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NEWS RELEASE

TSX Venture Exchange: NVC

Neovasc Inc. Announces Successful First Human Implant of Tiara™ Transcatheter Mitral Valve

Vancouver, BC, Canada, February 3, 2014 - Neovasc Inc. (TSXV: NVC) today announced that a first-in-human implantation of its Tiara™ transcatheter mitral valve was successfully performed on January 30th by physicians at St. Paul's Hospital in Vancouver, BC. The transapical procedure resulted in the elimination of mitral regurgitation (MR) and significantly improved heart function in the patient, without the need for cardiac bypass support and with no procedural complications.

The implantation was conducted by Dr. Anson Cheung, Professor of Surgery and Director of Cardiac Transplant, and Dr. John Webb, Director of Interventional Cardiology, at St. Paul's Hospital. They were supported by Dr. Stefan Verheye, Senior Interventional Cardiologist at the Antwerp Cardiovascular Center / ZNA Middelheim, Belgium and Dr. Shmuel Banai, Medical Director of Neovasc and Director of Interventional Cardiology at Tel Aviv Medical Center, Israel.

Commenting on the procedure, Dr. Cheung stated, "This 73 year-old male patient had severe functional mitral regurgitation and was considered an extremely high risk candidate for conventional valve repair or replacement surgery. The transapical implantation of the Tiara valve was completed quickly and without complications. It resulted in a well-functioning bioprosthetic valve with no significant paravalvular leak or residual MR."

Dr. Cheung added, "We are very pleased that this first implantation went so smoothly and that the patient's outcome to date is so positive. His recovery has been uneventful and we will continue to follow him closely over the coming months. The ability to implant a prosthetic mitral heart valve using a transcatheter, minimally-invasive approach instead of conventional open chest, open heart surgery would provide a much-needed alternative for the many patients who are considered at high risk for conventional surgery."

Tiara is a self-expanding mitral bioprosthesis specifically designed to treat mitral valve regurgitation, a serious and poorly served condition that requires development of highly specialized devices to address the complex mitral anatomy. Significant mitral regurgitation can lead to heart failure and death. Conventional surgical treatments are only appropriate for about half of the estimated four million MR patients in the US alone.

Tiara is implanted in the heart using a minimally-invasive, transcatheter approach and is designed to replace the diseased native mitral valve without the need for open heart surgery or use of a cardiac bypass machine.

Neovasc CEO Alexei Marko commented, "This successful first implantation of a transcatheter mitral valve by the team at St. Paul's Hospital is an exciting clinical milestone for patients with mitral disease. This procedure has the potential to provide a safe and effective new therapeutic option that could improve the health and quality of life of millions of patients worldwide."

About Neovasc Inc.

Neovasc Inc. is a specialty medical device company that develops, manufactures and markets products for the rapidly growing global cardiovascular marketplace. Its products include the Neovasc Reducer™ for the treatment of refractory angina and the Tiara™ transcatheter mitral valve replacement device in development for the treatment of mitral regurgitation. In addition, Neovasc's advanced biological tissue products are widely used as key components in a variety of third-party medical products, such as transcatheter heart valves. For more information, visit:

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