

**OPSENS REACHES PRE-CLINICAL MILESTONE IN DEVELOPMENT OF FFR MEDICAL APPLICATION**

**Quebec City, Quebec, February 23, 2011** –Opsens Inc. (TSX VENTURE EXCHANGE: OPS) (“Opsens”) said today that its Medical Division has reached a significant milestone, successfully completing a pre-clinical animal study on the EasyWire device, designed to measure Fractional Flow Reserve in the evaluation of coronary lesions.

Fractional flow reserve (FFR) is an index of the functional severity of coronary stenoses calculated from pressure measurements taken before and after a narrowing of arteries discovered during coronary angiography. This approach is gaining momentum in interventional cardiology catheterization laboratories because it more precisely determines if lesions are causing myocardial ischemia (lack of oxygen to the heart muscle). If the FFR test is positive, an interventional cardiologist can discuss treatment options directly with the patient, either angioplasty to install a stent or by-pass surgery if there are multiple lesions. FFR also reduces the number of non invasive testing before performing diagnostic angiography.

Results of “Fractional Flow Reserve vs. Angiography for Multivessel Evaluation”, the so-called FAME study, a landmark multi-center study published in the New England Journal of Medicine in 2009, found that patients subjected to FFR had fewer stents used and better outcomes overall compared with patients evaluated with angiography only. A further FFR study published in December 2010’s Circulation builds on those findings by saying this “is one of those rare situations in which a new technology not only improves outcomes but also saves resources.”

**EasyWire and OptoWire for the measurement of FFR**

Technically, existing FFR guide wires cannot evaluate all types of lesions. The EasyWire is a miniature catheter instrumented with a fiber optic sensor that slides over most existing 0.014” guide wires. The EasyWire provides a no-drift, highly accurate and reliable measurement of pressure in coronary arteries, and gives cardiologists, in opposition to existing guide wires, the freedom to use their favourite guide wire by simply slipping on the catheter tip.

The OptoWire is a guide wire instrumented with a fiber optic pressure sensor which is drift free, and provides a high fidelity measurement of blood pressure in coronary arteries. In addition to more reliable measurement, the OptoWire offers better mechanical performance in terms of trackability, torquability and support over other existing pressure guide wires.

With the EasyWire and the OptoWire, Opsens will offer cardiologists specialized in hemodynamics a highly stable and reliable technology to evaluate all types of coronary lesions to discuss best treatment options with the patient as the exam is being performed.

**Pre-clinical results on the EasyWire**

Data from the animal study showed that the EasyWire is safe, delivers good trackability (ability to advance the device through the artery to reach all types of lesions), and that the pressure measurements taken during the study were optimal. The EasyWire performed exceptionally well, with benefits believed to answer to some important unmet needs.

The animal study was performed at Institut universitaire de cardiologie et de Pneumologie de Québec (Quebec heart and lungs institute) by Dr. Olivier Bertrand, a cardiologist specialized in hemodynamics,

researcher for Quebec's funded research centre (FRSQ) and professor at the Faculty of Medicine, Université Laval.

"Compared with products available on the market, I found the EasyWire very practical, allowing for a very reliable measurement of intra coronary pressures. In addition, having the possibility to use our usual angiography guide wires is a considerable advantage to reach difficult lesions," said Dr. Bertrand. "I was also impressed by the technical qualities of the OptoWire" he added.

### **Opsens portfolio for the measurement of FFR**

"Recent strong favourable outcomes data related to the use of FFR to guide PCI (Percutaneous Coronary Intervention) have brought new interest in using a pressure wire for coronary lesion assessment," said Dr. Morton Kern, University of California, Irvine, Cardiology and Chairman of Opsens' scientific advisory board. "Opsens' new pressure wire systems, both pressure wire and microtransit pressure monorail (EasyWire) appear to provide high-quality pressure tracings comparable to available systems, and will permit broader applications to the use of FFR for patient care."

"Strong evidence continues to build in favour of the practice of FFR, calling for more efficient tools to perform the exam. Opsens is putting together a complete tool box for cardiologists to use in the measurement of FFR, allowing them to select the tool better adapted to a specific case," said Claude Belleville, VP Medical. "The OptoWire and EasyWire are complementary products: a cardiologist may choose the OptoWire for a diffused lesion or easy-to-reach lesions, while the EasyWire may be better suited for lesions that are more difficult to reach."

Opsens' in-house medical research team developed the EasyWire over the last two years, and is being supported through the clinical study and commercialization stages by its scientific advisory board composed of Dr. Bertrand, Dr. Kern and Dr. Michael J. Lim, all cardiologists recognized for their expertise and knowledge in the field of FFR.

Based on these very good results, Opsens intends to pursue a complete plan that will bring the EasyWire and the OptoWire to the market by 2012.

### **About Opsens ([www.opsens.com](http://www.opsens.com))**

Opsens is a leading developer, manufacturer and supplier of a wide range of fiber optic sensors and associated signal conditioners based on proprietary patented and patent pending technologies. Opsens' sensors provide long-term accuracy and reliability in the harshest environments. Opsens provides sensors to measure pressure, temperature, strain and displacement to original equipment manufacturers (OEM) and end-users in the oil and gas, medical and laboratory fields. Opsens provides complete technical support, including installation, training, after-sales service, for its fiber optics systems that are regulated by the ISO 9001-2008 norm.

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