Weill Cornell Medical College in Qatar

Qatar Foundation

PRESS RELEASE

WCMC-Q Research Sheds Light on Intracellular Calcium Signalling Regulation

Publication in Preeminent Scientific Journal Places Doha Research on International Stage

Doha, Oct. 26, 2009 – New research on the molecular mechanisms of cellular signalling performed at WCMC-Q in the laboratory of Khaled Machaca, PhD, has been published in the *Proceedings of the National Academy of Sciences*, a prestigious scientific journal in the United States.

The new study details the interaction of two proteins, Orai1 and STIM1, and their role in the inactivation of an important calcium-signalling pathway, store-operated calcium entry (SOCE), during the cell cycle. SOCE plays an essential role in multiple physiological and pathological processes, including the development of immune responses and the spread of cancer cells.

"The goal of our study is to improve our understanding of calcium signalling to allow its manipulation in the future for therapeutic purposes," says Machaca, professor of physiology and biophysics and associate dean or basic science research. Post-doctoral research fellows Fang Yu and Lu Sun collaborated on the study with Machaca.

"Publication of our work in PNAS demonstrates that the research program at WCMC-Q is in full swing and already making important scientific contributions. These contributions validate the vision of Qatar Foundation to establish Doha as a research center of excellence," adds Machaca. Importantly, the published work was performed exclusively in Doha at WCMC-Q research laboratories.

"Publication of this paper in such an important scientific journal demonstrates that our vision of producing pre-eminent scientific studies is becoming a reality," says Javaid Sheikh, MD, interim dean. "Our biomedical research program is aimed at improving the health and well being of the population of Qatar, the Gulf Region and the world. We are delighted by this evidence that it is well underway."

The paper, "Orai1 internalization and STIM1 clustering inhibition modulate SOCE inactivation during meiosis, " was published in the Oct. 14 edition of *PNAS*, one of the world's most-cited multidisciplinary scientific journals.

Ends

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NOTES TO EDITORS

Established in partnership with Qatar Foundation, WCMC-Q is part of Weill Cornell Medical College (WCMC) of Cornell University, the first US institution to offer its MD degree overseas. WCMC-Q shares the triple mission of WCMC: a dedication to excellence in education, patient care, and biomedical research.

WCMC-Q offers an innovative program of pre-medical and medical studies leading to the Cornell University MD degree. Teaching is by Cornell and Weill Cornell faculty, including physicians at Hamad Medical Corporation (HMC) who hold Weill Cornell appointments.

Faculty and staff of WCMC-Q and WCMC are building the research capacity of Qatar in partnership with Qatar Foundation, HMC, the Ministry of Health and other organizations, with a focus on high quality research in genetic and molecular medicine, women's and children's health, gene therapy, and vaccine development.

Website: www.qatar-weill.cornell.edu

About Qatar Foundation

Founded in 1995 by decree of His Highness Sheikh Hamad Bin Khalifa Al Thani, Emir of Qatar, Qatar Foundation is a non-profit organization focusing on education, scientific research and community development. Under Qatar Foundation's umbrella are Education City, which comprises elite universities, several academic and training programmes and Qatar Science and Technology Park, which boasts more than 21 world class companies involved in scientific research and development.

Chaired by Her Highness Sheikha Mozah bint Nasser Al Missned, Qatar Foundation also aims to enhance lives through community development initiatives including Doha Debates, Reach out To Asia and Al Jazeera Childrens Channel. Joint venture partnerships in the areas of design, ICT, telecommunications, policy studies and event management contribute to fulfilling the objectives of Qatar Foundation.

Website: www.qf.org.qa

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