



Proceedings of the Estonian Academy of Sciences,
2023, 72, 4, 430–431

Available online at www.eap.ee/proceedings

ANNOUNCEMENT



Qanik DX

QanikDX OÜ – a private Estonian R&D company – was founded in 2018 as a joint venture of the Estonian company LDI Innovation OÜ and Qanik DX Inc., Alberta Corporation, Canada (QDX) to carry out scientific research and technological development for the advancement of precision healthcare.

Qanik DX is developing life-changing technology that will, for the first time, enable patients to test and monitor their hormone health in the comfort of their own homes, at their convenience with instant results. Combined use of novel photonics of LDI Innovation OÜ and biochemical technologies developed by QanikDX OÜ resulted in the development of the QT Sensor for hormone detection, requiring no special skills or training and being easy enough to be used at home with results immediately delivered to mobile phone, laptop, or tablet.

**Meet QANIK DX's
QT Sensor**

Allows you to test your hormones at home. No doctors' appointments. No lab requisition. It's easy. It's affordable.

The innovative qLMI technique (quantum Labelled Molecular Interaction) of QDX includes a sensor, single and multi-test cartridges, as well as software for real-time data analysis, and a cloud-based Big Data/AI platform. Each single or multi-test sensor cartridge is intended for one-time use and may contain between one and five blood tests. This allows the development of very specific types of cartridges based on different healthcare needs, such as a female hormone panel, fertility panel, thyroid panel, etc.

Since the start of the COVID-19 pandemic, the qLMI technique has further extended to the detection of pathogenic viruses in physiological (human saliva) and environmental samples. The on-site detection of the toxins is a work in progress.

The scientists of the University of Tartu have made a significant contribution to the research activity of the company by designing and performing chemical synthesis of materials (peptide receptors and solvatochromic fluorophores) for the assay system of the QT sensor. This cooperation has yielded common research papers and the technique is registered as a set of inventions.

The QanikDX's technology is protected by granted US Patent U201900011 (2021), selective optical detection of organic analytes in liquids, and Utility Models EE 01560 and EE 01561 by the authors Sergey Babichenko, Jaak Järv, Aleksei Kuznetsov, and Anton Mastitski. The corresponding EU patent is pending.



Sergey Babichenko, founder and CEO of LDI Innovation and QanikDX OÜ, PhD in physics.

Sergey Babichenko is the initiator and developer of key concepts and designs of innovative photonics products for industrial, biosafety, medical, and environmental applications. He has more than 35 years of experience in R&D and the management of scientific projects and private companies in Europe, the USA, and Canada. He is the author of more than 120 publications and 14 international patents related to laser- and spectroscopy-based technologies. He has also supervised three PhD studies at Tallinn University, TalTech, and the University of Tartu.

Photo: private collection
