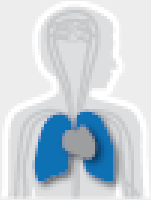
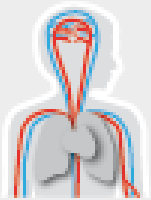


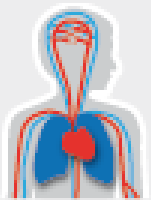
Heart Failure & Arrhythmias



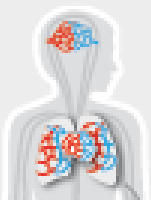
Pulmonary Hypertension
& Thrombosis



Atherosclerosis
& Ischemic Syndromes



Diabetes & Metabolism



Microcirculation

Focus of research group (I)

Name PI: **Bastiaan J Boukens**

Departments, UMC: **Medical Biology & Experimental Cardiology**

Size of research group:

- **1 Postdoc**
- **2 PhD candidates**
- **1 Technician**

Current mission

My research group strives at understanding cardiac arrhythmias by combining a wide range of research approaches including molecular and electrophysiological techniques.

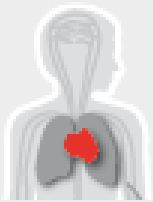
The experiments we perform centre around three main research goals:

1. Unravelling the arrhythmogenic mechanisms underlying J-wave syndromes.
2. Characterizing the evolutionary adaptations in cardiac electrophysiology
3. Determining the role of autonomic modulation in mechanisms of arrhythmias

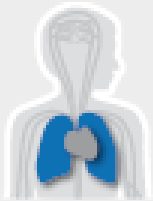
Vision

I think that the largely unexplored interplay between the autonomic nervous system and cardiac electrophysiological homeostasis has potential to provide various new angles for anti-arrhythmic strategies for a multitude of arrhythmogenic cardiac pathologies

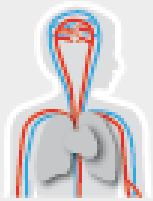
Focus of research group (II)



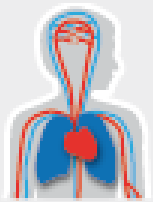
Heart Failure & Arrhythmias



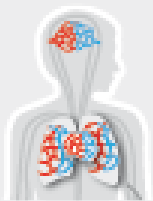
Pulmonary Hypertension & Thrombosis



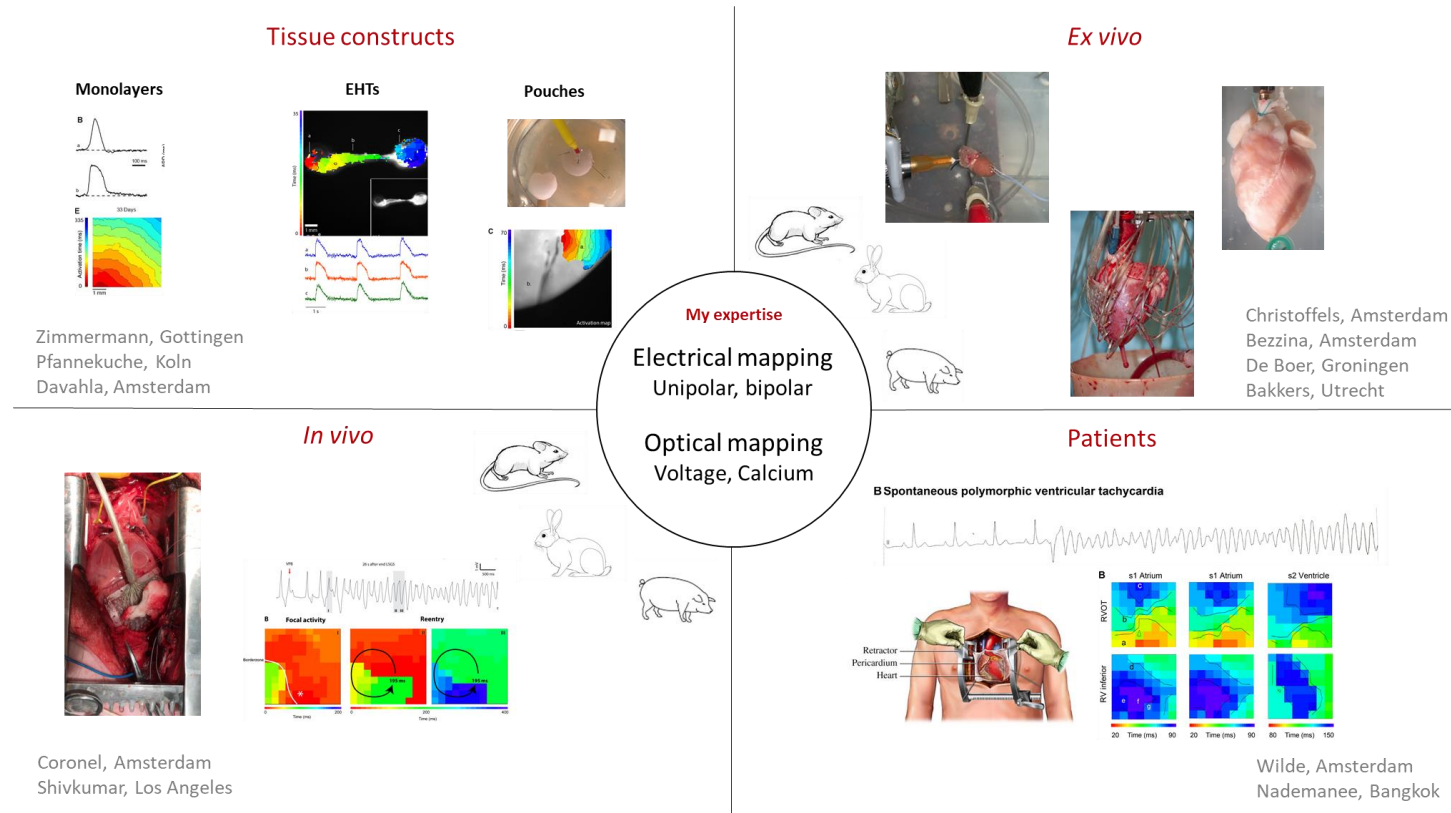
Atherosclerosis & Ischemic Syndromes



Diabetes & Metabolism

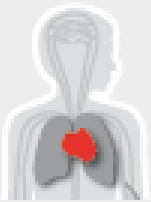


Microcirculation

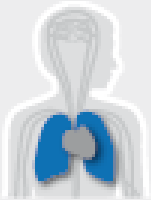


Current funding

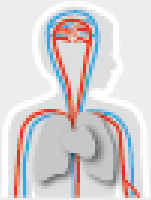
- Dutch Heart Foundation
- UCLA Cardiac Arrhythmia Center
- AMC-PPP (Boink)
- NWO OTP (Boink)



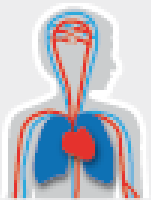
Heart Failure & Arrhythmias



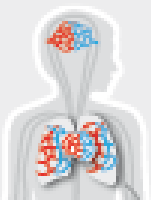
Pulmonary Hypertension
& Thrombosis



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& Ischemic Syndromes



Diabetes & Metabolism



Microcirculation

Future plans

Short term (1-2 year) plan

Plan:

To investigate the mechanism underlying J-waves syndromes

Necessary infrastructure:

- Patch clamp
- Calcium imaging
- Optical and electrical mapping

Long term (>2 year) plan

Plan:

To modulate neuronal activity to reduce ventricular arrhythmias

Necessary infrastructure:

Transgenic mouse facility, Electrophysiology (cell, intact heart and in vivo), Virus production, Optogenetics

Collaboration in ACS

Geert Boink, Connie Bezzina, Ruben Coronel, Vincent Christoffels