

Approximately 1 to 2% of the population is born with a **bicuspid aortic valve (BAV)**, rendering BAV the most common congenital cardiac malformation. Frequently, other abnormalities of the aortic wall, including coarctation of the aorta and thoracic aortic aneurysms (TAA) and dissections are observed. We want to gain insight into the clinical course of BAV-associated TAA, into the pathogenic mechanisms leading to aneurysm formation and to unravel the underlying genetic basis. This may be achieved by: 1) the investigation of pathways that have been implicated in non-BAV associated aneurysms and the exploration of signaling pathways involved in the development of the cardiac outflow; 2) the identification of the genetic basis of BAV-associated TAA in order to get better insight in the genetic heterogeneity of this condition and to correlate genotypes with specific clinical phenotypes and their natural history. For this work Bart Loeys has obtained funding from the ERC. Additional funding has been obtained from the Foundation Leducq. The Antwerp cardiogenetics group is the European coordinator of an international Leducq consortium, that consists of six labs, with, beside Antwerp, also the Johns Hopkins University Hospital (Baltimore, USA; Prof. Hal Dietz), Karolinska Institute (Stockholm, Sweden; Prof. Dr. Per Eriksson), Sickkids University Hospital (Toronto, Canada; Prof. Luc Mertens), Luebeck University Hospital (Luebeck, Germany; Prof. Salah Mohamed), Sainte-Justine Hospital (Montreal, Canada; Prof. Gregor Andelfinger).