

American University of Beirut Faculty of Medicine Receives Grand Challenges Explorations Grant for Groundbreaking Research in Global Health and Development

Only research funded from MENA region for this round and first ever from Lebanon

(Wednesday August 19, 2015) Beirut, Lebanon – The American University of Beirut Medical Center and Faculty of Medicine announced today that it is a [Grand Challenges Explorations](#) (GCE) winner, an initiative funded by the [Bill & Melinda Gates Foundation](#). Robert Habib, PhD of the Department of Internal Medicine at the American University of Beirut (Beirut, Lebanon) was awarded a Phase I GCE grant and will pursue an innovative global health and development research project, titled "Use of Physiologic Signal Complexity and Correlation Properties to Quantify Brain Development in Infants."

Grand Challenges Explorations (GCE) funds individuals worldwide to explore ideas that can break the mold in how we solve persistent global health and development challenges. Dr. Habib's project is one of more than 50 Grand Challenges Explorations Round 14 grants announced by the Bill & Melinda Gates Foundation from over 1700 received applications.

To receive funding, Dr. Robert Habib and other Grand Challenges Explorations winners demonstrated in a two-page online application a bold idea in one of five critical global health and development topic areas that included development of the new ways to measure fetal and infant brain development. The foundation will be accepting applications for the next GCE round in September 2015.

"We are so happy with this news," said Dr. Habib. "The grant research will help us in exploring a novel, practical and indirect approach to quantify the extent of brain development of premature babies compared to healthy full term babies" he added.

Infants born prematurely will frequently suffer from brain development problems that may affect them in many ways and for the rest of their lives. Early intervention aimed at aiding the brain development in such infants may help reduce the long-term adverse effects. Yet, it is currently difficult, cumbersome, impractical and expensive to assess and quantify brain development in the very challenging infant population explained Dr. Habib.

"We are so proud that our project is the only one funded from MENA region for this round and first ever from Lebanon," said Dr. Habib.

The proposed research will be based on the concepts that heart and breathing rhythms, or patterns such as how fast and how deep, are ultimately controlled by the brain or central nervous system. Hence, it is reasoned that these patterns will be analyzed mathematically and the results will be different in premature (abnormal) versus full term (normal) babies.

The Principal Investigator will conduct the needed experimentation and analyses to address the above aims. If successful, this research will then provide a solid foundation for a larger systematic set of experiments under a Phase II Gates foundation grant. Such a grant would aim to further develop the novel approach such that it may be used with ease and anywhere needed from the hospital intensive care unit, to doctor clinics to the infant's own home.

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About Grand Challenges Explorations

[Grand Challenges Explorations](#) is a US\$100 million initiative funded by the [Bill & Melinda Gates Foundation](#). Launched in 2008, over 1100 projects in more than 60 countries have received Grand Challenges Explorations grants. The grant program is open to anyone from any discipline and from any organization. The initiative uses an agile, accelerated grant-making process with short two-page online applications and no preliminary data required. Initial grants of US\$100,000 are awarded two times a year. Successful projects have the opportunity to receive a follow-on grant of up to US\$1 million.

About AUBMC

Since 1902, AUBMC has been providing the highest standards of care to patients across Lebanon and the region. It is also the teaching hospital for the Faculty of Medicine at AUB (established in 1867), which has trained generations of medical students and physicians, and whose graduates can be found at leading institutions around the world. AUBMC is the only medical institution in the Middle East to have earned the four international accreditations of JCI, Magnet, CAP, and ACGME-I attesting to its superior standards in patient-centered care, nursing, pathology/laboratory services and graduate medical education.

The Faculty of Medicine has graduated over 4,000 medical students and physicians; the Rafic Hariri School of Nursing provides excellent education for the nursing staff, and the Medical Center meets the health care needs of over 360,000 patient visits annually.

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For more information please visit our website www.aubmc.org or contact:

The AUBMC Office of Communications at 0096 1 350000 ext. 4732

Nadine Chatila, Interim Director of Communications and Public relations at 0096 1 350000 ext. 4791 - Email: praubmc@aub.edu.lb

Ketchum Raad Middle East

Suzan Bou Dargham, Account Director – 00961 3 690505 – Email: suzan.dargham@ketchum-raad.com