

Magnetic cancer detecting system moves towards commercialisation

June 13 2016, by Andrew Spence

An improved system for detecting cancers that uses magnetic rather than radioactive tracers has taken a major step towards commercialisation.

Researchers at the University of South Australia's Future Industries Institute have joined forces with New Zealand-based nanoparticle specialist Boutiq Science and major IP investor, Powerhouse Ventures.

The new technology – an ultrasensitive magnetometer probe designed to be about the size of a ball-point pen – evolved from the doctoral work of University of South Australia researcher Dr Aidan Cousins who is now overseeing the development of the technology in collaboration with Associate Professor Benjamin Thierry.

Radioactive tracers have been a mainstay for detecting the spread of breast cancer and melanoma in lymph nodes, but they have proved less effective in other cancers such as head and neck, gastrointestinal and oesophageal cancers, where nodes are closely packed or clustered.

Dr Cousins said although operating in the same ways as traditional gamma probes, the Magnetometer Probe was much more accurate for these complex cancers and cheaper to operate than existing probes.

"Doctors will find this product just as easy to use but the results will be superior," he said.

"Together the new tracers and the new probe represent cutting edge

technology that delivers a much more accurate and affordable system for the staging of deep or complex cancers."

The technology also offers logistical benefits for hospitals. The switch to magnetic tracers means there is no need for the specialised rooms, equipment and training currently required for radioactive agents.

"Magnetic tracers have a much greater shelf life than radioactive agents – years rather than hours –reducing storage and supply complications and costs," Dr Cousins said.

"Both factors mean it is likely that smaller or regional hospitals and medical services will be able to employ the technology locally, reducing stress and expense on cancer patients who would otherwise have to travel to major city hospitals for treatment."

A new company with backing from Powerhouse Ventures, Ferranova Pty Ltd, has been established to take the innovations and develop them into a system that clinicians and cancer patients can benefit from as soon as possible.

Powerhouse Chief Operating Officer, Colin Dawson said the collaboration and the technology was very exciting.

"Bringing nanotechnology and the magnetometer together has the potential to create a powerful system that will solve a real problem in healthcare, and has an estimated market of between USD\$300 million – USD\$450 million," he said.

"Powerhouse has agreed terms with Boutiq and UniSA Ventures, and will shortly be investing directly in the new company; Ferranova Pty Ltd which will develop an enhanced cancer detecting magnetic probe system. Our goal now is to work to get the system in the hands of

clinicians for trial with patients by 2017."

Provided by The Lead

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