

A Phase I Study of GCAR1, a Chimeric Antigen Receptor (CAR) T-Cell Therapy for Patients with Selected Relapsed / Refractory GPNMB-Expressing Solid Tumors

Duration: 11/1/2024 to 10/31/2027

Targeted Cancers:

Solid tumors

Building on the success of CAR T cell therapy in blood cancers, researchers have developed a therapy targeting a protein expressed in solid tumors. They are now conducting a Phase I clinical trial to evaluate its safety and anti-tumor activity in patients with alveolar soft part sarcoma, renal cell carcinoma, and triple-negative breast cancer.

Key Investigators:

Project Lead:

Dr. Douglas Mahoney

Laura Pearce



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BioCanRx Funded
Core Facility

**The Ottawa Hospital's
Biotherapeutics Manufacturing
Centre**

**Biotherapeutic:
Adoptive Cell Therapy**

Project value:

\$4,907,519

BioCanRx Contribution:
\$997,463

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Partners:

Canadian Cancer Trials Group Groupe canadien des essais sur le cancer

Alberta Health Services

ACTION

CIHR
IRSC Canadian Institutes of
Health Research
Instituts de recherche
en santé du Canada

Arnie Charbonneau Cancer Institute
The Riddell Centre for
Cancer Immunotherapy

About the project:

CAR T cell therapy is a promising new treatment that has been used successfully to treat and even cure refractory blood cancers. It involves taking functional T-cells from the patient, genetically modifying them to target the cancer cell, and then infusing them back into the patient to attack and clear the cancer. Scientists at the University of Calgary in collaboration with numerous BioCanRx-supported investigators and core facilities have created a new CAR T cell product that attacks different types of cancers in mouse

models, including a rare type of sarcoma in adolescents and young adults, and other types such as breast and kidney cancers. They now want to take the next step to study this therapy to patients across the country in a clinical trial. The main goal of the clinical trial is to assess the CAR T therapy in patients for safety and anti-tumor activity. Ultimately, they hope that the treatment provides benefit for patients that receive it. The team will also study how these CAR T cells work, with additional research planned on samples

obtained from the trial. There are a number of patients across Canada with tumors that express the target for these CAR T cells. The goal is to open the trial at multiple sites across Canada, providing an option for patients who would otherwise succumb to their disease.



Partners:

Canadian Cancer Trials Group

The Alberta Cellular Therapy
 and Immune Oncology Initiative

Cancer Care Alberta

The Riddell Centre for Cancer
 Immunotherapy

CIHR

Total Pledged Partner Contributions: \$4,993,561

Total Pledged Matched Contributions: \$1,500,000 Total

Total Leveraged Partner Contributions: \$3,407,519

Key Deliverables

1. Obtain regulatory approval for the trial
2. Initiate the clinical trial
3. Start and complete trial enrollment
4. Collect blood and tissue samples from enrolled patients. Generate and analyse correlative data from samples

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