

# Sunnybrook's innovative brain tumour research

Sunnybrook Health Sciences Centre is a national leader in research for brain tumour treatments – both for tumours that originate in the brain and for those that spread from other parts of the body (metastases). Some 55,000 Canadians are living with brain tumours. Unpredictable and complex, the tumours impact day-to-day living in countless ways, affecting a person's vision, hearing, memory, balance and mobility. To improve patient outcomes, Sunnybrook's experts are conducting wide-ranging studies and advancing new therapies.

## Tony Crolla Chair in Brain Tumour Research



**Dr. James Perry**

Sunnybrook's Dr. James Perry, a skilled and energetic scientist, holds the Tony Crolla Chair in Brain Tumour Research. He is involved in a number of ongoing research trials to improve treatment for patients with glioblastoma and other brain tumours.

Treatments are developed in several ways, including translational research that sees new ideas brought forward from brain tumour research labs to the clinic for testing in patients. Sunnybrook researchers also participate in – and often are the leaders of – national and international trials conducted in cooperation with other centres in Canada and around the world.

Dr. Perry has led studies that discovered a new way to deliver chemotherapy for recurrent brain tumours, establishing a new treatment standard globally.



Dr. Perry is also chairman of the Canadian Brain Tumour Consortium, a national not-for-profit network of the best cancer treatment centres in Canada, which attracts and develops novel treatments for Canadians.

## Targeted therapy

One day, there may be no such thing as an impossible-to-reach brain tumour, thanks to Sunnybrook research. Dr. Kullervo Hynynen, Dr. Todd Mainprize and other team members are investigating the use of MRI-guided focused ultrasound therapy to temporarily and safely open the blood-brain barrier, allowing for the direct delivery of anti-cancer drugs to tumours. The Slight Centre for Image-Guided Brain Therapy and Repair, recently established at Sunnybrook, is expected to be the first centre in the world to conduct clinical trials of this treatment.

## Precise radiation

Sunnybrook's Dr. Arjun Sahgal is playing a lead role in the advancement of a novel radiation treatment for people with brain metastases. The precision therapy – called stereotactic radiosurgery – is used in place of whole-brain radiation whenever possible. It helps preserve brain functioning, including processes related to attention span, memory, problem-solving, decision-making and speech.