



Heart Failure & Arrhythmias



Pulmonary Hypertension  
& Thrombosis



Atherosclerosis  
& Ischemic Syndromes



Diabetes & Metabolism



Microcirculation

# Focus of research group (I)

*Name PI:* Menno de Winther

*Department, UMC:* Medical Biochemistry, AMC

*Size of research group:* 2 tech., 3 PDs, 5 PhD students

## *Current mission, vision and aims*

**To define and understand how innate immunity (e.g. monocytes and macrophages) are regulated in the context of (cardio-metabolic) disease, how it contributes to disease and to identify approaches to influence it.**

**Current focus on *EPIGENETICS*, profiles in disease and epigenetic enzymes.**

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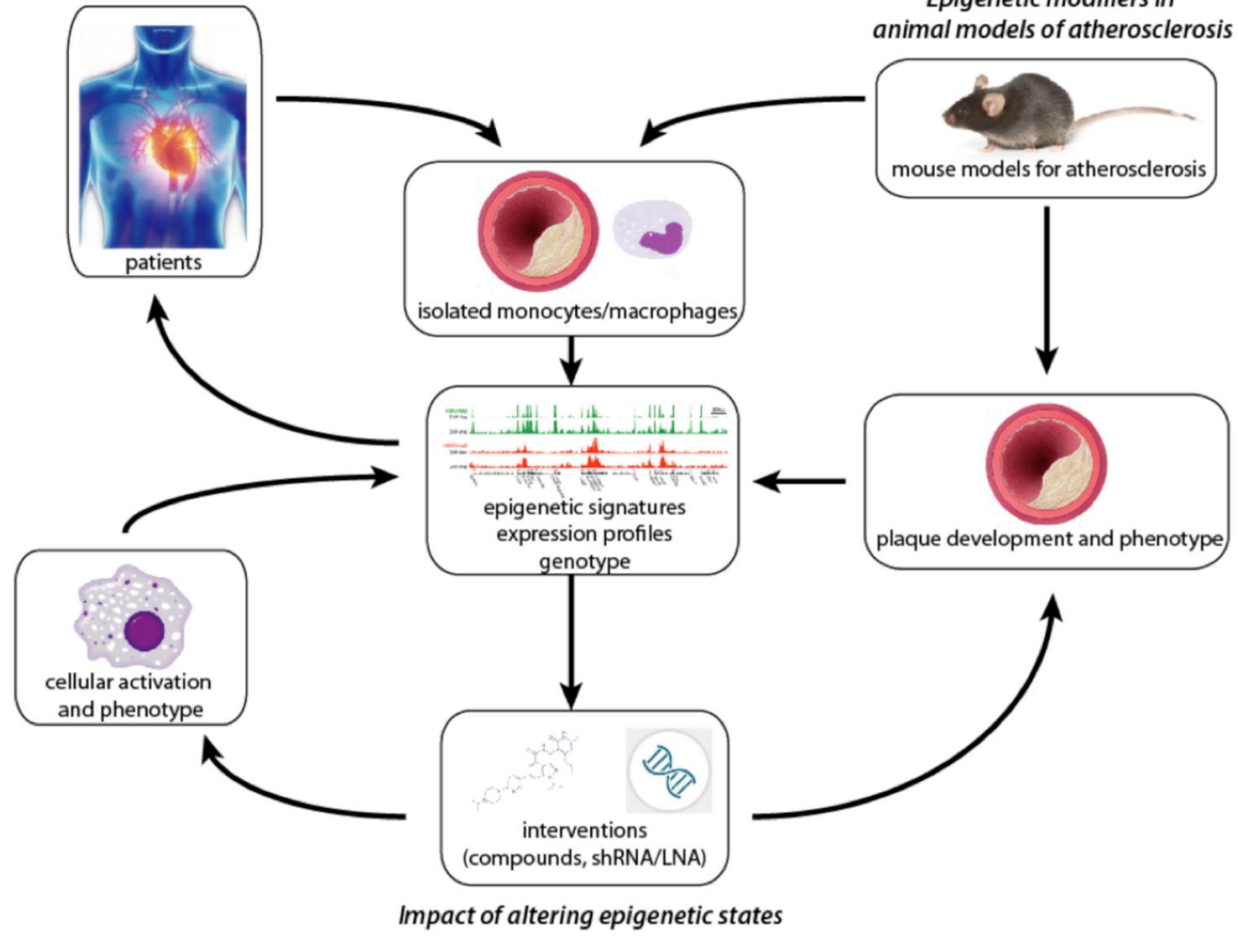
  
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*Epigenetic signatures and CVD risk in humans*

*Epigenetic modifiers in animal models of atherosclerosis*



*Impact of altering epigenetic states*

# Focus of research group (II)



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## ***Current expertise:***

- Human and mouse cell culture systems
  - Molecular Biology, Cell Biology, Immunometabolism
  - Animal models for disease (Athero, MI)
  - Extensive cell phenotyping by FLOW
  - Genomics techniques
    - RNAseq
    - CHIPseq, ATACseq
    - Single cell RNAseq
- } bioinformatics

## ***Current funding:***



Co-funded by the Horizon2020 framework  
of the European Union



Epimac



Fondation  
**Leducq**

Nederlandse  Hartstichting



**ACS**

Amsterdam Cardiovascular Sciences



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# Future plans

## ***Short term (1-2 year) and long term (>2 year) plans:***

- Further define monocyte/macrophage regulators
- Further implement work on small molecule drugs
- Further connect to human/clinical data
- Keep up with technological innovations

## ***Necessary infrastructure:***

- (all close-by)
- Cell culture (ML1, ML2)
- Molecular biology
- Animal facility
- State-of-the-art FLOW and Microscopy facility, Genomics facility, Metabolomics facility

## ***Collaborations in ACS:***

- Van den Bossche, Lutgens, Zelcer, Stroes  
(Pinto, Daemen/de Boer)