar Nassar and Johnny Awwad

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| 14:30 – 15:00 | Can mathematical models predict the likelihood of a successful pregnancy?
<i>Dr. Fulco Van Der Veen</i> |
| 15:00 – 15:30 | Would ovarian bio markers modify the strategy of ovarian stimulation?
Towards a more individualized approach to IVF/ICSI treatment
<i>Dr. Ghina Ghazeeri</i> |
| 15:30 – 16:00 | Does the study of embryo kinetics enhance the deselection of embryos
with poor viability
<i>Dr. Johnny Awwad</i> |
| 16:00 – 16:30 | Will the use of bio markers in Reproductive Medicine improve our clinical
practice? The path towards personalized medicine unraveled
<i>Dr. Fulco Van Der Veen</i> |
| 16:30 – 16:35 | Concluding remarks
<i>Dr. Johnny Awwad</i> |

Saturday, May 14, 2016: Issam Fares Lecture Hall

Session IV: Personalizing Cardiovascular Risk Assessment: Predicting and Preventing Disease

Moderators: Drs. Samir Alam, Ghassan Hamadeh and Samir Arnaout

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|---------------|--|
| 09:00 – 09:20 | Cardiovascular imaging and personalized management
<i>Dr. Brian Ghoshhajra</i> |
| 09:20 – 09:40 | Personalized risk assessment in hypertension
<i>Dr. Samir Alam</i> |
| 09:40 – 10:00 | Personalized risk assessment in patients with diabetes and dyslipidemia
<i>Dr. Asma Arabi</i> |
| 10:00 – 10:20 | COFFEE BREAK |
| 10:20 – 10:40 | Personalized risk assessment for coronary artery disease
<i>Dr. Samia Mora</i> |
| 10:40 – 11:00 | Personalized risk assessment for cardiac arrhythmias
<i>Dr. Moussa Mansour</i> |
| 11:00 – 11:20 | Personalized risk assessment for peripheral artery disease
<i>Dr. Fady Haddad</i> |
| 11:20 – 11:40 | Personalized cardiovascular risk assessment in patients with congenital heart disease
<i>Dr. Fadi Bitar</i> |
| 11:40 – 12:00 | Nutrition: Role of individual genetic variation for cardiovascular health
<i>Dr. Ahmed El Sohemy</i> |
| 12:00 – 12:10 | CHAMPS Fund: A local experience to prevent sudden cardiac death in the young
<i>Dr. Mona Osman</i> |
| 12:10 – 13:00 | LUNCH BREAK |

SESSION V: Has Precision Medicine Reached Cardiology?

Moderators: Drs. Marwan Refaat, Habib Dakik and Sobhi Dada

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|---------------|---|
| 13:00 – 13:45 | Naji Sahyoun Memorial Lecture: Genomics and risk stratification for sudden death
<i>Dr. Barry London</i> |
| 13:45 – 14:10 | Aspirin for the primary prevention of cardiovascular disease: A personalized approach
<i>Dr. Samia Mora</i> |
| 14:10 – 14:35 | Human induced pluripotent stem cell-derived cardiomyocytes for personalized therapeutics
<i>Dr. Barry London</i> |
| 14:35 – 15:00 | Personalized atrial fibrillation and ventricular tachycardia ablation
<i>Dr. Moussa Mansour</i> |
| 15:00 – 15:25 | Personalized approach for left atrial appendage closure devices
<i>Dr. Mohamad Kanj</i> |

Hicham Jaroudi Auditorium

Session VI: Personalizing Multidisciplinary Management of Obesity

Moderators: Drs. Ramzi Alami, Farah Naja and Yasser Shaib

14:00 – 14:20	Obesity in the Middle East and North Africa: Prevalence and determinants <i>Dr. Nahla Hwalla</i>
14:20 – 14:40	Bending obesity: Illustrative examples of the high risk and potential avenues for intervention <i>Dr. Michele Forman</i>
14:40 – 15:00	Applying genomics to nutrition and weight management <i>Dr. Ahmed El Sohemy</i>
15:00 – 15:20	Surgical management of obesity <i>Dr. Bassem Safadi</i>
15:20 – 15:40	Breaking the obesity – cancer link <i>Dr. Michele Forman</i>
15:40 – 16:10	Panel discussion <i>Drs. Nahla Hwalla, Michele Forman, Ahmed El Sohemy and Bassem Safadi</i>

Ismail M. Khalil Auditorium (SB-101)

Session VII: Precision Medicine in Lymphedema

Diagnostic

Moderators: Drs. Fady Haddad, Elie Kassabian and Jaber Abbas

14:00 – 14:20	Lymphedema overview <i>Dr. Georges Tabet</i>
14:20 – 14:40	Why precision medicine in lymphedema? Impact and rationale <i>Dr. Stanley Rockson</i>
14:40 – 15:00	Diagnostic imaging and work up: What's in and what's out <i>Dr. Chady Kallassy</i>
15:00 – 15:20	Who will get lymphedema after breast cancer: Simple blood test or candidate genes for early diagnosis? <i>Dr. Stanley Rockson</i>
15:20 – 15:40	COFFEE BREAK

Therapeutic

Moderators: Drs. Raghid Kreidi, Joseph Naoum and Ms. Rebecca El Asmar

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|---------------|--|
| 15:40 – 16:00 | Early intervention: Physical therapy? Challenges and current practices
<i>Dr. Nagham Haddad</i> |
| 16:00 – 16:20 | Therapeutic stem cell and lymphangiogenesis: Present or future?
<i>Dr. Stanley Rockson</i> |
| 16:20 – 16:40 | Current surgical options: Role and outcomes
<i>Dr. Amir Ibrahim</i> |
| 16:40 – 16:55 | Who should care for lymphedema patients: The Stanford model
<i>Dr. Stanley Rockson</i> |
| 16:55 – 17:10 | Round table: Are we doing enough for our lymphedema patients?
<i>Drs. Jamal Hoballah (moderator), Georges Tabet, Stanley Rockson, Chady Kallassy, Nagham Haddad and Amir Ibrahim</i> |

Jaber Sawaya Lecture Hall (Previously Room 300)

Session VIII: Patient-Centered Management in Hospital Settings:

An Evidence-Based Management Approach

Separate Registration Fees: LBP 50,000

Moderator: Dr. Lina Daouk-Öyry

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| 09:00 – 10:00 | Evidence-based methods and tools
<i>Dr. Lina Daouk-Öyry and Dr. Charlotte Karam</i> |
| 10:00 – 11:00 | Evidence-based operation management and change management
<i>Dr. Dania El Baba</i> |
| 11:00 – 11.15 | COFFEE BREAK |
| 11:15 – 12:15 | Financial management
<i>Dr. Shadi Saleh</i> |
| 12:15 – 13:15 | LUNCH BREAK |
| 13:15 – 14:15 | Scheduling
<i>Dr. Ghassan Hamadeh</i> |
| 14:15 – 15:45 | Application of evidenced-based management to nursing
<i>Dr. Nuhad Dumit</i> |

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