

Tissue bank pays dividends for brain cancer research

August 17 2015, by Kate Sullivan

Checking what's in the bank – the Brisbane Breast Bank, that is – has paid dividends for UQ cancer researchers.

Dr Jodi Saunus and Professor Sunil Lakhani from the UQ Centre for Clinical Research have worked with rare metastatic brain tumour samples to discover genetic information that could lead to new cancer treatments.

Metastatic brain tumours – cancers that have spread to the brain from another tumour – are currently incurable, with life expectancy ranging from a few months to a few years after diagnosis.

Dr Saunus said their study was the first of its kind to use genome sequencing to examine a cohort of secondary brain tumours.

"This study deepens our understanding of secondary brain tumours and highlights opportunities for new drug targets," she said.

"We have identified particular genes and inter-related networks of genes linked to the development of [brain metastases](#).

"We have also found potential drug targets in a large proportion of the tumours, including a molecule called HER3 that we had already been investigating."

Dr Saunus said new treatment options for metastatic brain cancer

patients were desperately needed.

"Identifying new targets could have a huge impact on fighting this disease, as it lays a foundation for the development of new treatments," she said.

"With the incidence of brain metastases increasing, the burden of this complication is now greater than any individual cancer type.

"Despite being responsible for most cancer-related deaths and illness, secondary cancers are not a current focus of large-scale cancer genome sequencing studies.

"However, with increasing development of more effective cancer treatments, there could be new opportunities to explore."

Dr Saunus said the discoveries would not have been possible without the valuable samples provided by the Brisbane Breast Bank, as metastatic [brain cancer](#) tissue samples were not easy to come by.

She said the research team anticipated the data from the study would be more extensively analysed by the international research community.

Researchers worked in collaboration with Pathology Queensland, UQ's Institute for Molecular Bioscience, the QIMR Berghofer Medical Research Institute and the Royal Brisbane and Women's Hospital.

The study is published in *The Journal of Pathology*.

More information: "Integrated genomic and transcriptomic analysis of human brain metastases identifies alterations of potential clinical significance." *J Pathol*. 2015 Jul 14. [DOI: 10.1002/path.4583](https://doi.org/10.1002/path.4583)

Provided by University of Queensland

Citation: Tissue bank pays dividends for brain cancer research (2015, August 17) retrieved 27 April 2024 from

<https://medicalxpress.com/news/2015-08-tissue-bank-dividends-brain-cancer.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.