

# Heart and Blood Vessels

## Development, disease and state-of-the-art Therapies

Cardiovascular disease is one of the main causes of morbidity and mortality in our society. During this half minor you will be introduced to the current concepts of the pathogenesis, diagnosis and therapy of the most common forms of cardiovascular disease. At the same time, you will be updated on the most recent developments in molecular medicine and how these novel insights are translated into the development of future therapeutic strategies.

### Introduction

In ten consecutive weeks the students will be introduced to the most current concepts in the pathogenesis, diagnosis and therapy of the most common forms of cardiovascular disease. The course will start with a basic introduction into the anatomy, physiology and haemostatic mechanisms in the cardiovascular system. Next, the students will be introduced in the pathogenesis of macrovascular disease (e.g. atherosclerosis, coronary artery disease, ischemic peripheral



disease) and microvascular diseases (e.g. ischemic heart disease, heart failure). Current options for diagnosis and therapy will be discussed as well as the current approaches in epidemiology and the use of biomarkers for cardiovascular disease.

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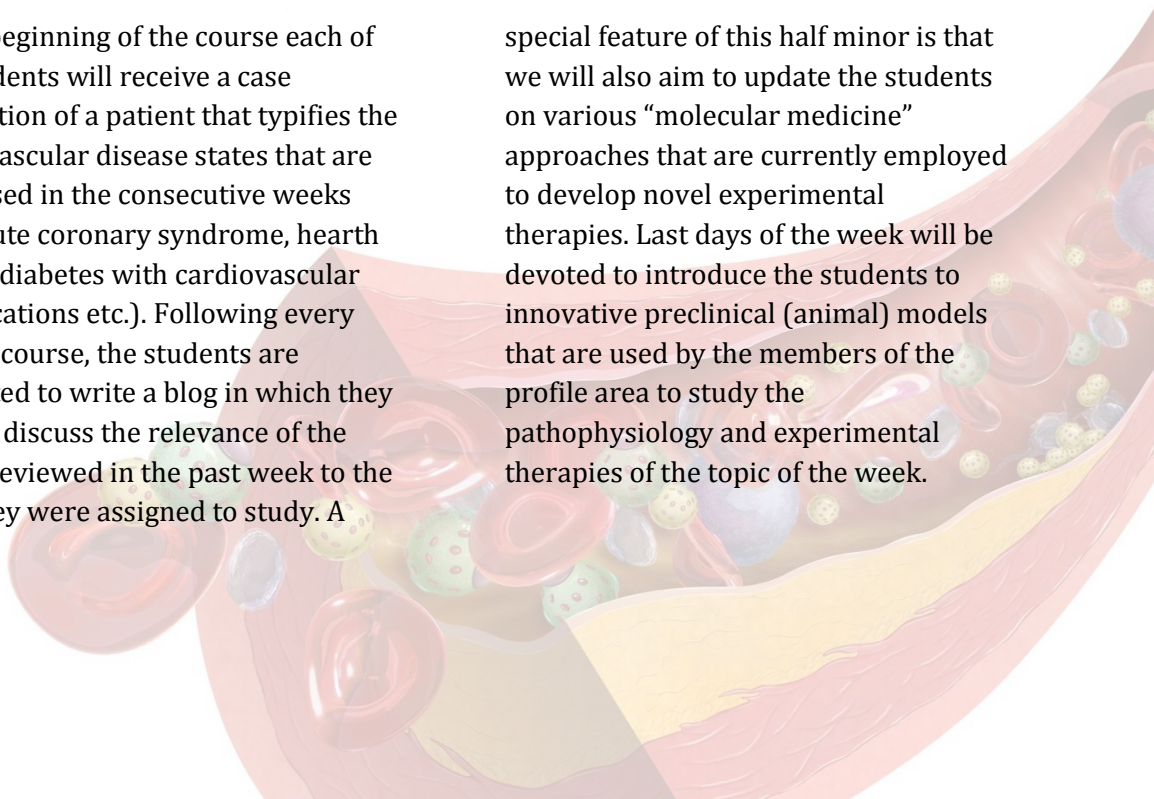
### Overview

At the beginning of the course each of the students will receive a case description of a patient that typifies the cardiovascular disease states that are addressed in the consecutive weeks (e.g. acute coronary syndrome, heart failure, diabetes with cardiovascular complications etc.). Following every weekly course, the students are requested to write a blog in which they list and discuss the relevance of the topics reviewed in the past week to the case they were assigned to study. A

special feature of this half minor is that we will also aim to update the students on various “molecular medicine” approaches that are currently employed to develop novel experimental therapies. Last days of the week will be devoted to introduce the students to innovative preclinical (animal) models that are used by the members of the profile area to study the pathophysiology and experimental therapies of the topic of the week.

### Quote

“This half minor truly allows for in-depth studying, I feel like an expert on the topic right now!”



## Learning goals

At the end of this half minor, the student can evaluate the pathogenic molecular mechanism(s) that underlie cardiovascular disorders and relate these pathogenic mechanisms to signs and symptoms. Students also know how to critically assess and communicate recent high impact publications in cardiovascular medicine and evaluate the feasibility, clinical potential and societal and legislative relevance of novel innovative therapeutic strategies for specific patient cases.

**You will be introduced to the most current concepts in the pathogenesis, diagnosis and therapy of the most common forms of cardiovascular disease.**

Anatomy of Cardiovascular System

Physiology of the heart and blood vessels

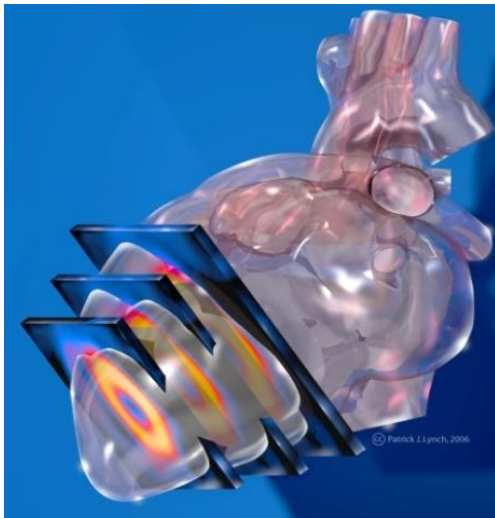
Thrombosis & Haemostatis

Micro vascular disease

Vascular Surgery & Peripheral Arterial Disease

Macro-vascular disease

Innovative therapeutic strategies



## Assessment

- Oral presentation (pass/fail)
- Written exam (3x): open questions (50% of final grade)
- Cumulative blog (pass/fail)
- Case report (50% of final grade)

## Quote

**“The course load was clinically relevant and much attention was paid to scientific research!”**

## Contact us



Prof. Dr. A.J. van Zonneveld  
Experimental Vascular Medicine  
A.J.van\_zonneveld@lumc.nl  
071-5265196

Prof. Dr. D.E. Atsma  
Interventional Cardiology  
D.E.Atsma@lumc.nl  
071-5261273