



MEDIA RELEASE

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Deakin University research finds rogue cells that could cause spread of breast cancer

A Deakin University study has shed light on what causes breast cancer cells to move to other parts of the body.

Stephanie Lebret completed the study for her PhD at Deakin's Centre for Cellular and Molecular Biology under the supervision of Associate Professor Leigh Ackland.

Ms Lebret is the first to use a particular cell model that mimics the structure of the human breast to map the spread of cancer. Using this model she identified a rogue cell type that may cause cancer cells to move out of the breast.

"As it is not possible to study what happens in the real human mammary gland, we developed a model of the breast using cultured cells grown outside the body. Through this model we first investigated how normal breast development occurs. We then went on to discover how to make these cells behave like migrating cancer cells, which move through the body unlike normal cells, in order to determine what may cause this to happen in the human body," Ms Lebret explained.

"We found that fibroblasts, a cell type that surrounds the mammary gland, help normal breast cells develop but when these fibroblasts are abnormal, they cause breast cancer cells to change and migrate."

Ms Lebret said that this is a preliminary study and that with further research she hopes that it will ultimately lead to preventative treatments for the spread of cancer.

"It is believed there are many ways that cancer may originate. More recently it has been thought that the area surrounding the breast, rather than the breast cells themselves, may play a role in the development of cancer," Ms Lebret said.

"What we have found is important, as it confirms that when abnormal, the cells surrounding the breast produce a specific factor, causing breast cells to change and migrate.

"With further study, it is possible that targeting of this factor may one day be used to prevent the spread of breast cancer."

Ms Lebret's work was recently published in the international journal, Breast Cancer Research.

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