

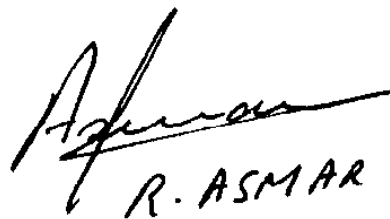


Foundation – Medical Research Institutes

Activities Report 2017

F-MRI®

Pr. Roland Asmar
Chairman



R. ASMAR

Date: **March 21th, 2018**

Signature

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Foundation – Medical Research Institutes

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Summary

Research, especially in the health area, represents a major issue with respect to the scientific and social development of a country. [All actors in the field meet interest in that development](#): patients, universities, hospitals, 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 (CME). 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 in both the Research and the CME fields

The previous annual “Activities Reports” reported [the main activities undertaken by the Foundation till 2016](#). The corresponding projects realized in the Middle-East were subject of mutual conventions between the F-MRI® Geneva (the initiator and promoter), and the F-MRI® Beirut (Executor). The other European projects were realized directly by the F-MRI® Geneva. In 2016, the F-MRI® developed its activities in Europe by initiating several research and academic projects. The present “Activities Report” reports the main activities which have been continued and/or initiated by the F-MRI® in 2017.

Overall, the activities undertaken during 2017 were significant in Europe as well as in the Middle-East despite serious issues related to the political. In Europe, the F-MRI® has set up an “academic international scientific committee” and initiated other European activities such as an “European clinical study” involving digital health technology. Moreover, during 2017, the F-MRI® initiated a collaborative project with Biospeedia-Institut Pasteur (Paris) and the World Health Organisation (WHO, Geneva) to be performed in Africa.

The future perspectives for 2018 are also described.

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- Development in the Middle-East - The initial project

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.

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.

Various important activities have been initiated, several of them have been completed, others are still in process (CF hereafter).

2- Development in Europe

In 2017, decision has been taken to develop the F-MRI® activities, in terms of Medical Research, Digital Health technology and Continuous Medical Education (CME) in Europe. These activities were initiated in 2016 and were developed during 2017 in collaboration with scientific societies, institutions, and key-opinion leaders across western and eastern European countries.

Details of the projects are available on the website: www.f-mri.org.

EDUCATION IN MEDICAL RESEARCH

A researcher or clinical study investigator must have been trained on medical research principles and methods. He or she will be assisted in this research activity by clinical research associate (CRA). Therefore, [education in medical research is of paramount importance and must be provided](#) to all the actors in this field.

The project to provide high level university education in medical research was the subject of an agreement and mutual convention between the Lebanese University and the F-MRI®, 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 education levels:

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

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 (UD): “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 F-MRI® website.

[Since its establishment in 2010, 7 academic years took place with 7 distinct classes; the seventh class is reported hereafter](#) (see appendix 1) and took place between Q4 2016 and Q3 2017.

- [Academic year 2016-2017: Class “Inna Ijlin” 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
SAADEDINE 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 Certificate of “Clinical Research Associate” (CRA)

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 F-MRI® website.

Like the post Doc University diploma, the organisation of this certificate involves experts from local and international universities.

Since its establishment in 2010, 7 distinct classes were performed. The seventh class is reported hereafter (see appendix 2) and took place between Q4 2016 and Q3 2017.

- Academic year 2016-2017: Class “Inna Ijlin ” 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-epidemi.	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 Units (CRUs)

Clinical Research Units (CRUs) are units created within academic hospitals; they are meant to [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). Details on the CRU: objectives, mission, organisation, etc, have been described in the Foundation brochure.

The F-MRI® project aims the implementation of distinct CRUs within those academic hospitals 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 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.

B- Lebanese Hospital Geitawi: This hospital is 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. Since the CRU unit has been designed as a Built-Organize-Transfer (B.O.T.) model, the CRU unit of the Lebanese Hospital Geitawi completed its transfer and become totally independent in 2017.

This accomplishment was concomitant to the participation of the F-MRI® in establishing an Institutional Review Board (IRB) at these hospitals.

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).

- **Hypothesis:** We hypothesize that TL is not just a simple marker, but a real determinant of arterial aging. This hypothesis cannot be tested by measurements of leucocyte TL alone; therefore, we propose, 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.
- All DNA extraction has been totally performed 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 have been presented as 2 poster presentations in France (Nice Sep 2017 and Paris November 2017).
- S. Toupence, I. Tzanetakou, M. Chahine, P. Konstantopoulos, S. Gautier, M. Korou, C. Lakomy, I. Doulamis, C. Labat, A. Gkogkos, R. Asmar, D. Perrea, A. Benetos. Longueur des télomères et attrition télomérique dans les contextes de stress oxydant et d'inflammation chroniques. Presented during the 37eme journée annuelles de la société Française de Gériatrie et Gérontologie, Paris, France from 27 to 29 Novembre 2017, L'Année Gérontologique, 2017; 31 (Tome II) :3 (O1-1).
- S. Toupence, I. Tzanetakou, M. Chahine, P. Konstantopoulos, S. Gautier, M. Korou, C. Lakomy, I. Doulamis, C. Labat, A. Gkogkos, N. Settembre, T. Moussallem, K. Perreas, L. Frimat, P. Yared, E.Menenakos, J. Hubert, M.Vasiloglou, S.Malikov, R. Asmar, D. Perrea, A. Benetos. Telomere length and telomere attrition in chronic oxidative stress and inflammation. Presented during the EUGMS in Nice, France from 20 to 22 September 2017, European Geriatric Medicine 8S1:S40-S247 (S2017-P581).

These results will be submitted for publication to international peer-reviewed journals.

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 a mutual convention between the F-MRI® Geneva and the F-MRI® Beirut. The F-MRI® initiated [two Epidemiological projects on the "Prevalence" and the "Management" of Cardiovascular Diseases overall Lebanon](#).

- **The "Prevalence" project:**

- **Background:**

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.

- **Procedure:**

From the list of circumscriptions in Lebanon (villages, towns and cities), we randomly selected one hundred and four circumscriptions. Through a representative of local authorities, a list of dwellers has been provided to us. Randomization of dwelling residents aged ≥ 20 years from this list has been performed.

- **Tools :**

The following measurements have been performed in all individuals: blood pressure, glycemia, height and weight, and waist circumference in addition to various standardized questionnaires.

Data collection and analysis have been performed.

[Two PhD candidates](#) who participated among others to the data collection were registered in ["co-tutelle" with the Lebanese University and 2 French universities](#); both students obtained successfully their PhD Diploma from both the Lebanese and the French Universities:

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

In addition, a 3rd PhD student registered at present in [co-tutelle with the Lebanese University and a French university](#) is working on this study: Dr Michelle Cherfan: Lebanese University & Paris VI / Co supervisor: Pr Jacques Blacher / Pr Pascale Salameh.

Up-to-date, this study has delivered several publications in international journals and others are in process:
1- Rita Farah, Rouba Karen Zeidan, Mirna N. Chahine, Roland Asmar, Pascale Salameh, and Hassan Hosseini. Prevalence and Risk Factors of Hypertension: a Nationwide Cross-Sectional Study in Lebanon. 2018. Just accepted in The Journal of Clinical Hypertension.

2-Pascale Salameh, Mirna Chahine, Souheil Hallit, Rita Farah, Rouba Karen Zeidan, Roland Asmar, Hassan Hosseini. Hypertension prevalence and living conditions related to air pollution: results of a national epidemiological study in Lebanon. 2018. Just got accepted in Environmental Science and Pollution Research

3-Salameh P, Farah R, Zeidan K, Chahine MN, Asmar R, Hosseini H. Self-reported history of stroke and long term living conditions near air pollution sources: results of a national epidemiological study in Lebanon. Environ Monit Assess. 2018; 190:153-164.

4-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.

5-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;1–7.

6-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.

- **The “Management” project:**

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

- 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 assess the management according to the physician phenotype and characteristics.

- **Methodology:**

This is a cross-sectional study carried out in collaboration with the primary care physicians (GPs, Family Medicine, Internal Medicine) to provide information on the management of CVD and risk factors of their adult patients aged 20 years and above ([1000 included patients](#)).

- **Procedure:**

[100 Lebanese physicians](#) were selected from the directory of the Lebanese Order of Physicians, among the 11 000 registered physicians. They filled out a questionnaire regarding their corresponding first 10 adult patients (with CVD and/or risk factors) aged ≥ 20 years who enter their clinics that day (total of 1000 patients).

Data collection has been finalized, data analysis is in process. 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. 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 highlight the degree of adherence of Lebanese physicians to the international guidelines.
- To determine if the international guidelines should be adapted to the Lebanese population.

Data collection has been finalized in 2017; statistical analysis is in process. Results will be published soon.

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

The objectives of this study are:

- To determine the prevalence of potential drug-drug interactions (DDIs) in the prescriptions given to in and out-patients with cardiometabolic diseases.
- To determine the effectiveness of prescriptions in terms of posology and indications.

Data collection and their analysis in collaboration with pharmacologist have been finalized. Results will be submitted soon for publication.

5- Other Research: Devices

Assessment of the accuracy of the blood pressure measurements using 3 various methods in 4 special populations (obese, pregnant, elderly, arrhythmic patients), according to the European Society of Hypertension (ESH) Protocol:

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 special populations, the elderly subject, the pregnant woman, the obese subject, and the arrhythmic patient according to the ESH protocol.

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 is partially finalized. The data obtained for the validation of these devices in the obese population has been published in a peer-reviewed journal; the others are under analysis and will be submitted soon for publication.

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*. 2017; 13:61-69. doi: 10.2147/VHRM.S126285. eCollection 2017.

Assessment of the accuracy of the blood pressure measurements using 2 various methods in type II Diabetic patients, according to the European Society of Hypertension (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 protocol.

Data collection and analysis have been finalized and accepted 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). *Med Devices (Auckl)*. 2017 Dec 27;11:11-20. doi: 10.2147/MDER.S142126. eCollection 2018

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 agreed by the CNRS.

7- Collaboration with Other Institutions: The World Health Organization (WHO - Geneva), Biospeedia - Institut Pasteur (Paris)

Rapid diagnostic tests for the detection of bacterial meningitis

Meningitis continues to affect sub-Saharan Africa causing the death of thousands of people every year. In 2017, Nigeria, Niger and Togo were particularly affected, but all the 26 African countries in the so-called "meningitis area" regularly experiences terrible episodes as well. [The detection and rapid identification of meningitis is crucial for triggering epidemic response, including vaccination and treatment.](#) To reduce the diagnostic time, tests that can be used on the patient's bed and capable to provide diagnosis within a few minutes are of crucial importance. New tests, developed by BioSpeedia - Institut Pasteur (Paris France) seem promising. Their assessment before their widespread use is necessary. The WHO in collaboration with the national authorities and the Pasteur Institute of Paris, initiated such study in Burkina Faso and Niger, In this regard, The Foundation-Medical Research Institutes (F-MRI®) contributes and supports Biospeedia-Pasteur Institute. The F- MRI® collaborates 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.

8- PUBLICATIONS

Publications in international peer-reviewed journals:

1. Rita Farah, Rouba Karen Zeidan, Mirna N. Chahine, Roland Asmar, Pascale Salameh, and Hassan Hosseini. Prevalence and Risk Factors of Hypertension: a Nationwide Cross-Sectional Study in Lebanon. 2018 accepted in *The Journal of Clinical Hypertension*.
2. Pascale Salameh, Mirna Chahine, Souheil Hallit, Rita Farah, Rouba Karen Zeidan, Roland Asmar, Hassan Hosseini. Hypertension prevalence and living conditions related to air pollution: results of a national epidemiological study in Lebanon. 2018. Accepted in *Environmental Science and Pollution Research*.
3. Salameh P, Farah R, Zeidan K, Chahine MN, Asmar R, Hosseini H. Self-reported history of stroke and long term living conditions near air pollution sources: results of a national epidemiological study in Lebanon. *Environ Monit Assess*. 2018; 190:153-164.
4. 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). *Medical Devices: Evidence and Research*. 2017; 11:11-20.
5. 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*. 2017; 13:61-69.
6. 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.
7. 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.
8. 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.
9. Chahoud J, Mourad J, Semaan A, Asmar R. Prevalence of Diabetes Mellitus Among Patients with Essential Arterial Hypertension. *J Med Liban*. 2015; 63(2):74-80.
10. Mirna N. Chahine, Nathalie Assemaani, Ghada Sayed-Hasan, Mariam Chami-Chebbo, Pascale Salameh, And Roland Asmar. 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)* 2015; 17(8):622-629.
11. Asmar R. Effects of treatment on arterial stiffness and central blood pressure--points to consider. *J Clin Hypertens (Greenwich)*. 2015; 17:105-106.
12. 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.
13. 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.

14. 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.
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CONTINUOUS MEDICAL EDUCATION

Continuous Medical Education (CME) was defined as one of the activities to be developed by the F-MRI®. To develop recognised and accredited CME activities, [the Foundation has entered in 2011 an agreement with the “International Society of Vascular Health”](#). Moreover, most of the CME activities initiated by the F-MRI are [accredited by the European authorities \(EBAC\)](#).

To develop its European CME activities in Europe, the F-MRI® decided in 2016 to limit the CME activities initiated in the Middle-East and to favour those initiated in Europe in collaboration with national or international European scientific societies. In this regard, to keep some CME activities in the Middle-East, the F-MRI® 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”](#).

In 2017, the F-MRI® organized in collaboration with the International Society of vascular Health (ISVH) and the Serbian “Hypertension, Infarction, Stroke Prevention Association” (HISPA), under the patronage of the Ministry of Health, an outstanding meeting with national and International speakers. The meeting entitled [“Cardiovascular challenges on Balkan Roads crossing”](#) took place September 2017 in Zlatibor, Serbia. More than 300 participants attended the meeting.

FUTURE PERSPECTIVES

The F-MRI® will continue in 2018 to maintain its moderate activities in the Middle-East and will push to develop and increase its activities mainly in Europe both in the western and eastern European countries.

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 European universities and realize the corresponding studies.

- 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.

2- Research

▪ **Epidemiological & Public Health Studies**

F-MRI® is willing to continue exploring in 2018 the results of this large national evaluation study entitled: “*The Cardiovascular Prevalence and Management Lebanese Project*”. More PhD candidates will be performing their PhD Thesis in collaboration with French Universities on the basis of this project database.

• **Validation of Medical devices**

F-MRI® will continue to develop its research on the validation and the accuracy assessment of medical devices, particularly on devices for blood pressure measurements. This research will be conducted according to the recommended validation protocols in the general population but also in special populations.

• **Establishment of an International Scientific committee**

To initiate its activities at European and International level, the Foundation has established in 2017 a scientific committee which includes European experts. These recognized experts include:

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

• **Initiation of the “Mobility Hypertension Management” project**

The F-IRM® as promotor in collaboration with the International Society of Vascular Health (ISVH) investigator’s network undertook an international multi-center clinical study entitled: “**Mobility**”

Hypertension Management". This project initiated in 2017 will start in 2018. More than 20 centers from 14 European countries will participate to the study which will be carried out in academic centers. The objective of this study is to analyze the effectiveness of telemedicine and "Digital Health" in the management of cardiovascular diseases and especially high blood pressure.

3- Continuous Medical education (CME)

- The F-MRI® will continue to develop the regional CME activities in collaboration with the International Society of Vascular Health (ISVH®). Collaboration with national and International other scientific societies will be developed to organize national, regional or international meeting focused on the selected subjects of the F-MRI®.

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**



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**El-Khoury
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**Farah
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**Fares
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**Haddad
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**Harb
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**Harb
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**Hwayji
Riham**



**Ismail
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**Issawi
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**Jouni
Reine**



**Louka
Jean**



**Mahfouz
Rana**



**Mansour
Amani**



**Matar
Maroun**



**Miayki
Georgio**



**Molty
Razane**



**Moujaes
Ghassan**



**Nasreddine
Donia**



**Noureddine
Ahmad**



**Obeid
Ibrahim**



**Saad
Khadija**



**Saadeddine
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**Abi Khalil
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**Abi Saad
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**Abou Diab
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**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**