

**Media release**

**18 May 2017**

**Ballarat Institute publishes findings to lead to potential new Ovarian Cancer treatment**

- *Research led by John Turner Professorial Cancer Research Fellow, Professor Nuzhat Ahmed, has recently published research that has shown a new way to treat ovarian cancer.*
- *“Momelotinib decreased cancer stem cell associated tumor burden and prolonged disease-free remission period in a mouse model of human ovarian cancer.”  
Emily Chan, Rodney Luwor, Christopher Burns, George Kannourakis, Jock K Findlay and **Nuzhat Ahmed**. Journal: *Oncotarget* Date Published: March 2018, Vol. 9, (No. 24), pp: 16599-16618*
- *To see a clip on the Ovarian Cancer project visit <https://youtu.be/G3ssKUyq78M>*

Ovarian cancer research conducted at Ballarat’s Fiona Elsey Cancer Research Institute, has revealed a new way of treating ovarian cancer.

Ovarian cancer continues to be a difficult cancer to treat. Approximately 1400 Australian women are diagnosed with the cancer each year, and nearly 800 die annually, making ovarian cancer the fourth most common cause of cancer-related death in women in Australia. The high mortality rate in patients results from the diagnosis of the disease at an advanced-stage. Devastatingly, the five-year survival period of ovarian patients has remained unchanged and has been as low as 40% for the last thirty years.

The research project led by John Turner Professorial Cancer Research Fellow, Professor Nuzhat Ahmed at FECRI has recently published research that has shown a new way to treat ovarian cancer.

Ovarian cancer continues to be a difficult cancer to treat. Despite a good initial response to chemotherapy, most ovarian cancer patients relapse, with nearly 60 percent dying within 5 years. The cause of this is that the patients develop a chemo-resistant strain of the disease. Research being conducted at the Ballarat based research centre is focused on the differences between responsive and non-responsive ovarian cancer protein cells.

The latest publication in international journal *Oncotarget*, demonstrates that following chemotherapy treatment, there are an increase in ovarian cancer stem cells that express a unique that leads to the cancer not responding to current chemotherapy drugs. There are currently drugs available that may be used to block this pathway, therefore improving treatment success.

Professor Nuzhat Ahmed from the Institute, said “ ...the pathway can be very active in some cancer cells, leading to uncontrolled growth. In our study we used an inhibitor drug, to block the growth of ovarian cancer cells in a mice model, leading to a significant reduction in the size of tumours. This is the first study to demonstrate a potential use of these readily available oral inhibitors in the treatment of chemo-resistant ovarian cancer and expands to further research.”

The proposed treatment from this study is that patients are given an oral daily inhibitor drug following chemotherapy as a maintenance therapy. This reducing the development of ovarian cancer stem cells that are resistant to chemotherapy, significantly decreasing the incidence of recurrence and increasing survival periods in advanced stage patients. Human trials using chemotherapy mixed with the inhibitor drug may lead to better treatment outcomes in women.

The research has been conducted as part of the Institutes collaborative program with researchers from the Hudson Institute, Walter and Eliza Hall Institute and the Melbourne University.

Professor George Kannourakis said “This publication is a great example of the ground-breaking work that the team here at the Institute is doing. Our program is building great momentum and will continue to produce outcomes.”

“As a non-government funded research facility, we rely on community donations to continue our important research. We encourage the community to consider making tax deductible donations to our cancer research program as we approach the end of another financial year.” Said Professor Kannourakis.

FECRI currently has 9 PhD students from Federation University and 10 senior scientific staff. Recent achievements of FECRI have included:

- Identification of potential new immunotherapy targets for ovarian cancer
- Identification of a new immune cell subset in histiocytic disorders.
- Further immune studies in various cancer and leukaemias.
- Identification of a new method for isolating new viruses.

***All media enquiries, please contact Sarah Stapleton- Marketing and Fundraising Manager at FECRI on 0475 383 687 or sarah@fecri.org.au***

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