

## Xeltis' RestoreX Technology Platform Designed To Enable Cardiovascular Restoration Via A Bioabsorbable Medical Device, For The First Time

### Enrollment of 12 Patients Completed for "Xplore-I" Multisite Feasibility Clinical Trial of Xeltis Pulmonary Valve Replacement

● RestoreX technology is the first-ever cardiovascular restoration platform based solely on a bioabsorbable device. By pervading the porous matrix, new tissue forms around and inside it and rebuilds a new heart valve or blood vessel. RestoreX devices are designed to absorb over time, leaving patients with a new, healthy, functioning heart valve or blood vessel. Current valves are plagued with complications: the potential for rejection, calcification and chronic infection.

● Dr. Gerardus Bennink, Head and Chief Pediatric Cardio-Thoracic Congenital Surgery, Heart Center University of Cologne (Germany), presented at the EACTS annual scientific meeting in October 2016 positive one-year *in vivo* preclinical data of Xeltis' bioabsorbable pulmonary heart valve, confirming safety and functionality.

● Two-year clinical data presented at EACTS 2016 showed positive functionality results, absence of device-related adverse events and significant improvement in patients' general conditions. The study concluded that the RestoreX bioabsorbable technology has the potential to improve cardiac and vascular surgical procedures by reducing implant-related complications.



The **RestoreX platform** is the **first** to apply the principles of **supramolecular chemistry** and the properties of **bioabsorbable polymers** to enable cardiovascular **restoration** via implanted **medical devices**. The **ETR (Endogenous Tissue Restoration) process** enabled by Xeltis devices does not require any *in vitro* tissue engineering, stem cells or other biological agents.

The **RestoreX platform** is protected by a portfolio of 20+ international patent families, including Xeltis' **innovative supramolecular polymer platform** and its **electrospinning** methodology for manufacturing the devices.

**Electrospinning** is a fiber production method that uses electric force to draw solid, charged threads from polymer solutions or polymer melts up to fiber diameters a fraction of the diameter of a hair.

### What the Experts Are Saying About A Bioabsorbable Platform Designed To Restore Cardiovascular Anatomy



**Jean-Marie Lehn**  
Nobel Laureate, PhD  
Pioneer in Supramolecular Chemistry; co-winner of 1987 Nobel Prize in Chemistry

*"Supramolecular chemistry enables Xeltis technology by providing unique biochemical and biomechanical properties, delivering solutions to issues faced by traditional materials over the course of decades."*

(NOTE: Prof Lehn is a Scientific Advisor to Xeltis.)



**Frederick J. Schoen, MD, PhD**  
Executive Vice Chairman, Pathology, Brigham and Women's Hospital; Prof. of Pathology and Health Sciences and Technology, Harvard Medical School

*"I am impressed by the Xeltis preclinical results to date that have advanced our understanding of host-biomaterial interactions and show potential for an innovative approach that could improve the care of patients with cardiovascular disease."*

(NOTE: Prof. Schoen is a Scientific Advisor to Xeltis.)



**Martin B. Leon, MD**  
Director, Center for Interventional Vascular Therapy, Columbia University Medical Center / New York-Presbyterian Hospital

*"I am excited by the potential of the Xeltis technology for the replacement of heart valves, bringing significant benefits not only to the procedure and valve designs but also to clinical outcomes for patients."*

(NOTE: Dr. Leon is a Clinical Advisor to Xeltis.)