

OPSENS SUCCESSFULLY TREATS FIRST PATIENTS IN HUMAN CLINICAL STUDY FOR TAVR PROCEDURE

Quebec, Quebec, October 13, 2021 - OpSens Inc. ("OpSens" or the "Company") (TSX:OPS) (OTCQX:OPSSF), a cardiology medical device company providing innovative product solutions based on its patented optical technology, is pleased to announce the commencement of the human clinical study utilizing the SavvyWire, and successful treatment of the first patients. The SavvyWire, developed initially for transcatheter aortic valve replacement ("TAVR"), is the first guidewire intended to both deliver a valvular prosthesis while allowing continuous hemodynamic pressure measurement during the procedure.

"We are extremely pleased to have commenced this important safety study with the first two patients successfully treated with the SavvyWire. Structural heart procedures are a rapidly growing market, driven by the TAVR procedure and the expansion of its indications," said Louis Laflamme, President and Chief Executive Officer of OpSens. "As the TAVR procedure continues to benefit a wider range of patients and the minimalist approach grows in popularity, the benefit of a product like the SavvyWire could be significant. The SavvyWire is an active guidewire that allows physicians to deliver the valve, monitor deployment, and ensure optimal implantation without guidewire exchanges. We believe this could have procedural benefits and improve the security and efficiency of the procedure."

Treatment of the first patients in the SavvyWire clinical study

The study will be conducted on 20 patients in two world renowned structural heart institutions with Dr. Josep Rodés-Cabau at the Quebec Heart and Lung Institute (*Institut Universitaire de Cardiologie et de Pneumologie de Québec* or "IUCPQ"), in Quebec City and Dr. Réda Ibrahim at The Montreal Heart Institute ("MHI") in Montreal, as primary investigators.

Dr. Rodés-Cabau and Dr. Ibrahim mentioned, "Our two major cardiology centers in Quebec (IUCPQ and MHI), are proud to collaborate in the optimization of TAVR procedures by working with OpSens, an innovative Company on the cutting-edge of medical technology in the field of cardiology. In the first cases performed simultaneously in Quebec City and Montreal, we were able to successfully deploy the two dominant valves on the market, an Edwards Sapien 3 Ultra valve in one patient and a Medtronic CoreValve Evolut Pro Plus in the other. This demonstrated the initial versatility of the SavvyWire."

The SavvyWire, a new intelligent, pre-shaped, structural guidewire with integrated pressure monitoring, aims at improving procedural efficiency and clinical outcomes by allowing multiple steps over the same device without exchange. This device has been designed to support the minimalist TAVR approach which has been growing among structural heart physicians. With the SavvyWire, physicians can expect to diagnose and implant the percutaneous valve over the same device while getting continuous and accurate hemodynamic measurements. OpSens is targeting the commercial launch of its SavvyWire in calendar year 2022.

TAVR Procedure Evolution

Aortic valve stenosis occurs when the heart's aortic valve narrows, which prevents the valve from opening fully, restricting blood flow from the heart into the main artery (aorta) and onward to the rest of the body.

Initially, the TAVR procedure was only indicated for inoperable patients and then for high-risk surgical patients. Clinical programs like PARTNER or COREVALVE, have since shown better or equivalent clinical outcomes in intermediate and low-risk patients. The TAVR procedure is now evolving quickly with a minimalist approach that allows the procedure to be faster and the patients to be discharged earlier, sometimes on the same day.

The TAVR procedure is on the rise, driven by an aging of the population and recent studies that demonstrate its benefits to patients of all conditions. The TAVR market is currently estimated at US\$5 billion and is expected to reach US\$8 billion by 2025.

About OpSens Inc. (www.OpSens.com or www.OpSensmedical.com)

OpSens focuses mainly on coronary artery stenosis measurement in interventional cardiology. The Company offers an advanced optical-based pressure guidewire that aims at improving the clinical outcome of patients with coronary artery disease. Its flagship product, the OptoWire, is a second-generation fiber optic pressure guidewire designed to provide the lowest drift in the industry and excellent lesions access. The OptoWire has been used in the diagnosis and treatment of over 150,000 patients in more than 30 countries. It is approved for sale in the United States, European Union, Japan, and Canada.

OpSens is also involved in industrial activities in developing, manufacturing, and installing innovative fiber optic sensing solutions for critical applications.

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