

InterTradeIreland sponsorship could change the face of diagnosis



Andy Barr of Marturion in Lisburn

THERE can be few more keenly anticipated innovations than those that relate to healthcare. Certainly, breakthroughs in IT and food technologies can significantly improve people's quality of life, but it is in the area of diagnosis and treatment that innovation can significantly improve their life itself.

To this end, an InterTradeIreland Innova-sponsored R&D collaboration could represent a genuinely significant breakthrough in diagnostic technology. As part of the programme which incentivises cross-border collaboration, Dublin-based Biosensia has come together with Marturion in Lisburn to develop a next generation point-of-care diagnostic tool which could take testing out of the laboratory and onto hospital wards and bedsides.

Imagine a child visiting a GP showing a high fever and a rash. It could be any number of ailments, both viral and bacterial, but by the time a blood sample is taken, sent to a centralised lab and returned, the child will probably have recovered.

However there may be more press-

ing issues. Imagine a person presenting at a hospital with chest pains. It could be a heart attack. But what type of attack is it? By identifying certain protein markers, it is possible to ascertain these details – but, again, lab results, even in a clinical setting, can take hours.

Biosensia is looking to circumnavigate the lab by producing immediate results from point-of-care testing. It has developed a product called RapiPlex which combines a number of leading-edge technologies to produce a latest-generation in-vitro diagnostics platform, which can be used with a variety of diagnostic applications.

Essentially, RapiPlex can perform simultaneous diagnostic tests for a variety of different ailments from a single patient sample (blood, saliva, urine). The RapiPlex platform comprises a diagnostic cartridge containing individual channels through which the patient sample flow. Each individual channel produces a separate analysis and diagnosis for a specific ailment. So Biosensia had a diagnostic cartridge prototype but it didn't have a reader instrument to interpret and report the diagnosis result. And that is where

Marturion comes in. Marturion is an instrumentation producer which brings the reader component to the mix. The reader will provide the result of the multi-ailment diagnosis by interpreting the signals from the diagnostic cartridge once the RapiPlex cartridge has performed the multiple analyses of the patient sample.

And the possibilities are numerous. Not only can it make fast and accurate diagnosis available to a wider array of medical and clinical professionals, it also has applications outside of the hospital or surgery – for example, it could be used by police forces to test for drugs, either in a station or in a roadside setting.

Biosensia expects to have a fully-validated platform ready within 12 months, and its efforts (like those of Marturion) have been hugely aided by being granted support from InterTradeIreland under its Innova fund.

"We were delighted to have secured this funding," said Diarmuid Flavin, chief operating officer of Biosensia. "It is critical to the completion of our platform, in that it will help us to get to our goal within the timeframe that we have set for ourselves."