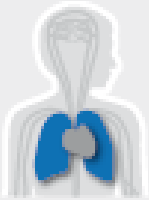
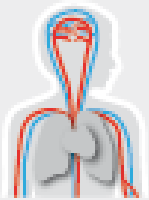


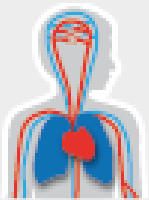
Heart Failure & Arrhythmias



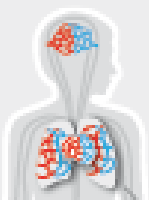
Pulmonary Hypertension  
& Thrombosis



Atherosclerosis  
& Ischemic Syndromes



Diabetes & Metabolism



Microcirculation

# Focus of research group (I)

Name PI: Dop Simonides

Department, UMC: Physiology, VUmc

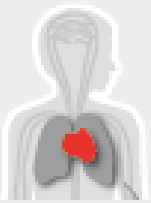
Size of research group: 2

**Mission** Reduce the burden of chronic heart failure

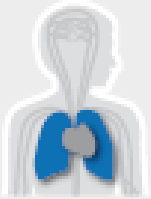
**Vision** Impaired cardiac thyroid hormone (TH) action is a critical factor

**Aim** Develop therapy to maintain cardiac TH action in remodeling heart

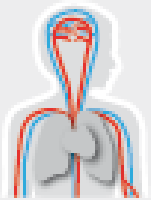
# Focus of research group: Cardiac TH action



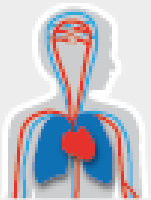
Heart Failure & Arrhythmias



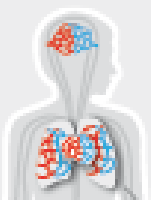
Pulmonary Hypertension  
& Thrombosis



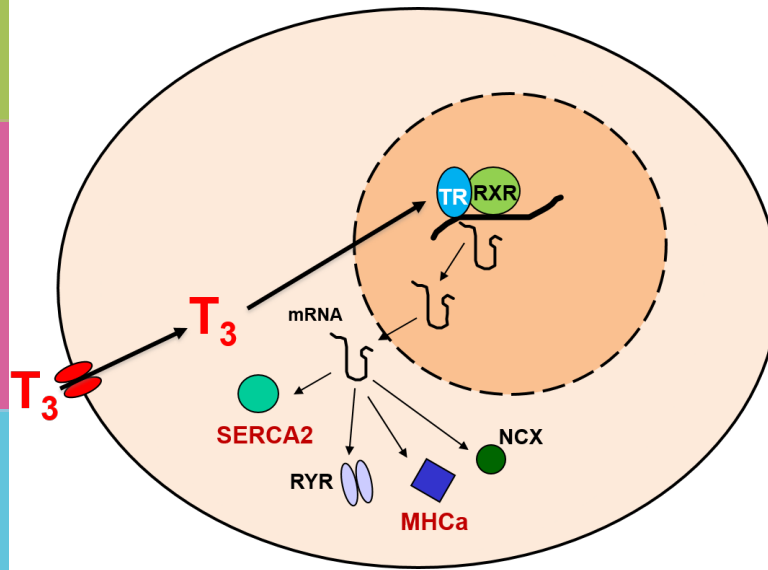
Atherosclerosis  
& Ischemic Syndromes



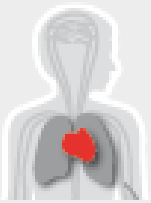
Diabetes & Metabolism



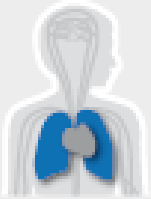
Microcirculation



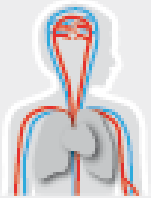
# Focus of research group: Cardiac TH action



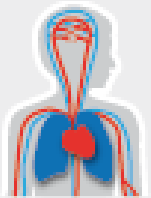
Heart Failure & Arrhythmias



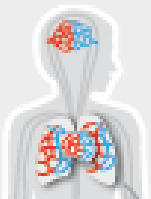
Pulmonary Hypertension & Thrombosis



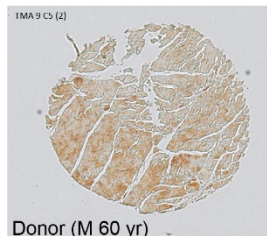
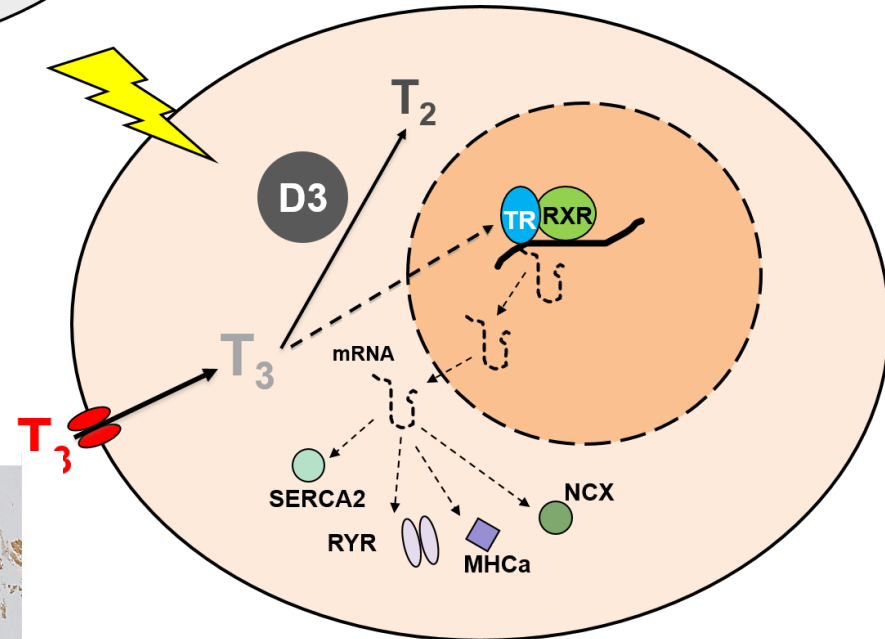
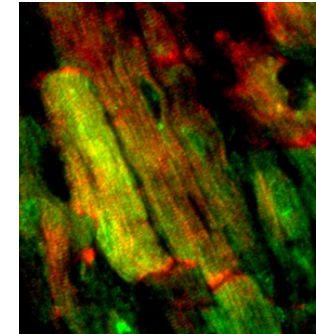
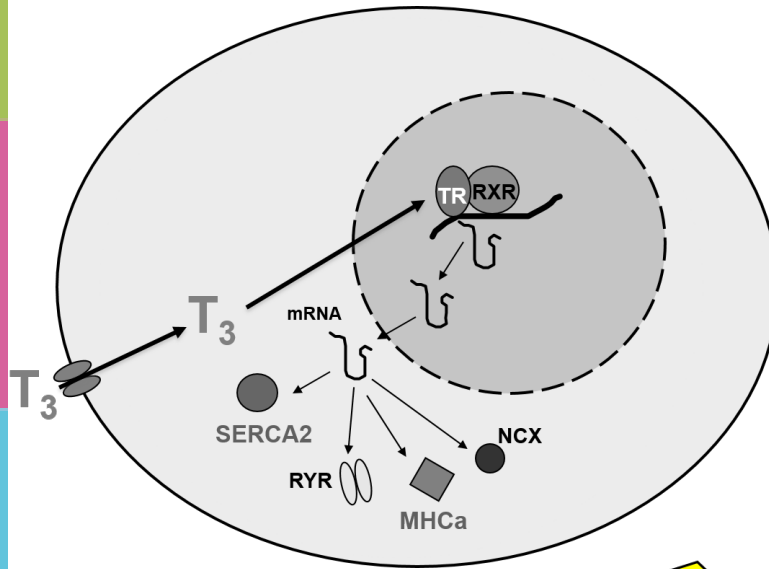
Atherosclerosis & Ischemic Syndromes



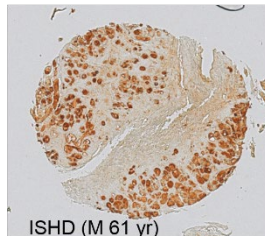
Diabetes & Metabolism



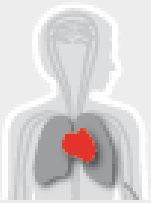
Microcirculation



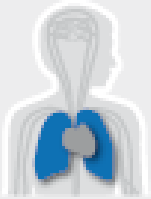
Donor (M 60 yr)



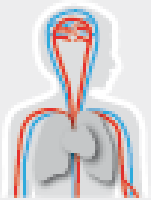
ISHD (M 61 yr)



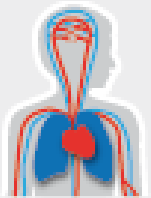
Heart Failure & Arrhythmias



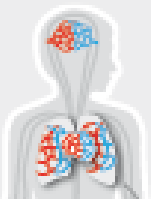
Pulmonary Hypertension  
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Diabetes & Metabolism



Microcirculation

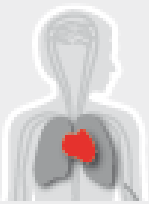
# Focus of research group (II)

## Current expertise

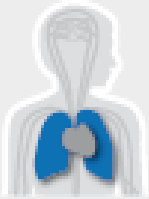
- *In vivo* analysis of cardiac TH transcriptional activity
- Conditional, cardiac specific knock-out of Diodinase type 3 (Dio3)
- Standard molecular biological and tissue analyses

## Current funding

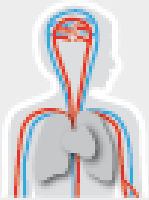
- No current external funding
- Commitment of GSK to develop Dio3 inhibitor in partnership



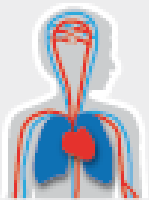
Heart Failure & Arrhythmias



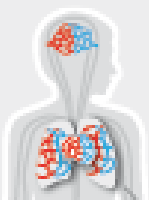
Pulmonary Hypertension  
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Diabetes & Metabolism



Microcirculation

# Future plans

## Next 5 years

- Optimize and analyze a model of ISO-induced cardiac remodeling and Dio3 expression
- Determine the time course and extent of Dio3-dependent remodeling
- Extend the TH and Dio3 analyses of human cardiac tissue (CHF/donor)

## Necessary infrastructure:

- Animal facility
- Labs for cardiac function analyses (echo/MRI/hemodynamics)

## Long term plan

- Include MI model
- Search for selective Dio3 blocker in collaboration with industry

## Collaboration in ACS

- No current collaboration