



Weill Cornell Medical College in Qatar



PRESS RELEASE

**WCMC-Q Biomedical Research Program  
Builds Scientific Knowledge, Technical Workforce in Qatar**

*Doha, October 26, 2009* – The biomedical research program of Weill Cornell Medical College in Qatar has made significant progress in its dual goals of advancing basic science and building a sustainable research community in Qatar since it was launched less than a year and a half ago.

From the sequencing of the date palm genome to improved understanding of the molecular mechanisms of cellular signalling and the differentiation of embryonic stem cells, the program is generating new information about complex biological systems that will contribute to effective disease prevention and treatment strategies.

It has also nearly doubled in size, adding almost two-dozen trained research professionals who are helping to build Qatar’s scientific and technical workforce and strengthening its research infrastructure. Besides hiring several young graduates of Qatar University as research assistants and providing them with additional training in scientific techniques and laboratory protocols, new staff have been recruited with valuable compliance and regulatory expertise to ensure the research program maintains the highest levels of quality and safety.

Unveiling a progress report on biomedical research at the college today, Dr Fathy Saoud, president of Qatar Foundation, said: “WCMC-Q plays a crucial role in creating a culture of research in Qatar. It is a pioneer here and research at the end of the day is about improving the quality of life for people. With all our partners, biomedical research is just as important in Qatar as it is around the world. I believe we are showing global audiences that we have a role model here that can motivate others to develop similar initiatives. We are showing the rest of the world that Qatar intends to become a research hub for the region and is making progress on its long term goal.”

Dr. Antonio M. Gotto, Jr., dean of Weill Cornell Medical College in New York said: “Impressive progress has already been made in starting this program and I am delighted Qatar Foundation and WCMC will be involved as partners long term. This is a major commitment and we have a long way to go in building a research community but I am very encouraged by the start that has been made. Together with my colleagues in the United States, we look forward to helping the country establish itself as a major center for biomedical research.”

“In just over a year, our biomedical research program has moved from vision to reality,” says Dr. Javaid Sheikh, interim dean of Weill Cornell Medical College in Qatar. “Our laboratories are staffed with first rate scientists, excellent post-doctoral fellows, technicians and administrators. They are

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**Office of Public Affairs**  
WCMC-Q  
Education City  
P.O. Box 24144  
Doha, Qatar

**Michael Vertigans**  
Director  
Phone: +974 492 8650  
Fax: +974 492 8444  
Email: miv2008@qatar-med.cornell.edu

**Kristina Goodnough**  
Associate Editor/Writer  
Phone: +974 492 8660  
Fax: +974 492 8444  
Email: krg2007@qatar-med.cornell.edu

generating knowledge that will help us improve health care in Qatar, the Gulf Region and around the world and help create a sustainable local research community.”

### **Introduction of New Technology**

Through its biomedical research program, WCMC-Q has introduced sophisticated new expertise to Qatar, including next generation genomic sequencing technology. WCMC-Q researchers used the technology to generate the world’s first draft sequence of the date palm genome. The genetic information is extremely valuable to researchers working to improve fruit yield and quality. Even more significantly, the successful project validates the capabilities of the WCMC-Q genomics lab and its ability to apply the most advanced technologies to biomedical research in Qatar.

Another new technology introduced to Qatar is fluorescence-activated cell sorting which is used by researchers in WCMC-Q’s stem cell laboratory to separate and purify collections of stem cells with great speed and precision. The technology, which requires great expertise and is essential to stem cell research, is available in only a few academic research laboratories around the world.

### **Building a Research Infrastructure**

With more than \$19 million from Qatar Foundation’s National Priorities Research Program, WCMC-Q has begun outfitting six new laboratories to investigate causes and treatments for diseases prevalent in the Gulf Region, such as diabetes, cardiovascular disease and respiratory illnesses. The funding also supports studies that will apply the latest proteomic, genomic and imaging technologies to a broad array of biological and molecular processes to advance the basic understanding of disease development and develop therapeutic interventions.

With additional grants during the year from Qatar Foundation’s Undergraduate Research Experience Program, nearly 50 WCMC-Q students are investigating topics such as the molecular and genetic basis of breast cancer and bone formation and barriers to early cancer screening in Arab women. Besides introducing students to the latest research techniques, the research studies familiarize them with the crucial relationship between basic science and medicine.

### **Publishing New Knowledge**

WCMC-Q research is appearing in prestigious international scientific journals. New research on the molecular mechanisms of cellular signalling performed in the laboratory of Khaled Machaca, PhD, professor of physiology and physics, was published in the Oct. 14 edition of the *Proceedings of the National Academy of Sciences*, one of the world’s most cited multidisciplinary scientific journals. The research elaborates on a basic aspect of many physiological and pathological processes, including reproduction, the development of immune responses and the spread of cancer cells; and it was performed exclusively in WCMC-Q laboratories.

Other eminent scientific publications showcased research by WCMC-Q faculty members in collaboration with renowned research centers around the world. Laith Abu Raddad, PhD, assistant professor of public health and physics, collaborated on a study funded by the Bill and Melinda Gates Foundation and published in the *Proceedings of the National Academy of Sciences*. It assessed the impact of the foundation’s funded interventions designed to eliminate tuberculosis by the year 2050.

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WCMC-Q  
Education City  
P.O. Box 24144  
Doha, Qatar

**Michael Vertigans**  
Director  
Phone: +974 492 8650  
Fax: +974 492 8444  
Email: miv2008@qatar-med.cornell.edu

**Kristina Goodnough**  
Associate Writer/Editor  
Phone: +974 492 8660  
Fax: +974 492 8657  
Email: krg2007@qatar-med.cornell.edu

Ahmed Teebi, MD, professor of genetics, collaborated on a study on chromosomal variations in autism spectrum disorder that was published in the *American Journal of Human Genetics*.

“Our progress in a short time is truly gratifying. It is a tribute to the strong partnership built by Weill Cornell Medical College and Qatar Foundation,” says Dr. Sheikh. “We take great pride in our accomplishments so far and we are confident that the future holds even greater promise.”

### *Ends*

**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](http://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 programs 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](http://www.qf.org.qa)

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**Michael Vertigans**  
Director  
Phone: +974 492 8650  
Fax: +974 492 8444  
Email: [miv2008@qatar-med.cornell.edu](mailto:miv2008@qatar-med.cornell.edu)

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Associate Writer/Editor  
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Fax: +974 492 8657  
Email: [krig2007@qatar-med.cornell.edu](mailto:krig2007@qatar-med.cornell.edu)