



## **Capital Health, Dalhousie University and Colibri Technologies announce licensing agreement for revolutionary ear-imaging probe**

Halifax, Nova Scotia (June 10, 2014)—New technology developed at Capital Health and Dalhousie University will give ear specialists their first tool for obtaining high-resolution images of the middle and inner ear. Canadian ultrasound technology firm, Colibri Technologies Inc., has licensed the technology and plans to begin manufacturing the new probe in its Toronto facilities. The licensing agreement between Dalhousie and Colibri was announced in Halifax today.

“This is the world’s first high-resolution, micro-fabricated endoscopic ultrasound-imaging probe,” says the technology’s lead inventor, Dr. Jeremy Brown, an assistant professor in Dalhousie’s School of Biomedical Engineering and departments of Electrical Engineering and Surgery. He developed the probe with co-investigators, Dr. Manohar Bance and Dr. Rob Adamson, and a team of students, postdoctoral fellows and research engineers, by adapting technology from the semiconductor industry to produce microscopic components for the device. As Dr. Brown explains, “It provides a resolution more than ten times higher than MRI or CT scans, which makes it ideal for examining the tiny structures inside the ear.”

The new handheld probe is a revolutionary device with important clinical – and economic – benefits. “We see a major market opportunity for the ear-imaging probe in the multi-million-dollar global medical-imaging market,” says Brian Courtney, president and CEO of Colibri Technologies. “Unlike MRI or CT, it is small, portable and inexpensive, so it can be used widely in clinics to diagnose and monitor ear pathologies quickly, easily and non-invasively. On top of this, it has the potential to be adapted for use in cardiology, urology and other health care fields.”

Currently, specialists must enter the ear surgically to get a clear picture. “The ear is encased in solid bone, so it has always been a challenge to see what’s happening when a patient presents with a hearing problem,” notes Dr. Bance, a leading ear surgeon and clinician scientist at Dalhousie/Capital Health who will lead pre-market clinical studies of the new technology. “In addition to its diagnostic power, this new ear-imaging probe will reveal a great deal of new information about many middle and inner-ear disorders and how they can best be treated.”

The ultrasound ear-imaging probe has been developed through a \$3.8 million Capital Health-led research and development project, with an investment of \$2.6 million from the Atlantic Canada Opportunities Agency’s Atlantic Innovation Fund. Other funders include NSERC, Canadian Institutes of Health Research, Innovacorp, Capital Health and Dalhousie University. The licensing agreement, negotiated by Dalhousie Industry Liaison and Innovation, will return royalties to Capital Health and Dalhousie University to be re-invested in research programs.



Capital Health



“This is a prime example of how we can build a viable economic sector by investing in health research – innovation breeds innovation, especially when it generates revenues for continued research and development,” says Dr. Patrick McGrath, Integrated VP of Research and Innovation at Capital Health and the IWK Health Centre. “Of course, not only will this technology help support future research in Nova Scotia, it will dramatically improve clinical management and outcomes for people with hearing disorders around the world.”

The ultrasound probe is the just part of the ear-technology equation at Capital Health and Dalhousie. Drs. Bance, Brown and Adamson have already developed and licensed subcutaneous bone-conduction hearing aids that could replace more invasive bone-anchored aids, and are working on numerous other technologies with potentially widespread commercial applications. They hold more than a dozen patents and co-own several companies, with ambitious plans for the future.

Beyond the technological and clinical advances, this research and development activity is providing valuable employment and training opportunities for talented young people in Nova Scotia. “We have a team of 12 students, postdocs and engineers developing advanced skills in the Microfabrication Lab, as well as valuable clinical experience,” notes Dr. Brown. “In addition, spin-off companies co-owned by former students offer lots of potential for employment growth as we launch new technologies in our pipeline.”

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