

Health Scan: BETTER SALIVA TESTING

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A novel device that enhances the diagnostic value of saliva has been produced by Hebrew University researchers. The disposable device clears whole saliva from its major protein constituent - alpha-amylase - to enable the detection of various low-abundance biomarkers.

Prof. Aaron Palmon of the dental medicine faculty presented it at the recent ILSI Biomed Israel 2008 conference

Nava Swersky Sofer, president and CEO of Yissum (the university's technology transfer company) said the technology paves the way to a quick and efficient, non-invasive diagnostic tool, and will contribute to patient welfare. He also said he believes it carries significant commercial potential.

Most molecules found in blood or urine can also be detected in the mouth, although usually at lower concentrations. Studies indicate saliva may therefore be useful for detecting various cancers, heart disease, diabetes, periodontal disease and other conditions, as well a host of infectious agents such as HIV. Obtaining saliva samples is a non-invasive, inexpensive and convenient procedure that can even be performed at home. However, a major hurdle is that saliva contains a high content of proteins whose function is to digest food. One protein, amylase, constitutes up to 60% of saliva proteins; its massive presence may mask the presence of other components and hamper certain diagnostic tests.

Palmon and colleagues invented the device to remove amylase from whole saliva in a simple, single pass.

The device takes advantage of modified potato starch, which is able to absorb large quantities of amylase. The 2007 global market for biomarkers was \$5.6 billion, and it is expected to increase to over \$12.8 billion by 2012.