BioCanRx
Canada's Immunotherapy Network
Le réseau canadien d'immunothérapie

Catalyst Program

Anti-DEC205 priming in heterologous prime-boost with OVs for sarcoma

April 23rd, 2018 to March 31st, 2021

Biotherapeutics: **Antibodies; Oncolytic vaccine**

Project value: **$200,000** BioCanRx contribution: **$100,000**

targeted cancers: **Sarcoma**

Development of a new oncolytic virus vaccine combination strategy optimized to target sarcoma

Partners: **1**

Valérie's Flutter Foundation — Fondation Flutter de Valérie

Highlights

- Sarcoma is often neglected by the pharmaceutical industry because of its rarity and homogeneity thus providing BioCanRx with the opportunity to bridge this gap in research and development
- Propose to use DEC205-mediated prime vaccination as a novel method to overcome limitations to current approaches
- New combination strategy can be quickly tested in human sarcoma given that there is already clinical experience with its individual components
- Significant contribution to the Biotherapeutics field to demonstrate that DEC205 targeted antibodies can be effective as part of a vaccination regimen in combination with oncolytic viruses

About the project

Sarcoma is a rare and heterogeneous cancer for which treatment modalities have not changed in 20 years and outcomes remain dismal. New therapies are desperately needed to gain an upper hand against recurrent tumors and lung metastases, the main cause of sarcoma mortality. Immunotherapy has changed the clinical landscape for treatment of carcinomas but has not been widely explored for sarcoma. For this project, we aim to develop an anti-sarcoma vaccine combining antibodies that deliver the vaccine directly to the relevant cells of the immune system, and oncolytic viruses that have direct anti-sarcoma effects and that also boost the effect of this vaccine. Our preliminary data have demonstrated that the combination of the antibody with oncolytic virus leads to a strong immune response that is able to control lung metastasis in a murine model of melanoma. In collaboration with BioCanRx, we propose to further optimize this vaccine targeting sarcoma. Importantly, this project builds directly on "oncolytic virus vaccine" technologies currently being supported by BioCanRx through enabling and clinical trial studies, and aims to overcome some of the limitations associated to current approaches. Given its rarity and heterogeneity, sarcoma is often ignored by the pharmaceutical industry and thus it is an opportunity for BioCanRx to help bridge this important research and development gap.

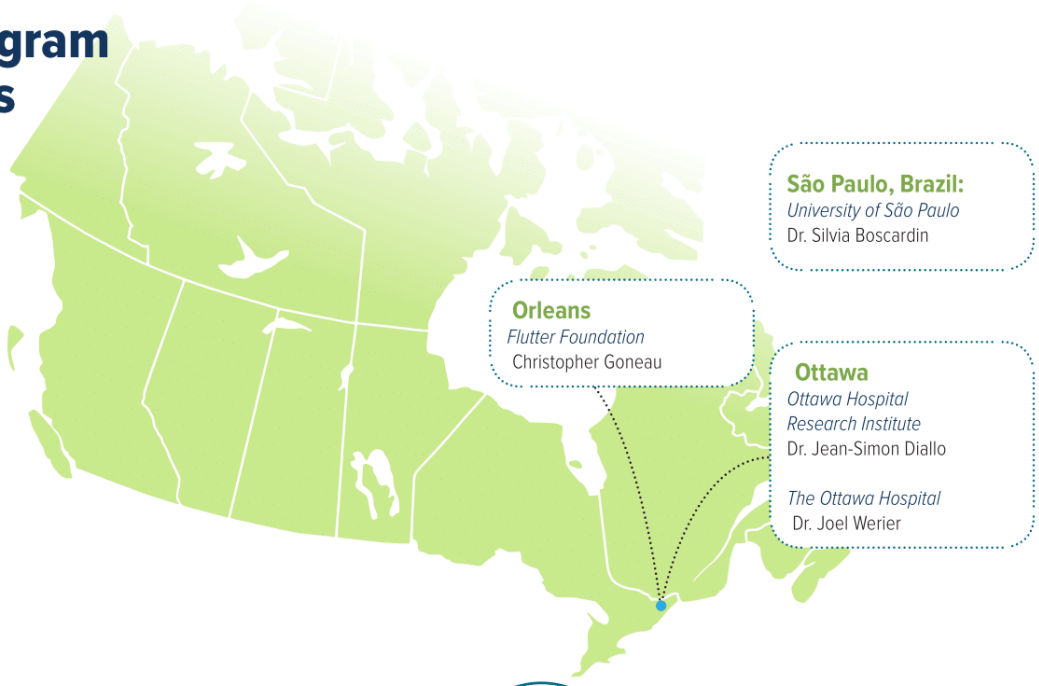
Key Investigators

Project lead:
Dr. Jean-Simon **Diallo**

Co-Principal Investigators
Dr. Joel **Werier**
Dr. Silvia **Boscardin**

USP Universidade de São Paulo
The Ottawa Hospital
Affiliated with uOttawa

Catalyst Program Investigators



São Paulo, Brazil:
University of São Paulo
Dr. Silvia Boscardin

Orleans
Flutter Foundation
Christopher Goneau

Ottawa
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Dr. Jean-Simon Diallo

The Ottawa Hospital
Dr. Joel Werier

Partner

Flutter Foundation
$50,000 year 1 (Cash)
$50,000 year 2 (Cash)

Key Milestones

Aim 1
- Use tissue microarrays to identify human sarcoma antigens that can be targeted with an optimized OVV regimen in human trials

Aim 2
- Evaluate an optimized anti-DEC-205 based OVV regimen targeting a sarcoma antigen

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

BioCanRx
Biotherapeutics for Cancer Treatment
Biothérapies pour le traitement du cancer