

University of Antwerp Research group PHYSIOPHARMACOLOGY Physiopharmacology

Research domain: Cardiovascular disease



Supervision master thesis and PhDs:



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RESEARCH QUESTIONS

BLOOD VESSELS

Role of arterial stiffness in hypertension, vascular dysfunction, vascular aging and end-organ failure



- Pathophysiology of heart failure:
 - → Regulators of ventricular function

- Cardiovascular safety pharmacology
- - → Role of autophagy and regulated necrosis (necroptosis,



- → Importance of cardiac endothelium
- → Role of cardiac stiffness in aging



TECHNIQUES

Cell culture: cell lines and primary cell culture (macrophages, endothelial cells, smooth muscle cells, cardiomyocytes)







Histology and immunohistochemistry: light and fluorescence microscopy





Animal models: genetic modified mouse models for cardiac diseases and atherosclerosis



In vivo heart function: Echocardiography, pressurevolume and pulse wave velocity measurements







Molecular techniques: Western blot, qRT-PCR, siRNA transfections







Ex vivo vascular reactivity: organ baths and ROTSAC, myograph, intracellular Ca²⁺ measurements

Isolated papillary muscle setup 30 °C bubbled with 95% O_2 / 5% CO_2 stimulation



