



Heart Failure & Arrhythmias



Pulmonary Hypertension  
& Thrombosis



Atherosclerosis  
& Ischemic Syndromes



Diabetes & Metabolism



Microcirculation

# Focus of research group

**Investigators:** Bogaard, Vonk Noordegraaf, de Man, Houweling, Christiaanse, van Tintelen, Wurdinger.

**Post-docs:** Szulcek, Aman

**PhD Students:** Jansen, Huis in 't Veld, Botros, Smits, Manz, Arkani

**Departments:** Pulmonary Medicine, Clinical Genetics, Radiology and Nuclear Medicine, Physiology,

## Current mission, vision and aims:

1) Early detection of pulmonary hypertension in risk groups (gene variants, pulmonary embolism)

2) Improved strategies for diagnosis, classification and monitoring of PH

2 ) Identification of new treatment modalities and strategies for PAH and CTEPH



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## Current expertise

National referral center for PH

Large cohort of patients with idiopathic and heritable PAH

Unique cohort of BMPR2 mutation carriers

State of the art imaging and biomarkers:

- MRI
- PET imaging
- Liquid Biopsy (ECFCs, platelet transcriptomics)
- Tissue bank and patient derived primary lung vascular cells
- Machine learning

## Current funding

CVON consortium PHAEDRA and PHAEDRA-IMPACT

CVON consortium DOLPHIN-Genesis

Optics consortium (Pharma sponsored)

NWO VICI (Vonk)

NWO VIDV (de Man)

Dekker (de Man)

Pharma: RCT participation



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# Future plans

## Short term

- Investigator initiated studies: 6-MP and RVX-208 in PAH
- Diagnostic classification on the basis of clinical parameters in combination with liquid biopsy
- Genetic background of RV adaptation

## Longer term

- Multicenter approach using adaptive clinical trial design for investigator initiated studies
- FLT-PET as part of precision medicine strategy
- Identification of early pulmonary vascular changes before onset of RV failure



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# Collaborations

## **Institutional**

Many departments, as mentioned

## **National**

PHAEDRA, DOLPHIN (LUMC, Twente University, MUMC)

OPTICS

NVALT WPH

Erasmus MC, UMCG

## **International**

Imperial college London

Cambridge University

INSERM Paris

Stanford University

University of Giessen

University of Colorado

Max Planck Institute Bad Nauheim

Many others