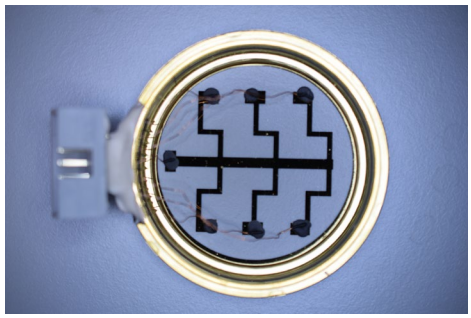
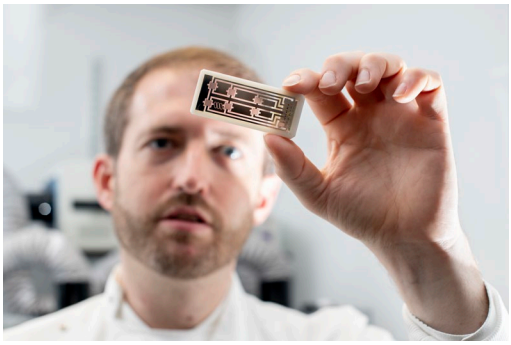
Cytecom – portable bacteria detection device offers faster diagnostics



A discovery by researchers at the University of Warwick School of Life Sciences offers a new technology for detecting bacteria in minutes instead of waiting for lab-test results which can take days. Delays in detection can cause significant damage; infections can become life threatening very quickly if not identified and treated with appropriate antibiotics. For example, 8% of people with the severe blood infection sepsis will die for every hour of delay in proper treatment.

Technology overview

The fundamental basis for the technology, Cytecom SCEFI, and its applications is based upon the emerging field of bacterial electrophysiology. The team discovered that bacteria cells can respond electronically to an applied electric shock. More surprisingly, healthy bacteria cells and cells affected by antibiotics and UV light showed completely different electric reactions. This finding led to development of a device that causes live bacteria to absorb dye molecules as they depolarise after being given electrical pulses which allows rapid evaluation of effects of antibiotics on growing bacteria colonies.



The Company

Cytecom was spun out of Warwick University's School of Life Sciences in 2018. The founder, Dr James Stratford, also took part in the Innovate UK's ICURe[1] programme, which enabled them to validate the applications of their research in the marketplace. During meetings with 100 industry experts and end-users, potential orders worth over £200k were identified, and the water quality monitoring market was targeted as a primary application; in the UK alone, water monitoring costs over £71m per annum, so the potential cost savings offered by this technology run into millions of pounds.

FUNDING TO DATE

2018 – ICURe funding - £50k
2018 – Innovate UK grant - £231k
2019 – Oxford Technology Management £100k

Next Steps

Cytecom has developed a prototype and the Innovate UK grant and Oxford Technology Management investment will enable acceleration of the development of a commercial product and allow the company to focus on the next stages of high volume manufacturing by working with the device manufacturers. Cytecom is also in discussion with end users to validate the device in field trials which will be followed by securing regulatory approval and first sales in 2020.

For further information please visit: www.cytecom.co.uk

Patents: Patent applied for

[1] ICURe - Innovation-to-Commercialisation of University Research