Weill Cornell Medical College in Qatar

Qatar Foundation

PRESS RELEASE

Advances in Medical Genetics Highlight 2nd Qatar Genetics Symposium

Doha, October 31, 2009 – The prevalence of genetic diseases in the Middle East and strategies for their treatment and prevention were among the topics of the second Qatar Genetics Symposium Saturday sponsored by Hamad Medical Corporation and Weill Cornell Medical College in Qatar.

"In Qatar, we have made tremendous strides in our understanding of genetic disorders and in our ability to diagnose and treat them," said Dr. Ahmad Teebi, professor of pediatrics and genetic medicine at WCMC-Q and a co-organizer of the biennial symposium. "With Hamad Hospital's new Center for Genetics, our progress in these areas will continue." Besides a staff of highly trained geneticists, the center has extensive laboratory and testing facilities that are important for the identification and treatment of genetic disorders.

"The Qatar Genetics Symposium is an important forum for the exchange of ideas and knowledge concerning current genetics research and its application," said Tawfeg Ben Omran, MD, chairman of the Organizing and Scientific Committee for the symposium and assistant professor of clinical pediatrics at WCMC-Q.

Genetic disorders are particularly significant in the Gulf Region and the Middle East because of marriage among close relatives, which is a risk factor for genetic disorders and birth defects. "This region of the world is largely inhabited by Arabs and Muslims who traditionally favor close-kin marriage," said Teebi. "The consanguinity rates range from 20-70 percent in most Middle Eastern countries," he added.

In his presentation, Dr. Teebi discussed the large number of abnormalities that have been observed and reported among people in Middle Eastern countries. He has published numerous papers on his discovery of more than 40 genetic disorders and is involved in research projects focused on their discovery at the genetic level and clinical management.

Zafar Nawaz, PhD, of the Pathology and Laboratory Medicine Department at Hamad Medical Corporation discussed the recent advances in cytogenetics, or the study of the structure and function of the cell and its chromosomes, in detecting genomic anomalies. "Recent improvements in testing have made it possible to improve our diagnostic skills related to genetic disorders," he said.

According to Dr. Sheila Unger from the Institute of Human Genetics, the number of disorders with a known gene has grown exponentially. "As of last count, 372 different skeletal abnormalities were known, with 215 having a connection with 140 different genes." Progress in genetic deciphering of skeletal disorders has provided valuable information about their physiological mechanisms, she said, but international cooperation is necessary for real progress in fundamental clinical research.

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

Although consanguinity is associated with higher frequency of genetic disorders and birth defects, it also facilitates the mapping of genes, according to Dr. Hatem El-Shanti, director of the Shafallah Medical Genetics Center in Doha. "The identification of genes after mapping is a step forward for honing the diagnostic tools used for diagnostic testing and carrier identification," he said.

"Over the past two decades, there has been remarkable achievement in the fields of cellular neurobiology and molecular neurogenetics," said Dr. Mustafa A.M. Salih, professor of pediatric neurology in the college of Medicine at King Saud University in Saudi Arabia. "The determination of the molecular development of neurological disorders is indispensable to the development of therapies for these disorders. It also plays a vital role in genetic counseling and prevention of handicaps."

Despite the fact that expatriates make up about 80 percent of the current five million inhabitants in the United Arab Emirates, intermarriage among them is rare and consanguineous marriages are still the norm, according to Dr. Lihadh Al-Gazali, professor of pediatrics, United Arab Emirates University in the UAE. "The UAE currently ranks 6th out of 193 countries in terms of prevalence of birth defects, mainly due to genetic causes," said Al-Gazali, who also discussed the clinical and molecular basis of several disorders identified in the UAE population.

"Rare skeletal disorders provide the opportunity to understand genes and pathways that regulate the development of cartilage and bone," said Muhammad Faiyaz-Ul-Haque, PhD, scientific director of the Molecular Pathology Core Facility at King Faisal Specialist Hospital and Research Center in Saudi Arabia. "The advances in describing the genetic defect in several conditions has endowed us with insight into the genes controlling normal growth of cartilage and development of bone. It has also open new diagnostic perspectives," he said.

Ends

NOTES TO EDITORS

Hamad Medical Corporation (HMC)
Hamad Medical Corporation is the premier non-profit health care provider in Doha, Qatar. It was established by Emiri decree in 1979 and manages five highly specialized hospitals, namely, Hamad General Hospital, Rumailah Hospital, Women's Hospital, Al Amal Hospital and Al Khor Hospital. Since its establishment, HMC has rapidly developed medical facilities capable of providing state-of-the-art diagnosis and treatment of diseases that previously could only be managed in overseas medical centers.

The Corporation has recently achieved the accreditation of the Joint Commission International (JCI), which certified that the health care services secured by the Corporation are on equal footing to those provided by world-class prominent hospitals.

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.

Office of Public Affairs
WCMC-Q
Education City
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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

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 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

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