

## **Laurent Duca** biography:

Laurent Duca obtained his PhD in Biochemistry and Molecular Biology in 2004 at the University of Reims Champagne-Ardenne (URCA). He then performed a post-doctoral training in Toulouse at INSERM and Pierre Fabre laboratories where he studied molecular genetics approaches to modulate pathological cutaneous and corneal wound healing. After the completion of his post-doc, he joined the UMR CNRS 6198 MERC as Associate Professor.

He is now Full Professor at the University of Reims Champagne-Ardenne and the Director of the CNRS lab UMR CNRS/URCA 7369 MEDyC, specialized in cell/extracellular matrix interactions in pathophysiological contexts such as aging and cancer. He also led, with Pr. Philippe Gillery then Pr. Stéphane Jaisson, for more than 10 years, the team "*Matrix Aging and Vascular Remodeling*" of MEDyC. He has published more than 70 articles in internationally renowned journals with a primary focus on elastin, elastin-derived peptides and the Elastin Receptor Complex.

He is interested in the molecular mechanisms leading to vascular elastolysis and in the role played by elastin-derived peptides (EDP) in the development of vascular diseases such as atherosclerosis, aneurysms or vascular calcification. Using integrative technologies from Biochemistry, Cell Biology, Imaging, *in vivo* murine models (WT or transgenic) and *in silico* approaches (developed in collaboration with L. Debelle and S. Baud's group, UMR CNRS 7369), he extensively studied the signaling pathways and the operating mechanism of the Elastin Receptor Complex (ERC). The data gathered allowed him to propose a new pharmacology targeting the ERC and permitting to limit the deleterious involvement of elastin peptides in pathological vascular remodeling.