



كلية طب وايل كورنيل في قطر

Weill Cornell Medical College in Qatar

*Member of Qatar Foundation*

## Press Release

### **New test could revolutionize diabetes screening**

**Doha – January 22, 2014:** A discovery by researchers at WCMC-Q and HMC could lead to a quick, non-invasive screening test for diabetes, allowing sufferers who don't know they have the disease to access treatment quicker.

Currently, doctors test for diabetes using either blood or urine analyses. But these are inconvenient and not suitable for a comprehensive public screening program as they generally have to be carried out by a nurse or doctor.

Now researchers at Weill Cornell Medical College in Qatar (WCMC-Q) and Hamad Medical Corporation (HMC) have discovered a way of testing for diabetes using a swab of an individual's saliva. The discovery means that samples could easily be taken in schools or sports associations, or even during regular visits to the dentist, making the implementation of diabetes screening programs – and thus early intervention - much more viable.

Dr. Karsten Suhre, Professor of Physiology and Biophysics at WCMC-Q, said it is vitally important to diagnose patients who have diabetes as early as possible to allow them to access treatment, and the saliva test is one way of expediting that.

He said: "Diabetes is a really vicious disease as initially when you get it you don't feel any different; you can live for years without knowing about it but if you don't adapt your lifestyle you're slowly but continuously destroying your body. It's like running an engine using the wrong kind of oil."

The researchers have discovered that people with diabetes have a reduced amount of 1,5-anhydroglucitol (1,5-AG) in their saliva. This is a substance similar to sugar. Scientists have long known that 1,5-AG can be used as a biomarker for diabetes in blood but the discovery by

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WCMC-Q and HMC that it can be tested for via a simple swab of the mouth greatly increases its potential importance as a quick, non-invasive test for diabetes.

Dr. Mohamed Mohy El Din Selim, Senior Consultant in the Dermatology Clinic at HMC, collaborated with WCMC-Q on the study.

He said: "To make this study happen we needed saliva, blood and urine samples from patients with diabetes, but also from people without diabetes. Many patients with diabetes also have skin problems and visit the Dermatology Clinic at HMC. Therefore, we could find both healthy and diabetic volunteers for our study in one place. This is essential for the data analysis since we needed to rule out potential influences that may be due to differences in sample collection."

The study was conducted by researchers in Qatar and involved 369 people, approximately half of whom were Arabic, and half Asian. It is the first time that a new research technique called metabolomics has been used in a diabetes study of this size on saliva, plasma, and urine samples in parallel. Such is its importance that it is being published in the Journal of Clinical Endocrinology & Metabolism.

Dr. Khaled Machaca, Associate Dean of Research at WCMC-Q noted: "This study provides proof of concept for the feasibility of identifying biomarkers for complex diseases such as diabetes in Qatar. The discovery has huge potential to improve diabetes screening and detection in Qatar. This is significant given the high rate of diabetes in the country."

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### Photo Caption:

Dr. Karsten Suhre, Professor of Physiology and Biophysics at WCMC-Q

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### About Weill Cornell Medical College in Qatar

Weill Cornell Medical College in Qatar is a partnership between Cornell University and Qatar Foundation. It offers pre-medical and medical courses leading to the Cornell University M.D. degree with teaching by Cornell and Weill Cornell faculty and by physicians at Hamad Medical Corporation (HMC) and Aspetar Orthopedic and Sports Medicine Hospital who hold Weill Cornell appointments.

Through its biomedical research program, WCMC-Q is building a sustainable research community in Qatar while advancing basic science and clinical research. Through its medical college, WCMC-Q seeks to provide the finest education possible for medical students, to improve health care both now and for future generations, and to provide high quality health care to the Qatari population.

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