



Heart Failure & Arrhythmias



Pulmonary Hypertension
& Thrombosis



Atherosclerosis
& Ischemic Syndromes



Diabetes & Metabolism



Microcirculation

Focus of research group (I)

Name PI: Jurjan Aman

Department, UMC: Pulmonary Diseases / Physiology,
VUMC

Size of research group: 1-2 PhDs

Current mission & vision

- Molecular mechanisms of pulmonary vascular leak
- Link between vascular leak and vascular remodelling
- Identify targets for pharmacological intervention

Current Aims

- Integrins: Linkers between endothelial barrier dysfunction and vascular remodelling?
- SOX17: The gate keeper of the quiescent and healthy endothelium?

Focus of research group (II)



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Current expertise

- Endothelial cell cultures
- Endothelial barrier measurements (in vitro and in vivo)
- Immunofluorescence imaging of cell-matrix adhesions
- Pharmacological inhibitors

- CRISPR/Cas9 genetic modulation in primary human cells
- CHIP, Allelic Imbalance

Current funding

- Dekker Grant Dutch Heart Foundation (finished)
- ERS/EMBO Long Term Research Fellowship (Finished)
- ACS Out-of-the-Box Grant (S.Huveneers, R. Szulcek)



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Future plans

Short term (1-2 year) plan

Plan:

- Clinical development of 1-2 drugs against vascular leak
- Establish the role of integrins in vascular leak and vascular remodelling

Necessary infrastructure:

- Collaboration with clinical partners (ICU)
- Running wet lab environment

Long term (>2 year) plan

Plan:

- Establish my own research group (preclinical)
- Elucidate early molecular steps in vascular biology

Collaboration in ACS

- Frances de Handoko / Robert Szulcek / Harm Jan Bogaard / Anton Vonk Noordegraaf
- Stephan Huveneers
- Peter Hordijk