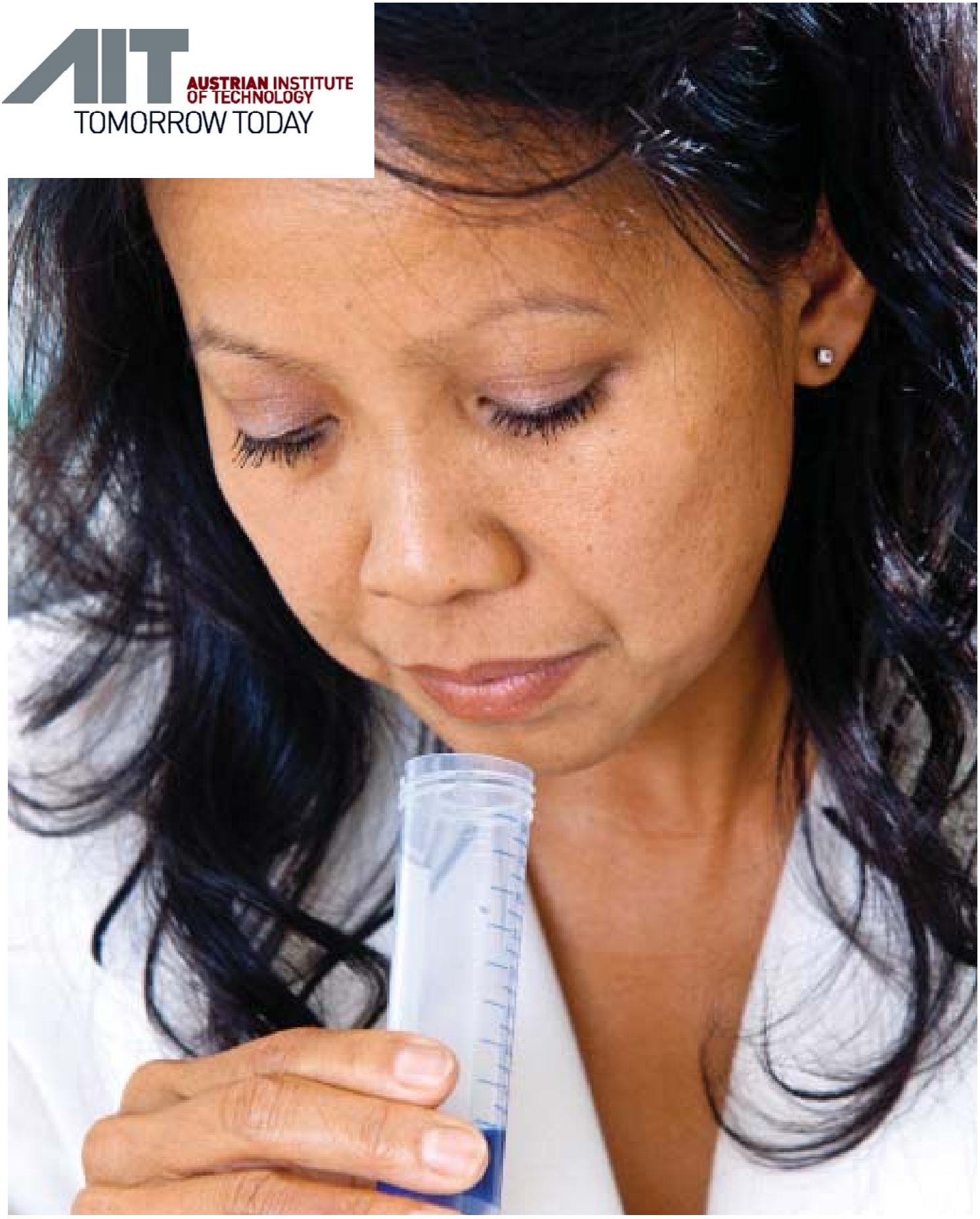
AUSTRIAN INSTITUTE OF TECHNOLOGY
TOMORROW TODAY



SALIVA DIAGNOSTICS

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Rapidly ageing societies in developed countries demand innovative solutions for future health care systems. The increase in the number of people aged 80 and over goes hand in hand with a growing need for the early detection and efficient treatment of age-related diseases, especially chronic, heart and cancer diseases. These demographic changes threaten to place an increasing burden on our health care systems and also lead to greater decentralization in some medical areas. Telemedicine, eHealth and the personalization and individualization of medicine will successfully address these future challenges, but require new approaches in molecular diagnostics.

SALIVA – AN IDEAL DIAGNOSTIC MEDIUM

Saliva diagnostics is an emerging field of molecular diagnostics that can offer major advantages over traditional blood or tissue-based approaches. Saliva contains a broad range of diagnostically relevant classes of molecules, such as methylated DNA, miRNA and antibodies. Driven by ever more sensitive detection technologies, recent scientific findings increasingly show that measuring and quantifying these biomolecules in saliva can be used not only to detect local diseases of mouth and throat but also to diagnose systemic diseases and diseases elsewhere in the body.

The major advantage of saliva diagnostics is that collecting saliva samples is easy, absolutely painless and non-invasive. As a result, the use of saliva as a diagnostic medium will specifically increase in fields such as screening for chronic and age-related diseases, point-of-care tests at the doctor's office, and in therapy and home monitoring of chronic diseases.

OUR CORE COMPETENCIES

Our platform focus on saliva diagnostics is based on many years of experience in biomarker and biosensor development in molecular diagnostics. Together with our academic and clinical partners and in cooperation with our industrial customers, we are combining our interdisciplinary expertise to move this exciting new field forward.

Our interdisciplinary team of molecular biologists, bioinformaticians, chemists, physicists and electrical engineers adopts a systemic approach to saliva diagnostics, delivering solutions that perfectly meet our customers' application needs.

We provide the following services to our partners and customers:

- Identification and validation of salivary biomarkers for early disease screening applications, monitoring of chronic diseases, therapy monitoring and many other applications
- Application-dependent assay development for salivary samples, including preanalytical and analytical procedures
- Bioinformatics expertise for data handling, data management and data evaluation of saliva-based molecular diagnostic systems
- Identification and development of customized sensor elements and prototypes for saliva diagnostic solutions based on optical, magnetic or electrochemical detection principles
- System integration of customer assays and detection systems with AIT saliva biomarkers and vice versa; development of customized point-of-care system prototypes for saliva diagnostics

CONTACT

AIT Austrian Institute of Technology

Health & Environment Department
Muthgasse 11 | 1190 Vienna | Austria

www.ait.ac.at

DR. MARTIN WEBER

Phone: +43(0) 50550 - 4300
Fax: +43(0) 50550 - 4399
E-mail: martin.weber@ait.ac.at