

**Media release**

**Friday 3 March 2023**

**New research to stop progression of aggressive Ovarian cancer.**

- *Every eight-hours one woman dies of ovarian cancer in Australia.*
- *New Ovarian cancer research looking a new method of stopping the progression of aggressive Ovarian cancer from the Fiona Elsey Cancer Research Institute (FECRI) has been published in internationally recognised Cancer Cell International.*

FECRI research team, Dr Ruth Escalona, Dr Jason Kelly, Professor Nuzhat Ahmed, and Professor George Kannourakis have published research into Ovarian cancer in the journal Cancer Cell International- “Knock down of TIMP-2 by siRNA and CRISPR/Cas9 mediates diverse cellular reprogramming of metastasis and chemosensitivity in ovarian cancer”.

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 progressed and spread, making it difficult to remove and treat.

For many ovarian cancer patients, treatment ceases to work as chemoresistance sets in. The FECRI group are working on difference ways to treat aggressive ovarian cancer, leading to better treatments and outcomes for patients.

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 what makes this disease aggressive.”

The recently published results focus on the biological process of ovarian cancer and the high level of a protein called MMPs in the cells that are present in chemo resistance cells, allowing for the cancer to grow, move, and progress to other organs. The FECRI team have found an inhibitor (TIMPS) used in conjunction with chemotherapy can dampen the MMPS protein and stop this biological process. In using this inhibitor in treatment, the cancer would be less likely to spread and be a better treatment for aggressive ovarian cancer.

Next steps for the research are to model this inhibitor stopping the growth and progression of the ovarian cancer, that would allow this to progress to clinical trials.

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.

**[Link to research paper](#)**

***Please tag the Institute on all social media using @fionaelseycr***

***Photo opportunity***

**Who:** Professor George Kannourakis, Director at the Fiona Elsey Cancer Research Institute & Professor Nuzhat Ahmed, Head of Ovarian Cancer Research

**When:** Friday 3 March, at 10:30am

**Where:** Fiona Elsey Cancer Research Institute, Suite 23 Ballarat Technology Park – Central, 106-110 Lydiard Street (Sth), Ballarat

***All other media enquiries, please contact Sarah Stapleton - Marketing and Fundraising Manager at FECRI on 0475 383 687 or [sarah@fecri.org.au](mailto:sarah@fecri.org.au).***