

Atherosclerosis & Ischemic Syndromes



Heart Failure & Arrhythmias



Pulmonary Hypertension
& Thrombosis



Atherosclerosis
& Ischemic Syndromes



Diabetes & Metabolism



Microcirculation

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Microcirculation

Focus of research group (I)

Name PI: Bert-Jan van den Born (b.j.vandenborn@amc.nl)

Department, UMC: Vascular Medicine and Public Health, location AMC
(since Oct 2018, connected to the HELIUS cohort)

Size of research group: 8 PhDs, 4 Msc

Current mission, vision and aims

To better understand the biological mechanisms that underlie ethnic disparities in (risk factors for) cardiovascular disease

Learn from the large ethnic disparities that are present by extreme population phenotyping of complex traits (ie hypertension, diabetes)

Find novel pathways and/or mechanisms that help to further elucidate ethnic differences in cardiovascular disease



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Focus of research group (II)



Healthy Life in an Urban Setting (HELIUS) study

Population based study, Dpt of Public Health & GGD

N=25.000 with equal representation of 6 largest ethnic groups

Data collection from 2011-2015, 2nd round 04-2019

CV risk factors, body composition, non-invasive HD, ECG
blood & urine collections, microbiome, GWAS

Large differences in prevalence of CVD risk factors

Current focus on: outcome data & nature of these differences



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Focus of research group (III)

Current expertise

Hypertension and CV risk prediction

Non-invasive hemodynamics (pulse wave analysis/-velocity)

Sympathetic nervous system/renal hemodynamics/non-osmotic sodium binding

Collaboration in ACS

C.O. Agyemang, M. Snijder, K. Stronks (Dept. of Public Health), EP Moll van Charante (Dept. of General Practice)

M. Nieuwdorp, GK Hovingh, ESG Stroes (Dept. of Vascular Medicine)

L Vogt, M Vervloet (Dept of Nephrology)

RPL Peters, R de Winter, JJ Piek (Dept. of Cardiology) & J Reekers (Dept. of Radiology)

E van Bavel, E Bakker (Dept of Biophysics)

Current funding

TKI/Holland Health, NWO/ZonMw, Philips (in kind)



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Future plans

Short term (1-2 year) plan

Valorization of existing HELIUS data

Further research in particular groups in concert with ACS partners
~ basal scientists

Acquire funding for future HELIUS data collection

Long term (>2 year) plan

Gain further mechanistic insight in ethnic differences in CVD

Future collection of outcome data (planned follow-up 30 yrs)