“Endothelial caveolae, nitric oxide and cholesterol in vascular diseases and muscular dystrophy: from bench to bedside.”

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The vascular endothelium is a critical and dynamic barrier between the blood and underlying tissues. We study how changes in endothelial function, vascular shear stress and nitric oxide (NO) release can prevent atherosclerosis, aortopathies and thrombosis using transgenic animals and novel small molecules. Through proteomic analyses of endothelial caveolae and lipid rafts, we document how changes in vascular homeostasis and circulating lipoproteins exacerbate muscular dystrophy (MD) and muscle cholesterol synthesis. How our work has impacted patient care is discussed.