Evaluation of FGL2 as a therapeutic target in ovarian cancer
Apr. 1, 2017 to Sept. 30, 2018

Highlights
• This project aims to investigate FGL2 as an immunotherapeutic target.
• Proof of concept of the combination of immune modulation plus oncolytic virus therapy.
• Preclinical manipulation of T regs in the tumour microenvironment.

About the project
High-grade serous ovarian cancer is the most common and lethal subtype of ovarian cancer. Patients are usually diagnosed with metastatic (Stage III) disease, at which point their 5-year survival rate is less than 30%. Despite extensive testing of targeted therapies in preclinical and clinical trials, there have been no new treatments that lengthen survival rates of ovarian cancer patients in more than 40 years. This study addresses the unmet clinical need for more effective treatments for ovarian cancer. This project intends to investigate a new immune-based therapy founded on its preliminary results.

In exploring why ovulation is a risk factor for ovarian cancer, the team of researchers led by Dr. Vanderhyden discovered the expression of Fibrinogen-like 2 (FGL2) and its association with an accumulation of regulatory T cells (Tregs) in normal ovaries, in two syngeneic models of ovarian cancer, and in human ovarian tumors. FGL2 is known to promote the spread and activity of Tregs. Since Tregs are known immune suppressors, the team predicts that blocking FGL2 function will inhibit Treg accumulation and/or function, thereby initiating a robust immune response to fight the tumor.

This project will perform preclinical studies as proof of concept that anti-FGL2 treatments cause tumor regression either alone, or in combination with the oncolytic virus, Maraba MG1.

Project lead:
Dr. Barbara Vanderhyden
uOttawa

Ovarian Cancer
Determining the efficacy of anti-FGL2 therapy on ovarian cancer.

Ovarian Cancer Canada
Cancer de l’ovaire Canada

Key Investigators

Biotherapeutics
FGL2 antibodies
&
Maraba MG1

Project value
$157,992
BioCanRX contribution:
$78,996

Partners
4

The Ottawa Hospital
L’Hôpital d’Ottawa
uOttawa

Biotech partnerships

FGL2 antibodies
&
Maraba MG1
Catalyst Program Investigators

Objective 1:
Determine the efficacy of anti-FGL2 therapy on ovarian cancer.

Objective 2:
Test the efficacy of anti-FGL2 therapy in combination with immunogenic oncolytic virotherapies.

Objective 3:
Determine FGL2 levels in human ovarian tumors and ascites.

Objective 4:
Test the efficacy of a modified MG1 that expresses microRNA targeting FGL2.

The power to kill cancer lies within us.
Let’s tell our bodies how.