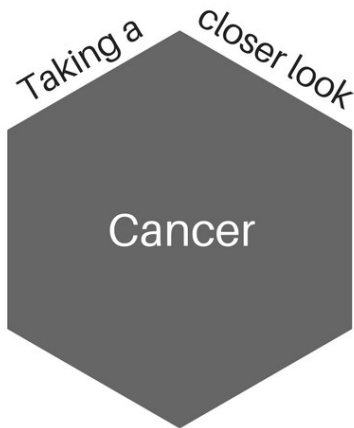
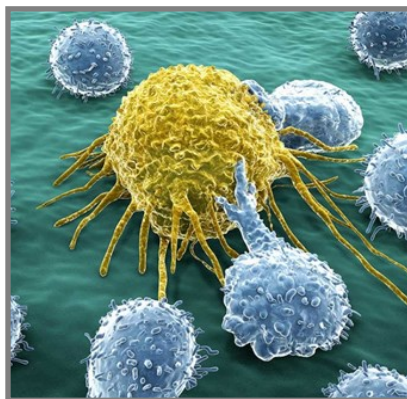


The Bench and Beyond



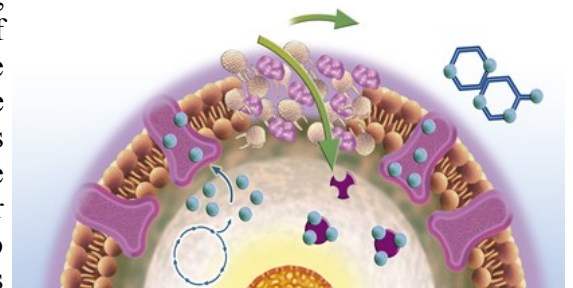
Metastatic cancer is cancer that has spread from the site where it was first detected (the primary cancer) to another organ. The probability of cancer spreading depends on the type and stage of the primary cancer, as well as the general health of the patient, family history, age and other factors. These factors, in combination, are helpful in determining how likely someone will develop metastatic cancer and the type of treatment they will receive. Current treatments for metastatic cancer stop or slow cancer growth, but these treatments are only successful in some patients. SDBRI is part of a global workforce that is working tirelessly to develop new medicines that will halt the spread of cancer in a greater number of patients.

Scientists at SDBRI are working on understanding how cancer cells move from one area of the body to another so that we can develop new treatments to stop metastasis. What we know



is that some cancer cells have outgrowths that look like legs (yellow cancer cell on left). The scientific name for these leg-like structures is filopodia. There are two types of “legs”, long and short, and these legs help cancer cells move. One of the SDBRI research teams, led by Dr. Celine DerMardirossian, has studied how a cancer cell tells itself to grow legs, and how it tells itself to absorb the legs back into the cell. We have learned that there are groups of molecules inside the cell that touch and stick to each other in a highly precise and methodical way providing clear instructions to the cell to grow legs. If these molecules don’t touch each other, the legs will not grow.

Using robots scientists at SDBRI are testing hundreds of thousands of new types of molecules hoping to find some that block the interaction of leg-inducing molecules inside cancer cells. The idea is that if these molecules are prevented from binding to each other, the legs will not grow, and without legs the cancer cells can’t move from one part of the body to another and metastasis is prevented. The process these scientists are using is fast and is called high-throughput screening. This is one of several approaches that scientists at SDBRI are using to design new medicines to stop the development of metastatic cancer.



Autoimmunity
Type 1 Diabetes
SLE
Multiple Sclerosis

Type 2 Diabetes
and Obesity

Cancer

Cachexia
(muscle wasting)

HIV-associated
neurological
disorders

HIV Vaccine

Frequently Asked Questions!

How do scientists celebrate the holiday season? Take a look at the photos from SDBRI's end of the year party.



Who works at SDBRI? Most of our employees have a science background and work in the laboratory designing, conducting and analyzing experiments. Our administrative staff handles tasks that include, ordering and receiving, bookkeeping and financials, ensuring equipment and facilities operate smoothly, preparing documents for grant submissions, manuscripts and legal papers. In all SDBRI employs 28 people representing 15 different countries. They are USA, Canada, Mexico, UK, France, Germany, Russia, Brazil, India, Sri Lanka, Bangladesh, Egypt, Afghanistan, Japan and China.


Wishing you all a Happy and Healthy 2019!

Location

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