Researchers follow in baby’s footsteps

A novel blood storage and analysis technology, inspired by the baby heel prick test, could soon lead to cheaper pharmaceutical drugs and make blood collection less stressful for humans and animals.

University of Tasmania researchers at the Pfizer Analytical Research Centre (PARC), within the Australian Centre for Research on Separation Science (ACROSS), are developing the MilliSpot™ technology, a new medium for storing and analysing blood (and other bodily fluids), primarily for samples involved in pharmaceutical drug development.

There is already potential for this research to be commercialised.

ACROSS researcher, Dr Emily Hilder, said the innovation will help address some of the challenges of handling and storing blood samples, such as reducing biohazard risk, transporting samples safely to and from remote locations, and meeting ethical research standards.

“The new blood storage technology involves a polymer matrix that can also separate the specified drug from the blood within the storage medium, requiring less blood to be taken for each sample,” she said.

Dr Hilder said the current focus is on using the technology in drug development, future applications could change the way blood samples are collected from children and adults. The technique is derived from the heel prick test developed in the 1940s for obtaining blood samples from newborn babies.

The University’s research commercialisation partner, UniQuest, is working with the ACROSS team to advance MilliSpot’s progress onto the market.

Dr Hilder said current sampling techniques required relatively large volumes of blood or fluids, but with MilliSpot™, less blood needed to be collected to achieve the same quantitative data.

“This technology could revolutionise the pharmaceutical analysis in new drug developments,” Dr Hilder said.

“With more efficient techniques for storing and analysing samples, the costs and time required to develop new drugs can be reduced, and these benefits should be passed on to the patient.”

UniQuest’s UTAS-based Manager of Innovation and Commercial Development in Life Sciences, Dr Robin Fieldhouse, said the MilliSpot technology was already attracting interest from biotechnology companies.
“We’re very excited about this technology and its potential for human benefit. Discussions are underway with a number of key industry partners who have recognised the value this innovation could bring to health care and to laboratory practices,” he said.

**ACROSS Background**

MilliSpot™ is one of several innovations currently in development at ACROSS, a centre within the UTAS School of Chemistry which specialises in exploring and developing new separation science technologies and techniques.

Separation science involves the extraction of complex mixtures into components, followed by the measurement of the amount of each component present.

The discipline is commonly associated with drug testing in sport, with the separation step making it easier to detect a banned drug in an athlete’s system by removing it from the many other components of urine.

**ACROSS researcher, Dr Emily Hilder is available for interview on (03) 6226 7670**

**UniQuest’s UTAS-based Manager of Innovation and Commercial Development in Life Sciences, Dr Robin Fieldhouse is available on (03) 6226 6299**

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