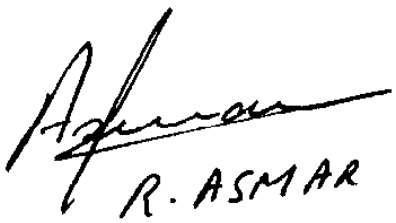
Foundation – Medical Research Institutes

Activities Report 2016
F-MRI®

Pr. Roland Asmar
Chairman



Date: **May 3th, 2017** Signature

CONTENTS

Summary

Research, especially in the Health area, represents a major issue with respect to the economic and social development of a country. All actors in the field meet interest in that development: patients, universities, hospitals, practitioners, researchers and industries. In this regard, the medical research deserves much attention because of its direct consequences on the population.

The Foundation - Medical Research Institutes (F-MRI®), established since 2009 as public utility non-for-profit organization in Geneva (Switzerland), has the objective to develop the Academic Medical Research and continuing medical education. This has been described in one of its projects entitled "Development of Academic Medical Research" initiated and developed in the Middle East since 2010. In 2016, the (F-MRI®) decided to extend these activities to Europe and to promote the collaboration between experts from The Middle east and Europe, in the Research and the CME fields.

The previous "Activities Reports" described the main activities undertaken by the Foundation in 2010-2015; These projects are subject of agreements and mutual conventions in which the F-MRI® Geneva, the initiator and promoter, delegates to F-MRI® Beirut (Executor) the task of their local achievements. They were organized according to the initial plan of the project described in the Foundation brochure. The present "Activities Report" reports the main activities which have been continued and/or initiated by the F-MRI in 2016.

Overall, the activities undertaken during 2016 were significant. In the Middle East, despite serious issues related to the political situation activities were maintained mainly in terms of Education, Research and CME. In Europe, it should be noted that the F-MRI has set up an academic international scientific committee and initiated other European activities such as an European clinical study and an international CME program performed, for the first time, in Europe.

The future perspectives for 2017 are also described.

The Foundation-Medical Research Institutes

Main Issues- Administration

The Foundation - Medical Research Institutes (F-MRI): Governance*

The Foundation - Medical Research Institutes (F-MRI®, Geneva Switzerland), is a public utility non-for-profit organization registered in Geneva, regulated by the Swiss law. This organization chaired by its founder, Prof Roland Asmar has been established in 2009 and officially recognised in 2010. It is registered with the trade and placed under the control of the supervisory authority of the Federal Department of Home Affairs in Bern, Switzerland.

Headquarter: The Foundation's headquarters location is: Place Saint Gervais 1, Po Box 2049, 1211 Geneva 1, Switzerland. Tel: +41 22 909 89 00. Fax: +41 22 909 89 39.
Email: contact@f-mri.org ; Web: www.f-mri.org

** Details on the F-MRI governance are provided on the website: www.f-mri.org*

Main Projects*:

1- The initial project of the Foundation:

The project **« Development of Academic Medical Research in the Middle-East »** has been described in a specific brochure. Briefly, the main objective of the project is to develop the research activities in medical science in the Mediterranean / Middle-East region. This has been decided after permanent collaboration with various local and international entities: governments, institutions, and universities. The project has been planned as the progressive creation in the participant country of a local F-MRI entity.

Establishing of Lebanese local F-MRI Entity: To operate in the Middle-East, the Foundation has established a local independent legal office in Beirut, Lebanon as a public utility, non-for-profit organization registered in Beirut and regulated by the Lebanese law. This entity chaired by Prof Roland Asmar has been established in 2010 and officially recognised in 2011. It is registered under the control of the supervisory authority of the Ministry of Interior, Lebanon.

2- Development in Europe

In 2016, decision has been taken to develop the Foundation activities, both in terms of Medical Research and Continuous Medical Education in Europe. These activities will be developed in collaboration with scientific societies, institutions, and key opinion leaders across western and eastern European countries (C.F. Perspectives).

More details are available on the website: www.f-mri.org

** Details of the project are described in specific downloadable brochure from the website*

EDUCATION IN MEDICAL RESEARCH

A physician interested in becoming researcher or study investigator must have been trained on medical research principles and methods. He or she will be assisted in this activity by persons belonging also to the medical sphere: the clinical research assistants (CRA).

This project is the subject of an agreement and mutual convention in which the F-MRI® Geneva, the initiator and promoter, delegates to F-MRI® Beirut the task of their local achievements. This specific education was organized at two levels:

- A university (UD) diploma proposed to post-doctorate students, the objective of which is to introduce future investigators in research fundamentals and related regulatory and technical requirements.
- A professional education recognized by a university certificate, proposed to students having achieved their baccalaureate + three years of higher education, who are interested in becoming clinical research associate (CRA).

These two university educational levels, initiated at the Lebanese University in 2010, welcome students from various Lebanese universities (see appendixes 1 & 2).

The University Diploma "Principles of Medical Research"

The organization of this university diploma involves a collaborative participation of local and international universities, with the participation of experts from Beirut (Lebanon) but also from Toulouse, Nancy and Paris VI Universities (France), as well as Basel (Switzerland). Details on the university diploma: objectives, required qualities, organisation, training, final exam, etc… can be obtained from the website.

Since its establishment in 2010, 7 academic years took place with 7 distinct classes; The Seventh class is reported hereafter (see appendix 1).

- Academic year 2016-2017: Class "Inna Iljin" included 39 Participants

NAME	DIPLOMA	UNIVERSITY
ABOU ASSI LAYAL	PhD Biochemistry	BAU
ABOU OBEID MARIA	Pharm D	USJ
AHMAD FATIMA	MD 5th year	UL- Faculty of Medicine
ALI MARIAM	Pharm D	BAU
ALLOUCH ALI	MD Internal Med	UL- Faculty of Medicine
ASSAAD MARC	MD 5th year	UL- Faculty of Medicine
AWWAD D. CAROLINA	MD 5th year	UL- Faculty of Medicine
AZAKI ALAA	MD Internal Med	UL- Faculty of Medicine/ LAU
DBOUK SARA	MD 5th year	UL- Faculty of Medicine
EL SOUFI HIND	MD 7th year	UL- Faculty of Medicine
EL SOUFI YAHYA	MD 5th year	UL- Faculty of Medicine
EL-KHOURY MICHAEL	MD 5th year	UL- Faculty of Medicine
FARAH CHAHID	MD 5th year	UL- Faculty of Medicine
FARES EDDY	MD Internal Med	UL- Faculty of Medicine
FARHAT KASSEM	MD 5th year	UL- Faculty of Medicine
GHOSN STEPHANIE	PhD Biological Sciences	Paris Diderot University
HADDAD JULIANO	MD 5th year	UL- Faculty of Medicine
HARB AYA	MD Internal Med Neuro	UL- Faculty of Medicine
HARB RAWAN	MD 5th year	UL- Faculty of Medicine
HOWAYEK ELIANE	MD Pediatric	UL- Faculty of Medicine
HWAYJI REHAM	Pharm D	BAU
ISMAIL RIM	MD Internal Med	UL- Faculty of Medicine
ISSAWI MARIAM	MD 5th year	UL- Faculty of Medicine
JOUNI REINE	Pharm D	USJ
LOUKA JEAN	MD Orthopedic surgery	UL- Faculty of Medicine

MAHFOUZ RANA	MD 5th year	UL- Faculty of Medicine
MANSOUR AMANI	MD 5th year	UL- Faculty of Medicine
MATAR MAROUN	MD Internal med	UL- Faculty of Medicine
MIAYKI GEORGIO	MD 5th year	UL- Faculty of Medicine
MOHTY RAZANE	MD Residency	UL- Faculty of Medicine
MOUJAES GHASSAN	MD 5th year	UL- Faculty of Medicine
NASREDDINE DONIA	MD Internal Med	UL- Faculty of Medicine/ BAU
NOUREDDINE AHMAD	MD 5th year	UL- Faculty of Medicine
OBEID IBRAHIM	MD 5th year	UL- Faculty of Medicine
SAAD KHADIJA	MD Internal Med	UL- Faculty of Medicine
SAADEDDINE HIBA	Pharm D	LIU
SABRA HASSAN	MD 5th year	UL- Faculty of Medicine
YARED YASMINA	Pharm D.	LAU
ZAITER ALINE	MD 5th year	UL- Faculty of Medicine

BAU = Beirut Arab University; LAU= Lebanese American University; LIU = Lebanese International University; LU= Lebanese University; USJ = Saint-Joseph University.

The Professional Certificate of "Clinical Research Associate"

This certificate is proposed to students who are interested in becoming clinical research associate (CRA). Details on the Clinical Research Certificate: objectives, required qualities, organisation, training, final exam, etc can be obtained from the website.

Like the post Doc University diploma, the organisation of this certificate involves experts from local and international universities: from Beirut (Lebanon), from Toulouse, Nancy and Paris VI Universities (France), as well as Cambridge university (United Kingdom), and Basel (Switzerland).

Since its establishment in 2010, 7 academic years took place with 7 distinct classes. The Seventh class is reported hereafter (see appendix 2).

- Academic year 2016-2017: Class "Inna Iljin " included 17 participants

NAME	DIPLOMA	UNIVERSITY
ABI KHALIL JENNIFER	BSc Biochem + Msc Healthcare Manag. Qual.	UL- Fac SC
ABI SAAD MARIANA	MSc Bio Health	UL - Fac Public health
ABOU DIAB HIBA	MSc Mathematical Modelling & Applications- Biostats	UL- Fac SC//Montpellier Fr
AMMAR NADINE	BSc Medical Laboratory Sciences	AUB
ATALLAH BACHIR	BSc Nursing +MSc in Community Health	UL - Fac Public health
BEJJANY ABDO	BSc Nursing + UD Oncology + GCP Certificate	LGU + USJ+ Merck
DANNAOUI RIM	BSc + MSc Biochemistry	UL- FAC SC + BAU
EL-MASRI MAHER	BSc Pharmacy	BAU
JOUDIEH MARWAN	Biomedical Engineering	Don State Technical University- Russia
JOUNI LAMA	BSc Nutr & and Dietetics + MSc Public Health and Clin. Nutr	UL - Fac Public health
JREIJE AFAF	BSc+ MSc Cell & Mole Biol + Neurosciences	UL- FAC SC
OSSMANE ELISSAR	BSc / MSc in Biochem + Food Technology	UL + LIU
SAFA SIHAM	BT/ TS/LT Nursing	Sch. of Nursing Baabda/ Chouf Technical Sch.
TAWK LEILA	BSc Lab Sc + MSc Biochem	UL - Fac Public health + USEK

WEHBE FATIMA	MSc Modelling and App. mathematics in epidemi. biostat	UL- FAC SC
YASSINE MOHAMMAD	MSc Clini. Pharm. Pharmaco-epidemio.	UL- Pharmacy Faculty
ZEAITER LARA	BSc Pharmacy	LIU

AUB= American University of Beirut; BAU = Beirut Arab University; LIU = Lebanese International University; LU = Lebanese University; USEK= Université Saint-Esprit Kaslik.

RESEARCH

1- Clinical Research

Clinical Research Units (CRUs) are units created within academic hospitals; they are meant to favour and promote the development of clinical research and improve the conditions of clinical study realization. CRUs are responsible for the concrete implementation of the studies, together with the participating investigators; they follow up the study within a monitoring process (quality insurance) with the collaboration of the CRAs. Details on the CRU: objectives, mission, organisation, etc, have been described in the Foundation brochure downloadable from the website.

The F-MRI project aims the implementation of distinct CRUs within those academic hospitals or institutions having applied and declared their willingness to initiate a research activity. These structures must meet the participation criteria as described in specific documents.

Two CRUs have been implemented in 2 academic hospitals:

A- Mount Lebanon Hospital (MLH): This hospital is located in Beirut and affiliated to the Faculty of Medicine of the Lebanese University. This multidisciplinary hospital has several excellence centres mainly in oncology, medical imaging, and endocrinology. The affiliation form has been accepted in July 2011 and the CRU established in October 2011.

Since the CRU unit has been designed as a Built-Organize-Transfer (B.O.T.) model, the CRU unit of Mount-Lebanon Hospital completed its transfer and become totally independent in 2016.

In 2016, 1 **trial** was coordinated in the CRU with the contribution of the F-MRI, the others clinical studies started in a full independency from the F-MRI:

A 12-Week treatment, multicenter, randomized, double-blind, double-dummy, parallel group study to assess the efficacy and safety of switching from salmeterol/fluticasone to QVA149 (indacaterol maleate/ glycol-pyrronium bromide) in symptomatic COPD patients.

- **Study Name:** FLASH
- **Principal Investigator:** Dr Carole Youakim
- **Sponsor:** Novartis
- **Study status:** Ongoing
- **Start date: Dec 2nd, 2015**
- **Number of patients' status:** 5 patients selected/ 1 patient enrolled
- **End Date:** June 2016

B- Lebanese Hospital Geitawi: This hospital is located in Beirut and affiliated to the Faculty of Medicine of the Lebanese University. It has been recently accredited by the Ministry of Health and the corresponding Institution. The affiliation form has been accepted in December 2012.

The set-up of the Clinical Research Unit (CRU) at Geitawi hospital started and was operational in 2014. The unit remains in its organization phase since the hospital remains under partial renovation.

2- Basic Science Research

The F-MRI has established its first basic science research unit within the Faculty of Medicine at the Lebanese University under the direction of Dr Mirna Chahine.

A first project, entitled "Tissue regulation of telomeres' length (TL) - Simultaneous study on telomeres' length in different tissue types", is in collaboration with the CHU de Nancy, France (Prof. Athanase Benetos) and the University of New Jersey, USA (Prof . Abraham Aviv).

- **Background:** The prevailing view in telomere epidemiology is that leukocyte telomere length (LTL) is associated with atherosclerosis and accelerated aging since it serves as a biomarker of the cumulative burden of inflammation and oxidative stress during adult life. It has been shown that TL is mainly determined at birth and childhood.

- **Hypothesis:** Since short telomeres antecede atherosclerosis, *we hypothesize that TL is not just a simple marker, but a real determinant of arterial aging.* That is because TL reflects cellular repair capacity and a short LTL denotes diminished repair reserves. This hypothesis cannot be tested by measurements of LTL alone, since this parameter reflects TL at birth and its age-dependent attrition thereafter. We propose, therefore, a model that makes it possible to examine different elements of TL dynamics in leukocytes and skeletal muscle in patients with or without atherosclerosis.

- **Aim :** The aim of this project is to examine different elements of TL dynamics in leukocytes and skeletal muscle in patients with or without atherosclerosis undergoing surgery or implantation of pacemaker/defibrillator.

- **Methodology and ongoing results' analysis:** The study was initiated in the Foundation CRU of the Lebanese Hospital Geitawi.

- Dec 3rd 2013; 1st patient enrolled
- March 12th 2015:Last patient enrolled
- Total patients enrolled: 37 Patients enrolled; Informed consents have been signed at the beginning of the hospitalization.
- In July 2015, all DNA extraction has been totally performed from collected tissues (skeletal muscle and blood) and has been sent for telomere's length measurement at the CHU of Nancy (France) and New Jersey University (USA) .The results of this study will soon be published.
- December 2016: writing of the manuscript

3- Epidemiological research

This project has been submitted to the head-office F-MRI® Geneva by the Lebanese F-MRI® unit. After its approval, it has been the subject of an agreement and mutual convention between the F-MRI® Geneva and the F-MRI® Beirut.
The F-MRI initiated two Epidemiological projects about the "Prevalence" and the "Management" of Cardiovascular Diseases overall Lebanon.

- **The prevalence project :**

- **Background:**

The incidence and the prevalence of cardiovascular diseases (CVD) have tremendously increased as they have become one of the main causes of death among adults.
According to the World Health Organization, CVD are the world's largest killers, claiming 17 million lives a year. In Lebanon, chronic diseases constitute an important public health problem.

- **The objectives of the prevalence study were:**

– to evaluate major Cardiovascular (CV) risk factors such as Hypertension, Diabetes, Dyslipidemia, Smoking, Obesity;
– to assess the prevalence of Cardiovascular Diseases (CVD) in the adult Lebanese population.

- **Methodology:**

A cross-sectional study has been carried out, using a multistage cluster sample all over Lebanon. Lebanese residents aged 20 years and above have been enrolled in the study, with no exclusion criteria.

- **Procedure:**

From the list of circumscriptions in Lebanon (villages, towns and cities) (17), we randomly selected one hundred and four circumscriptions. Through a representative of local authorities, a list of dwellers has been

provided to us. To select interviewees, randomization of dwelling residents aged 20 years and above from this list has been performed on a computerized software.

- **Tools :**

For every individual, the following measurements have been performed: blood pressure, glycemia, height and weight, and waist circumference for abdominal obesity measurement. Moreover, standardized questionnaires has been be used.

Data collection of the prevalence study has been finalized in 2015; the data analysis has been performed in 2015 - 2016.

One third of the data were collected by 2 PhD candidates registered in co-tutelle with the Lebanese University and 2 French universities; After analyzing the totality of the results of this study, both students obtained successfully their PhD Diploma from both the Lebanese in the French Universities:

- 1- Rouba Karen Zeidan: : Lebanese University & Toulouse III University / Co supervisor: Pr Atul Pathak/ Pr Pascale Salemeh
- 2- Rita Farah : Lebanese University & Paris-Est University Créteil/ Co-supervisor : Pr Hassan Hosseini/ Pr Pascale Salemeh

In 2015, as a result, this study has delivered 2 peer-reviewed publications.
1.Rita Farah, Rouba Karen Zeidan, Mirna N. Chahine, Roland Asmar, Ramez Chahine, Pascale Salameh, and Hassan Hosseini. (2016) Predictors of uncontrolled blood pressure in treated hypertensive individuals: First population-based study in Lebanon. J Clin Hypertens. 2016 2016;1–7.
2-Rita Farah, Rouba Karen Zeidan, Mirna N. Chahine, Roland Asmar, Ramez Chahine, Pascale Salameh, and Hassan Hosseini. (2015) Prevalence of Stroke Symptoms in Lebanon: First National Data from Lebanon. Int J Stroke. 2015:10 (Suppl A100): 83-88.

In 2016, as a result, this study has delivered 2 more peer-reviewed publications one of them is still under revision.

1- Rouba Karen Zeidan, Rita Farah, Mirna N Chahine, Roland Asmar, Pascale Salameh, and Atul Pathak. (2016) Prevalence and Correlates of Coronary Heart Disease: First Population-based Study in Lebanon. Vascular Health and Risk Management 2016;12:75–84.
2- Rouba Karen Zeidan, Rita Farah, Mirna N Chahine, Roland Asmar, Atul Pathak, Hassan Housseini, Pascale Salameh. (2017) Clustering of hypertension, diabetes and dyslipidemia in Lebanon (submitted J of Public Health).

In addition, in March 2016, a 3rd PhD student began analyzing further results from this study; she registered in co-tutelle with the Lebanese University and a French university: Dr Michlle Cherfan: Lebanese University & Paris VI / Co supervisor: Pr Jacques Blacher/ Pr Pascale Salemeh.

- **The management project:**

- **Background:**

The large numbers of epidemiological studies and clinical trials have documented the benefits of treating for example dyslipidemia, diabetes mellitus, hypertension, and obesity using behavioural and pharmacological means.
These epidemiological studies have led to clinical practice guidelines aimed at implementing these management *recommendations.*

- **The objectives of the management study were :**

– to assess the management of the major cardiovascular risk factors in the Lebanese adult population versus clinical practice guidelines.
– to evaluate the quality of the management of each of the major cardiovascular risk factors versus clinical practice guidelines, to evaluate the management of the multiple risk factors combination (patient at high cardiovascular risk) versus clinical practice guidelines, to assess the management according to the physician phenotype and characteristics, because treatments can differ based on the sexe, the age and the location of the physician, and to compare risk factors management to the management as recommended by the guidelines

- **Methodology:**

A cross-sectional study has been carried out. Lebanese primary care physicians (GPs, Family Medicine, Internal Medicine) have been enrolled in the study to provide information on the management of CVD and risk factors of their adult patients aged 20 years and above.

- **Procedure:**

From the directory of the Lebanese Order of Physicians, we selected from different regions in Lebanon 100 Lebanese physicians among the 11 000 physicians that are members of the Order of Physicians. The selected 100 physicians filled out a questionnaire regarding the first 10 adult patients (with CVD and/or diseases) aged 20 years and above who enter their clinics that day, and this will totalize 1000 patients.

The study has been initiated in June 2014. Data collection has been finalized and data analysis have been performed in 2015 - 2016. The results will be published soon.

4- Public Health Research

These projects are the subject of an agreement and mutual convention in which the F-MRI® Geneva, the initiator and promoter, delegates to F-MRI® Beirut the task of their local achievements.

A- Management of hypertension and diabetes in patients with Target Organ Damages and/or previous cardiovascular diseases in multicentric academic hospitals of Beirut and Mount-Lebanon from January 2014 to August 2015. Where do we stand with respect to international guidelines?

The objectives of this project are:

- To assess the management of practice of Lebanese doctors in primary health care centers with regard to hypertension and diabetes in patients with target organ damages and/or previous cardiovascular diseases.
- To evaluate the quality of management of hypertensive and diabetic patients in Lebanon: the prevalence of cardiovascular complications (CAD and stroke) among treated patients.
- To highlight the degree of adherence of Lebanese physicians to the international guidelines regarding the management of hypertension and diabetes.
- To determine if the international guidelines should be adapted to the Lebanese population, should be modified or even specific guidelines could be recommended to help Lebanese physicians achieve ultimate goals and improve patients' management.

This project has been assigned to 3 MD candidates as part of their thesis; they started collecting their data in February 2015; We are currently finalizing the data analysis.

B- Evaluation of potential drug-drug interactions (DDIs) in patients with cardio-metabolic diseases in multi-centric academic hospitals of Beirut and Mount -Lebanon from January to August 2015.

The Primary objective is to determine the prevalence of potential DDIs in the prescriptions given to in and out-patients with cardiometabolic diseases in multi-centric academic hospitals from Beirut and Mount Lebanon between January and August 2015.
The secondary objectives are to determine the effectiveness of prescriptions in term of posology and the accuracy of prescribed drugs regarding indications.
This project has been assigned to 3 MD candidates as part of their thesis; they started collecting their data in June 2015; all data has been finalized in Dec 2016 and this thesis will be defended soon and data will be submitted for publication next month:
1-Maroun Matar, Eliane Howayeck , Eliane Jabbour, Yared Yasmina, Mirna N. Chahine , Roland Asmar. Prevalence of potential Drug interactions in Doctors' prescriptions for patients with cardiometabolic diseases. A multicentric retrospective study from Beirut and Mount-Lebanon hospitals. (To be Submitted to the *Journal of Fundamental & Clinical Pharmacology* 2017)

5- Other Research: Devices

Assessment of the accuracy of the blood pressure measurements using 3 various methods in 4 specific populations (obese, pregnant, elderly, arrhythmic patients), according to ESH-IP:

The primary objective of the study is to assess the accuracy of automatic oscillometric BP devices: the Microlife WatchBP O3® (at the brachial level) and the OMRON RS6® (at the wrist level) in specific populations, the elderly subject, the pregnant woman, the obese subject, and the arrhythmic patient according to the ESH-IP.
The secondary objectives are: to explore innovative means to improve BP measurement in specific populations; to define phenotype, morphometric (weight, BMI), and hemodynamic (Heart rate, BP) parameters which may constitute determinant(s) of the BP differences.
This project has been assigned to 6 MD candidates as part of their thesis; they started collecting their data in April 2015; This project is partially finalized. The data obtained for the validation of these devices in the obese population has been now published in a peer-reviewed journal:
1- Azaki A, Diab R, Harb A, Asmar R, Chahine MN. Questionable accuracy of home blood pressure measurements in the obese population – Validation of the Microlife WatchBP O3® and Omron RS6® devices according to the European Society of Hypertension-International Protocol. *Vascular Health and Risk Management*. In press 2017

Assessment of the accuracy of the blood pressure measurements using 2 various methods in 1 specific population (Diabetic patients), according to ESH Protocol:

The objective of the study is to assess the accuracy of automatic oscillometric BP device, the OMRON M6® (at the brachial level) in the type II diabetic patient, according to the ESH-IP. This project has started in Dec 2015. In 2016 we finalized the data collection and analysis and has been submitted for publication;

1- Chahine MN, Topouchian J, Zelveian P, Hakobyan Z, Melkonyan A, Azaki A, Diab R, Harb A, Asmar R. Validation of BP devices the QARDIOARM® in the general population and the OMRON M6 Comfort® in Type II Diabetic Patients according to the European Society of Hypertension International Protocol (ESH-IP). In revision in *Vascular Health and Risk Management*. 2017

6- Collaboration with the CNRS (Centre National de la Recherche Scientifique) :

The F-MRI® has developed the research in collaboration with recognized national institutions such as the CNRS. In this regard, our project entitled:" Validation of the Microlife WatchBP O3® & the OMRON RS6® in arrhythmic patients, elderly subjects, pregnant women, and obese patients according to the European Society of Hypertension International Protocol (ESH-IP)", has been submitted in Quarter 1 2015 and has been agreed to be funded for 2 years.

PUBLICATIONS

Publications in international peer-reviewed journals during the last five years:

1. Azaki A, Diab R, Harb A, Asmar R, Chahine MN. Questionable accuracy of home blood pressure measurements in the obese population – Validation of the Microlife WatchBP O3® and Omron RS6® devices according to the European Society of Hypertension-International Protocol. *Vascular Health and Risk Management*. In press 2017

2. Zeidan RK, Farah R, Chahine MN, Asmar R, Salameh P, and Pathak A. (2016) Prevalence and Correlates of Coronary Heart Disease: First Population-based Study in Lebanon Vascular Health and Risk management 2016;12:75–84.

3. Farah R, Zeidan RK, Chahine MN, Asmar R, Chahine R, Salameh P, and Hosseini H. (2016) Predictors of uncontrolled blood pressure in treated hypertensive individuals: First population-based study in Lebanon. J Clin Hypertens. 2016;1: 1–7.

4. Farah R, Zeidan RK, Chahine MN, Asmar R, Chahine R, Salameh P, and Hosseini H. (2015) Prevalence of Stroke Symptoms in Lebanon: First National Data from Lebanon. *Int J Stroke.* 2015:10 (Suppl A100): 83-88.

5. Chahoud J, Mrad J, Semaan A, Asmar R. (2015) Prevalence of Diabetes Mellitus Among Patients with Essential Arterial Hypertension. J Med Liban. 201;63(2):74-80.

6. Mirna N. Chahine, Nathalie Assemaani, Ghada Sayed-Hasan, Mariam Chami-Chebbo, Pascale Salameh, And Roland Asmar. (2015) Validation of the OMRON® M3500 blood pressure measuring device using normal and high speed modes in the adult and specific populations (obese and children) according to the AAMI Protocol. J Clin Hypertens (Greenwich) 17(8):622-629.

7. Asmar R. (2015) Effects of treatment on arterial stiffness and central blood pressure--points to consider. J Clin Hypertens (Greenwich). 2015; 17:105-106.

8. Mancia G, Asmar R, Amodeo C, Mourad JJ, Taddei S, Gamba MA, Chazova IE, Puig JG. Comparison of single-pill strategies first line in hypertension: perindopril/ amlodipine versus valsartan/amlodipine. J Hypertens. 2015; 33:401-411

9. Parati G, Stergiou G, O'Brien E, Asmar R, Bilo G, de Leeuw P, Imai Y. European Society of Hypertension practice guidelines for ambulatory blood pressure monitoring. J Hypertens 2014; 32:1359-1366.

10. Topouchian J, Agnoletti D, Blacher J, Youssef A, Chahine MN, Ibanez I, Assemaani N, Asmar R. Validation of four devices: Omron M6 Comfort, Omron HEM-7420, Withings BP-800, and Polygreen KP-7670 for home blood pressure measurement according to the European Society of Hypertension International Protocol. Vasc Health Risk Manag. 2014;10:33-44.

11. O'Brien E, Parati G, Stergiou G, Asmar R, et al., European Society of Hypertension position paper on ambulatory blood pressure monitoring. J Hypertens. 2013 31:1731-1768.

12. Cameron JD, Asmar R, Struijker-Boudier H, Shirai K, Sirenko Y, Kotovskaya Y, Topouchian J. Current and future initiatives for vascular health management in clinical practice. Vasc Health Risk Manag. 2013; 9:255-264.

13. Cremer A, Butlin M, Codjo L, Coulon P, Ranouil X, Joret C, Coste P, Asmar R, et al. Determination of central blood pressure by a noninvasive method (brachial BP and QKD interval). J Hypertens. 2012; 30:1533-1539.

14. Stergiou G, Parati G, Asmar A, O'Brien E. Requirements for professional office blood pressure monitors on behalf of the European Society of Hypertension Working Group on Blood Pressure Monitoring. Journal of Hypertension 2012; 30:537–542.

15. Asmar R. Telmisartan in High Cardiovascular Risk Patients. *European Cardiology*, 2012;8:10–16

16. Asmar R. L'hypertension au Coeur du cerveau. Editorial. Circulation, french version. 2011; 11: 371-372.

17. Topouchian J, Agnoletti D, Blacher J, Youssef A, Ibanez I, Khabouth J, Khawaja S, Beaino L, Asmar R. Validation of four automatic devices for self-measurement of blood pressure according to the international protocol of the European Society of Hypertension. Vascular Health and Risk Management 2011; 7:709–717.

18. Johnston A, Asmar R, Dahlöf B, Hill K, Jones DA, Jordan J, Livingston M, Macgregor G, Sobanja M, Stafylas P, Rosei EA, Zamorano J. Generic and therapeutic substitution: a viewpoint on achieving best practice in Europe. Br J Clin Pharmacol. 2011; 12;1365-2125.

19. Asmar R, Gosse P, Queré S, Achouba A. Efficacy of morning and evening dosing of Amlodipine/ Valsartan combination in hypertensive patients uncontrolled by 5 mg of amlodipine. Blood Press Monit. 2011; 16:80-86.

CONTINUOUS MEDICAL EDUCATION

Continuous Medical Education (CME) was defined as one of the activities to be developed by the F-MRI®. An efficient CME needs to be performed according to a well-established methodology. After assessing the need of doctors and researchers, the adapted CME programs is defined and implemented. Moreover, CME activities need to be recognized and accredited by national or international scientific societies or institutions.

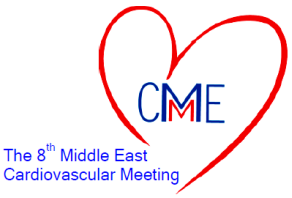
In order to develop recognised and accredited CME activities, the Foundation has entered in 2011 an agreement with the "International Society of Vascular Health". Moreover, all the CME activities initiated by the F-MRI are accredited by the European authorities (EBAC).

To develop its European collaboration, the F-MRI organized its first European / Middle East CME program in 2016 in Europe in collaboration with other International and European scientific societies:

1- The Eighth Cardio-Metabolic Meeting (CME VIII) was fully organized by the F-MRI in collaboration with the ISVH in Belgrade, Serbia in July 2016. Outstanding international and local speakers (from the US, Canada, Europe, Middle East) participated in this scientific meeting (See Program). The meeting was organised in collaboration with the Serbian scientific socities & Institutions, principaly with the HISPA (Hypertension, Infarction, Stroke Prevention Association) under the patronage of M. President of Serbia.

The attendance included over 300 participants with 131 participants from the Middle East amongst which 6 from Jordan, 2 from Palestine, 45 from Iran and 78 from Iraq. Analysis of the evaluation forms fulfilled by the participants was very satisfactory, promising, and successful. (See Evaluation form's results).

Program:



The 8th Middle East Cardiovascular Meeting

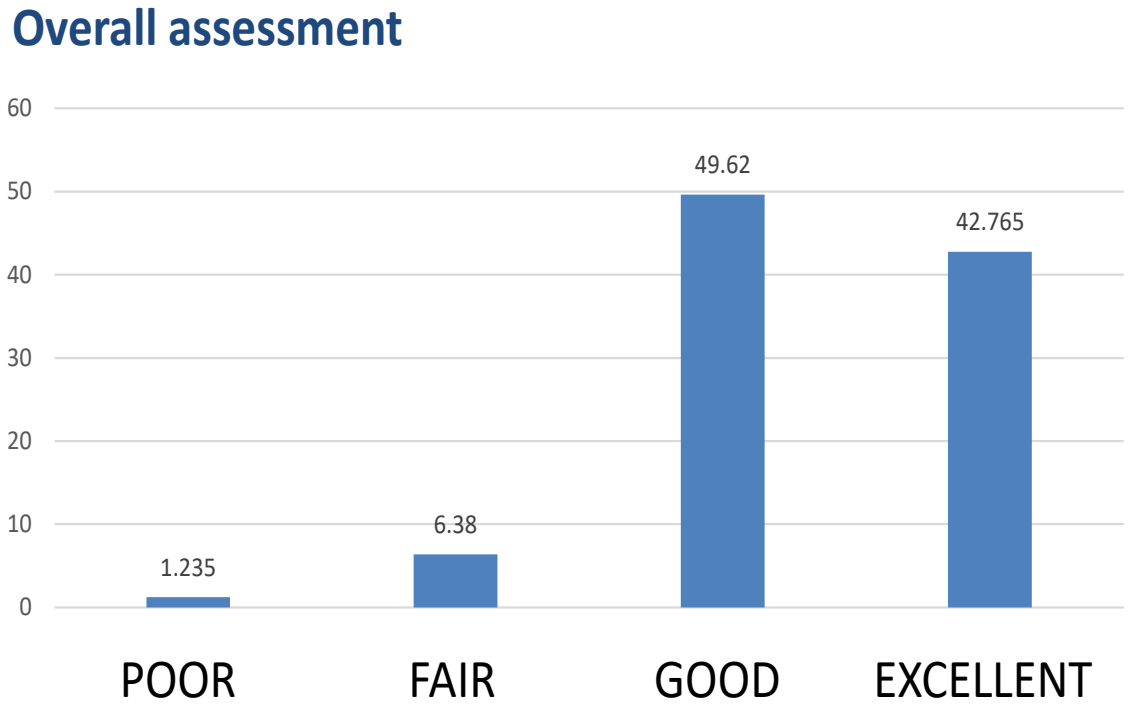
Saturday, July 16th 2016

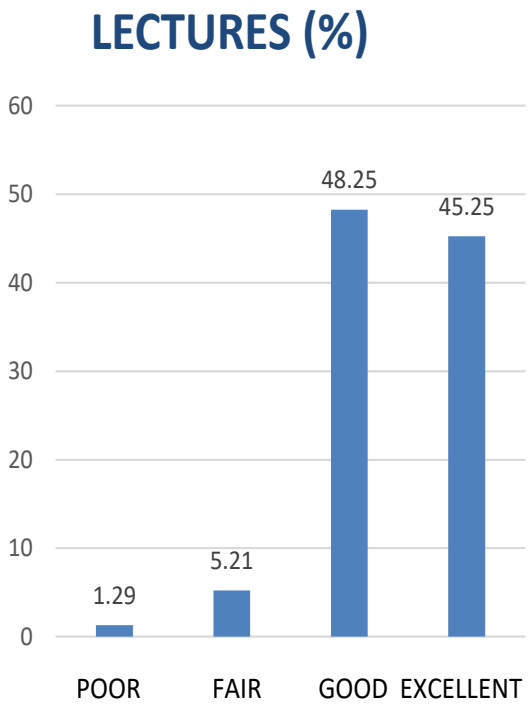
Crowne Plaza Hotel, Belgrade, Serbia

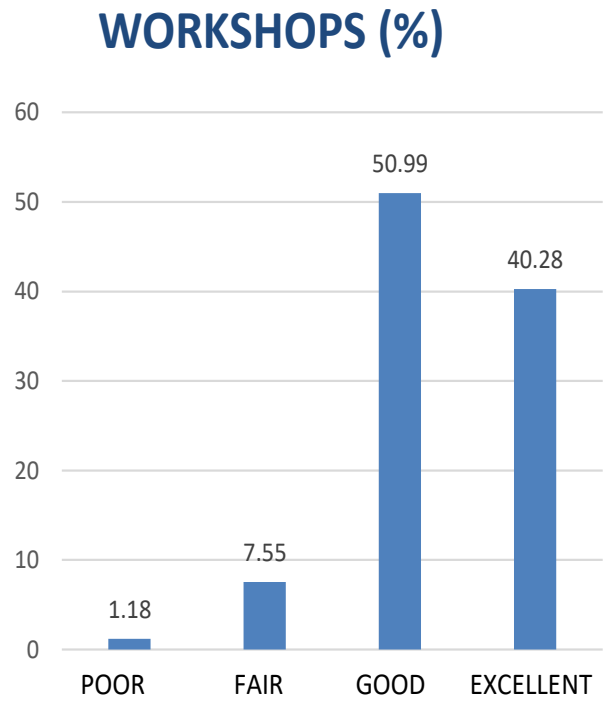
8:00 - 8:15	**Welcome and Introduction**	**Prof. Roland Asmar (FR)** **Prof. Mirna Chahine (CAN)**
Session I: Heart Failure **Chairmen: Prof. Arsen Ristic (RS) / Prof. Sadeq Al-Hamash (IRK)**		
8:15 -8:40	Evaluation of Heart Failure	**Prof. Roberto Ferrari (IT)**
8:40 -9:05	Pharmacological treatment of chronic HF	**Prof. Nebojsa Tasic (RS)**
9:05 -9:30	Heart Transplant	**Prof. Babak Sharif-Kashani (IRN)**
9:30 -9:55	Left Ventricular Assistance Device (LVAD)	**Prof. Arsen Ristic (RS)**
9:55 -10:10	General Discussion	**All**
10:10 - 10:30	Coffee Break	
Session II: CAD **Chairmen: Prof. Tasic Nebojsa (RS)/ Prof. Eyas Al-Mousa (JOR)**		
10:30 -10:55	Updates on Acute CAD Management	**Prof. Simon Abou Jaoudé (LB)**
10:55 -11:20	Updates on Chronic CAD	**Prof. Paolo Palatini (IT)**
11:20 -11:45	Angina treatment — medical versus interventional therapy	**Prof. Marina Deljanin-Ilic (RS)**
11:45 -12:10	Trans-catheter Aortic Valve Implantation (TAVI)	**Dr. Ramzi Abi Akar (FR)**
12 :10 -12:30	General Discussion	**All**
12:30 - 14:00	Lunch Break	
Session III: Parallel Workshops*		
14:00 - 15:30 15:30 - 17:00	**Workshop A:** "Arterial Evaluation: Cardio-Ankle Vascular Index & Arterial stiffness" + "Central and Aortic blood pressure"	**Dr. Jirar Topouchian (FR)** **Mr. Simon Martin (UK)**
14:00 - 15:30 15:30 - 17:00	**Workshop B:** "Evaluation of heart functions & structures tissue & 3D ultrasound"	**Prof. Elie Chammas (LB)** **Prof. Arsen Ristic (RS)** **Prof. Christophe Klimczak (FR)**
14:00 - 15:30 15:30 - 17:00	**Workshop C:** Case Discussions	
	14:00 - 14:30 15:30 - 16:00 — Heart Failure (2 Cases acute and chronic)	**Prof. Nebojsa Tasic (RS)** **Prof. Babak Sharif-Kashani (IRN)**
	14:30 - 15:00 16:00 - 16:30 — CAD (2 Cases acute and chronic)	**Dr. Ramzi Abi Akar (FR)** **Prof. Mahmoud Hashemian (IRN)**
	15:00 - 15:30 16:30 - 17:00 — Tachycardia in Hypertension (2 Cases)	**Prof. Stevo Julius (US)**

** **NB:** Each workshop will last for an hour and half. Participants will be divided into three groups. Each group can attend two workshops.*

Evaluation form







FUTURE PERSPECTIVES

1- Education

- **Seminars on medical research**
  Considering that professional employments are also interested by the research education, the foundation is willing to develop specific modulus and seminars. These seminars will take place at the end of the week for 2 to 3 days, and will be organised as “Master classes”

- **MD Thesis:** We will continue to welcome and support resident students from the Lebanese University Faculty of Medicine to help them define the subjects of their thesis and realize the corresponding studies.

- **PhD Thesis:** We will continue to welcome and support MSc students or Pharm D from the Lebanese University Faculty of Medicine to help them define the subjects of their PhD thesis in collaboration or by co-tutelle with French universities and realize the corresponding studies.

2- Research

- **Epidemiological & Public Health Studies**

  F-MRI is willing to continue exploring in 2017 the results of this large national evaluation study entitled: *“The Cardiovascular Prevalence and Management Lebanese Project”*. This study will help to assess the epidemiological aspects in terms of prevalence and the management reality of the major cardiovascular risk factors in Lebanon. Other PhD candidates will be performing their PhD Thesis in collaboration with French Universities.

- **Validation of Medical devices**

  F-MRI will continue to develop its research on the validation of medical devices and particularly on devices for blood pressure measurements. This research will be conducted according to the recommended validation protocols such as the AAMI/ISO protocol and the European Hypertension Society protocol. This research will be developed in the general population but also and mainly in specific populations such as the obese, pregnant, elderly, etc.

3- CME: Regional Development

- The F-MRI will continue to develop in collaboration with the International Society of Vascular Health (ISVH®) important regional CME activities.

4- Development of European Activities

The F-MRI executive committee decided in 2016 to develop its activities in Europe both in the western and eastern European countries. These activities will be initiated either only in Europe or with the potential collaboration of institutions from the Middle East countries. In this regard, the followings activities will be undertaken.

- **Establishment of an International Scientific committee**

In order to initiate its activities at European and International level, the Foundation has established a scientific committee which includes European experts from Switzerland, France, Spain and Italy. These outstanding and recognized experts include:

  - Prof/DR Bernard Waeber, Lausanne Switzerland

- Prof/Dr Michel Burnier, Lausanne Switzerland
- Prof/Dr Daniel Hayoz, Fribourg Switzerland
- Prof/DR Massimo Volpe, Rome Italy
- Prof/DR Luis Ruilope, Madrid Spain
- Prof/DR Roland Asmar, Paris France

- **Education**

The F-MRI® will continue to develop the research academic education for students of the Lebanese University in collaboration with other European universities, mainly French universities. The F-MRI® will initiate and help students to do their PhD by co-tutelle between the Lebanese and the European universities.

- **Research**

1. The Scientific Committee of F-IRM® undertook an international multi-center clinical study project entitled: **"Mobility Hypertension Management**". This project is involving more than 15 European countries including Switzerland. This study will be carried out in academic centers and will aim to analyze the effectiveness of telemedicine and "Digital Health" in the management of cardiovascular diseases and especially high blood pressure.

2. The F-MRI® is discussing a potential collaboration between the **Foundation F-MRI®, Biospeedia, Pasteur Institute (France) and the World Health Organisation (WHO**) Geneva in a "confidential" project to use automatic and speed test for the meningitis diagnosis. The study will be performed in 2 African countries chosen by Biospeedia and WHO. The F- MRI® will collaborate to this important project aiming to establish rapid diagnostic test, therefore helping to limit the epidemic dissemination of this dangerous disease and to constitute a network of epidemic monitoring.

- **Continuous Medical Education**

The F-MRI® will develop International CME activities in Europe with experts and participants from Europe and the Middle East to favour the establishment of expert's networks. This activity will be developed in the same manner than the first European meeting hold in Serbia Belgrade (C.F. CME activities).

APPENDIXES

1- University Diploma “Fundamentals in Medical Research” - Class “Inna Iljin ” - Academic year 2016-2017.

2- Clinical Research Assistant - “ Fundamentals in Medical Research” - Class “Inna Iljin” - Academic year 2016-2017.

University Diploma
« Principles of Medical Research »
Class " Inna Iljin"
Academic Year 2016 – 2017 (page 1/2)

Abou Assi
Layal

Abou Obeid
Maria

Ahmad
Fatima

Ali
Mariam

Allouch
Ali

Assaad
Marc

Awwad
Diana Carolina

Azaki
Alaa

Dbouk
Sara

El Soufi
Hind

El Soufi
Yahya

El-Khoury
Michael

Farah
Chahid

Fares
Eddy

Farhat
Kassem

Ghosn
Stéphanie

Haddad
Juliano

Harb
Aya

Harb
Rawan

Howayek
Eliane

University Diploma
« Principles of Medical Research »
Class “ Inna Iljin”
Academic Year 2016 – 2017 (page 2/2)

Hwayji
Riham

Ismail
Rim

Issawi
Mariam

Jouni
Reine

Louka
Jean

Mahfouz
Rana

Mansour
Amani

Matar
Maroun

Miayki
Georgio

Mohty
Razane

Moujaes
Ghassan

Nasreddine
Donia

Noureddine
Ahmad

Obeid
Ibrahim

Saad
Khadija

Saadeddine
Hiba

Sabra
Hassan

Yared
Yasmina

Zaiter
Aline

Clinical Research Associate
« Principles of Medical Research »
Class " Inna Iljin"
Academic Year 2016 – 2017

Abi Khalil
Jennifer

Abi Saad
Mariana

Abou Diab
Hiba

Ammar
Nadine

Atallah
Bachir

Bejjany
Abdo

Dannaoui
Rim

El-Masri
Maher

Joudieh
Marwan

Jouni
Lama

Jreije
Afaf

Ossmane
Elissar

Safa
Siham

Tawk
Leila

Wehbé
Fatima

Yassine
Mohammad

Zeaiter
Lara