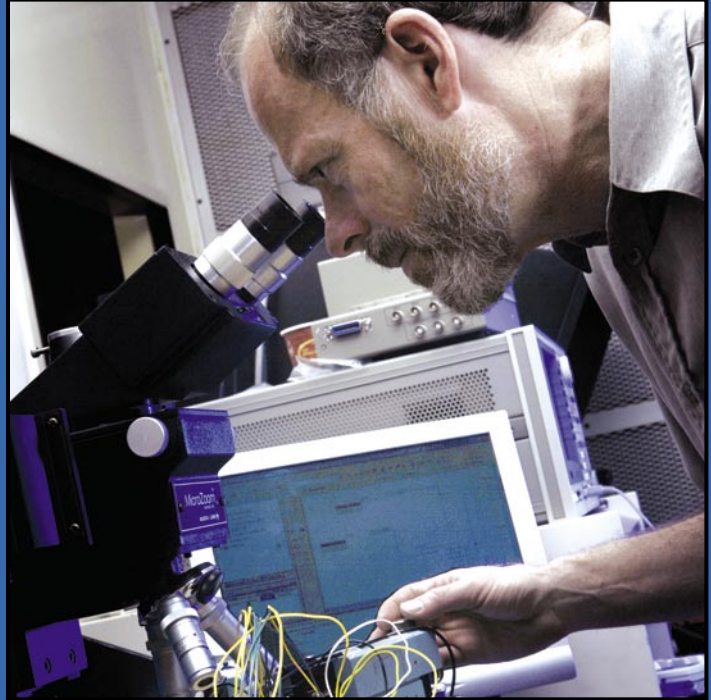


Research Collaboration Enables Improved Ways to Monitor Radiation Levels in Cancer Patients

Dr. Garry Tarr of Carleton University is collaborating with Thomson Nielsen Electronics on the development of a new device that aims to improve radiation therapy for cancer patients

“The ability to fabricate high-voltage chips with DALSA Semiconductor and realize a working prototype was critical to this research—this would not have happened without CMC. The outcomes from this project will help Thomson Nielsen Electronics to develop a commercial product that will improve a physician’s ability to monitor radiation levels in cancer patients.”

Dr. Garry Tarr
Professor of Electronics
Carleton University



Dr. Garry Tarr of Carleton University is collaborating with scientists at the National Research Council Canada and Thomson Nielsen Electronics to develop a gamma ray detector that will provide physicians with a simpler and more effective way to measure and monitor radiation levels in cancer patients.

The ability of physicians to monitor radiation levels during cancer therapy is critical to ensure the maximum benefit of the treatment for the patient. Radiation levels that exceed the targeted dosage present a risk to healthy cells, while a dosage that is not high enough is ineffective in destroying cancerous cells.

Researchers at Carleton University are collaborating with scientists at the National Research Council Canada and Thomson Nielsen Electronics, a global leader in the development and manufacture of radiation measurement devices, on the development of a new gamma ray detector. It will provide physicians with a simpler and more effective way to measure and monitor radiation levels in cancer patients.

The detector does not require a wired power source or costly customized manufacturing processes, differentiating it from other radiation measurement products available in hospitals today.

“Wires are a challenge for physicians and patients in a cancer clinic. They increase the risk of someone tripping and falling, disconnecting the wires from medical equipment or terminating the flow of power to this equipment,” explains Dr. Garry Tarr, researcher at Carleton University. For the past 10 years, his research has relied on design, fabrication and test capabilities provided by CMC.

“The detector can be fabricated in almost any commercial microelectronics technology, without any process customization. This significantly reduces the cost of production and creates new opportunities to integrate the device with other electronics-based diagnostic equipment in future.”

Thomson Nielsen Electronics develops products that are used in hospitals across Canada and around the world, including the United States, Latin America, India and China. The company expects to begin field trials in the coming months and release a commercial product within the next two years. *cmc*