

Media release

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FECRI research find new proteins involved in chemoresistance of Ovarian cancer.

- Every eight-hours one woman dies of ovarian cancer in Australia.
- New Ovarian cancer research from the Fiona Elsey Cancer Research Institute has been published in internationally recognised Journal of Translational Medicine.
- February is Ovarian cancer awareness month.

FECRI research team, Professor Nuzhat Ahmed and Professor George Kannourakis have published research into Ovarian cancer chemoresistance- 'Platinum-resistance in epithelial ovarian cancer' in the Journal of Translational Medicine.

Ovarian cancer is a terrible disease and has the poorest survival rate of any female cancer in Australia. Every eight-hours one woman dies of ovarian cancer in Australia. There are no early-stage screening markers. Most patients are diagnosed at the advanced stage, when the cancer has spread, which is difficult to remove and treat.

For many ovarian cancer patients, treatment ceases to work as chemoresistance sets in.

Head of the Ovarian cancer research at the Institute, Professor Nuzhat Ahmed said "Our research is important to understand the mechanisms of how chemo resistant disease develops and is sustained in ovarian cancer patients. The focus of this research is to understand these mechanisms, that is vital to the future design of drugs to target treat these patients."

The research identified a profile of new proteins, that play a vital role in proliferation and spread of the cancer. The study showed high expression of these proteins in tumours and how they interact with immune cells, important for immunotherapy in these patients.

Currently there are no viable treatment options for chemo resistant patients. Findings demonstrates how chemo resistant cells survive and flourish in relapsed patients, important for designing drugs which can target the survival pathways of the chemo resistant cells to abolish relapse in patients.

Institute Director of FECRI, Professor George Kannourakis stated, "This publication is a great example of the relevant and ground-breaking work that the team here at the Institute are doing into the immunology of cancer. Our program is building great momentum and will continue to produce outcomes."

This research was undertaken with support of the John Turner Cancer Research Fund to Fiona Elsey Cancer Research Institute.

The Institute currently has 3 PhD students and 17 staff with key projects in: Immunology, Breast cancer, Bowel cancer, Ovarian cancer, Chronic lymphocytic leukaemia, Renal cancer, Langerhans cell histiocytosis and Brain tumours.

Recent additional research results include:

- Identification of proteins involved in chemo resistance in Ovarian cancer that can potentially be used as targets to prevent progression and circumvent chemoresistance in patients.
- World first work in describing the behaviour and function of a pregnancy associated plasma protein (PAPPA), in triple negative breast cancer. This research has led to understanding the mechanism for progression of cancer during pregnancy.
- Bowel cancer research team reported discovery on a subset of immune cells in the bowel that can misbehave and release chemical messengers that promote cancer and inhibit other immune cells.
- Identification of a new immune cell subset in histiocytic disorders.

A video animation summary of the paper available via [YouTube](#)

[Link to research paper](#)

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