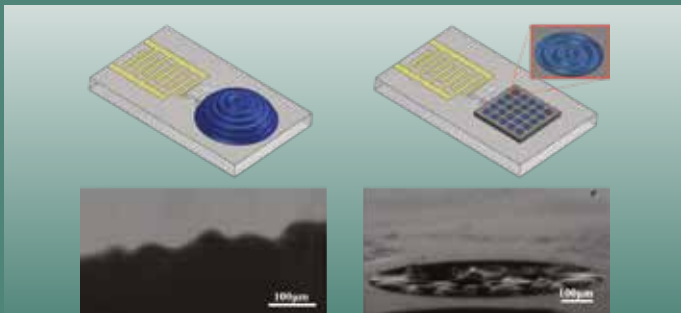




Title: Commercialisation of Surface Acoustic Wave Technologies for Healthcare Applications

Name of academic researcher or group and external partner organisation: Prof Jon Cooper, Wolfson Chair of Bioengineering & Dr Julien Reboud, Lecturer in Biomedical Engineering, School of Engineering, and SAW DX Ltd.



The Opportunity

Lab-on-a-Chip and biosensor technologies based upon acoustic forces to deliver low-cost, point-of-care assays and highly efficient pulmonary drug delivery nebulisation platforms have been developed. Expertise in acoustofluidics has been directed toward a number of applications to create a tool-box of integrated diagnostic functions. The team use Surface Acoustic Waves (SAWs) which carry a mechanical energy that can be harvested to manipulate fluids and particles, and therefore manipulate biological samples (such as blood, urine, etc. and particles within them). Using advanced microtechnologies, such as phononic crystals, this energy can be shaped to obtain specific functions, such as movement, lysis, heating, nebulisation and mixing, fully integrated on a disposable microchip.

What was done to address the challenge?

EPSRC Impact Acceleration Account funds were utilised to fast-track the commercialisation of an IP portfolio relating to the use of acoustics to more efficiently and effectively manipulate samples for use in a variety of healthcare applications. University of Glasgow spin-out company SAW DX Ltd is built upon this IP portfolio (www.sawdx.com). The IAA has supported 3 key activities:

- Appointment an experienced entrepreneur to support business plan development;
- Specialist expert advice to develop regulatory and development roadmap;
- Commissioning a product development specialist.

What was the outcome?

The technology was awarded the Royal Academy of Engineering Entrepreneurship award and a jury commendation in the THE awards. In 2017 SAW DX closed an investment round of £750k with the IP Group, a developer of intellectual property-based businesses, and the Scottish Investment Bank, the investment arm of Scottish Enterprise. SAW DX also secured £1.1m in support from the UK Government's Biomedical Catalyst fund to help develop a prototype for new products in infectious disease diagnostics. The company employs 3 members of staff. Beneficiaries of this technology are wide ranging: UK and worldwide health service providers - rapid diagnosis enabling immediate treatment, at home testing freeing up GP and health service time, more efficient and effective use of (expensive) drugs; Indian dairy producers – 125bn litres of milk produced annually; sequencing providers; pharmaceutical companies; and patients.

Find out more

Please contact:

Julien.Reboud@glasgow.ac.uk

or keith.dingwall@glasgow.ac.uk

WORLD
CHANGING
GLASGOW

