

## St-Boniface Hospital Foundation and Monteris Medical

[On October 2, 2015, Monteris Medical's Dr. Mark Torchia and Mr. Richard Tyc will receive the Earnest C. Manning Innovation Award - the premiere innovation award in Canada – for their development of Neuroblate®, a surgical device employed for inoperable brain tumours. Currently *“focused on providing innovative MRI-guided neurosurgical ablation tools and solutions for neurosurgeons”*, Monteris is an example of St-Boniface Hospital Foundation's investment in Research paying off – and saving lives.]

In 1971, founders of the St-Boniface Hospital Foundation could only imagine what dividends their investment in medical research would bring - but the need was clear. Foundation chair Campbell MacLean described the research environment as “terrible... doing research in broom closets in the basement, with no room for proper equipment”. A \$25 million state-of-the-art facility ensued (1986) along with efforts to attract “the brightest and the best” to St-Boniface Hospital.

This lack of proper facilities did not deter Dr. Mark Torchia from achieving his goal of working in medical research. Armed first with a diploma in Biochemical Technology from Red River College, he started at St-Boniface in the Surgical GI laboratory in 1978. After completing multiple graduate degrees while working at SBGH, Torchia then became the principal investigator of Surgical Research. When the new research facility opened, he was among the first tenants. “I started building projects around patient-centred surgical applications, and ended up with so much funding that I couldn't do it all myself. And so they thought, okay, this is a way to start a surgical laboratory where we could focus on things like medical devices, and that's how I ended up there”.

Torchia developed a passion for the development of surgical devices; one being the employment of robotics and lasers to treat deep-seated brain tumours. “The laser robotic surgery project had been percolating in my head, and on scraps of paper,” says Torchia. “Richard Tyc was already working with me on another project, so it was blessing for me that an exceptionally talented engineer like Richard could come over to the new project (Richard is now the Vice-President of Advanced Technology for Monteris Medical). He was the first person I hired”. St-Boniface committed funding, but as the project proceeded and showed promise, it became apparent additional funding would be required.

Says Torchia, “There's kind of this chasm, where you are working from a really crude prototype. And you've got to get to the other side where the device is successful enough to attract investments to ultimately have it used in patients. But there were years where from one week to the other we were not sure if we were going to continue to attract financing. By then, of course, it's not just me, it's 12 other people in our team. And now you're thinking, “am I putting these 12 people out of work?” Where is that next investment coming from?

A letter of appeal written to Foundation donors by Dr. Richard Anttila would make the all difference. A Winnipeg obstetrician-gynecologist, Anttila had developed a brain tumor – exactly the type of tumor Torchia's new technology was intended to treat. His appeal – then the most successful in the Foundation's history – would fund development of the Dr. Richard Anttila Image-Guided Surgery Facility, featuring an interventional magnetic resonance imager (MRI).

“That’s where the Foundation had a huge impact. The Anttila campaign provided us with amazing infrastructure that we would never have been able to convince an investor to purchase. The Foundation and its donors came up to bat and set us up for success. Donors in Winnipeg really saw the ‘humanity’ of what we were working on, and why it was so important for us to come up with a way to treat tumors like the kind that had affected Dr Anttila”.

“We know that there are many hundreds patients out there now who have received the benefits of our technology. It’s really important that that kind of foresight that Dr. Anttila had, and the kind of passion he had toward what we were doing, has translated across North America, and we hope soon worldwide, as an approach for treating these tumors. It would not have happened without that commitment”.

Receiving the Earnest C. Manning Innovation Award has brought new attention to the Monteris NeuroBlate. Along with requests for interviews, Torchia knows he will receive many inquiries from family members or patients who hope they might benefit from this technology. “Our phone at home would ring off the hook for days or weeks with people saying ‘My daughter has...’ or ‘My husband has...’ It was so gut wrenching in the past to have to tell them that “we’re not there yet.” Now, we can tell them ‘Yes, speak to your surgeon. There are 30 hospitals in North America you can call to find out if this tool is applicable in your specific’. It’s incredibly gratifying”.