Cardiorenal Winter School
of the graduate schools
SFB TRR219 IRTG &
Marie-Curie ITNs CaReSyAn &
INTRICARE and Cardiorenal Retreat

Functional analyses
of kidney-heart crosstalk

5th - 7th February, 2020
Contact/Organizer

University Hospital RWTH Aachen
Institute for Molecular Cardiovascular Research (IMCAR)
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Dr. Heidi Noels

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Meeting venue

Lufthansa Seeheim

Lufthansa Seeheim Conference Hotel
Lufthansaring 1
64342 Seeheim-Jugenheim, Germany
+49 69 696 13 1000
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Where are the....

...meals: Restaurant „eat&meet“

...presentations and posters: „Boardmeeting area“
### Program Cardiorenal Winter School and Annual Retreat 2020

**Wednesday, 05 February 2020**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>7.30</td>
<td>Bus departure in Aachen, University Hospital</td>
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<tr>
<td>11.30 - 13.00</td>
<td>Arrival and lunch, hang up posters</td>
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<tr>
<td>13.15 - 13.30</td>
<td>Welcome (brief overview of the program)</td>
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<td></td>
<td>Claudia Goettsch (SFB), Heidi Noels (CaReSyAn) and Wilhelm Jahnen-Dechent (INTRICARE)</td>
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<td>Chair: Anne Babler and Sebastian Maxeiner</td>
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<tr>
<td>13.30 - 14.15</td>
<td>Analyses of pathological mechanisms and organ function: approaches within our own consortia (10’+5’)</td>
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<tr>
<td>14.15 - 14.55</td>
<td>Animal models of chronic kidney disease and the cardiorenal syndrome (15’+5’)</td>
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<tr>
<td>14.55 - 15.15</td>
<td>Cutting edge technology I (15’+5’)</td>
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<td>15.15 - 15.45</td>
<td>Coffee Break and Check-In</td>
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<td>15.45 - 18.00</td>
<td>Poster presentation/discussion</td>
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### Sofia de la Puente Secades

**Vitamin K and vascular calcification: why there is a deficiency in CKD?**

**Robert Dzhanaev**


**Katja Ermert**

Characterization of renal microvasculature in chronic kidney disease.

**Ana Amaya Garrido**

The role of calprotectin in vascular calcification.

**Maurice Halder**

Tracing the cellular origin of in-stent restenosis.

**Tianlin He**

Urinary collagen type I peptides predict cardiovascular outcome in heart failure.

**Christian Hemmers**

Identification of cardiokines influencing fibroblasts and vasoactivity.

**Juliane Hermann**

Multimodal mass-spectrometric imaging of whole organs.

**Marina Heuschkel**

Bioinformatics predict novel mechanisms in calcific aortic valve disease.

**Jonas Heyn**

Interplay of organelles in vascular calcification.

**Anika Himmelsbach**

The role of the VPS10 domain receptor sortilin in cardiovascular calcification in chronic kidney disease.

**Sam Hobson**

Increased senescent cell burden and modified NRF2 expression in a model of uremic vascular calcification.

**Sina Köppert**

Cellular clearance of calciproteins depends on their maturation state and crystallinity.

**Michael Kohlhaas**

Rapid fire presentations:

Maryam Amini
Differential calcium signals in CKD derived monocytes, a potential role in inflammasome formation.

Andrea Büscher
Calciprotein particles (CPP) regulate calcification.

Eva Harlacher
Alterations of chemokine levels contributing to remodeling after myocardial infarction in CKD.

Barbara Klinkhammer
Cellular and molecular mechanisms of renal injury in 2,8-dihydroxyadenine nephropathy.

Pascal Mann
The SGLT2 inhibitor ertugliflozin reduces cardiac fibrosis and modulates cardiac substrate metabolism in a mouse model of cardiac hypertrophy.

Sebastian Maxeiner
Complement activation leads to C3 and C5 dependent prothrombotic alterations of fibrin clots.

Bilal Mir
PIKfyve inhibition reduces the calcification potential of vascular smooth muscle cell-derived extracellular vesicles.

Sumra Nazir
Aryl hydrocarbon receptor: from intestinal sensor to novel player in immun modulation and vascular disease?

Fabian Peisker
Reprogramming of the immune system in chronic kidney disease as a potential driver of cardiovascular disease.

Poster presentations:

Hoda Alibiglou
Molecular machinery that functionally regulates TNAP activation in calcifying smooth muscle cells.

Maria Chiara Arrivas
The role of gastric inhibitory peptide (GIP) in sepsis and septic cardiomyopathy.

Constance Baaten
Platelet function in CKD.

Anne Babler
Dissecting mechanisms of adventitial progenitor recruitment driving vascular calcification in CKD.

Giulia Ilaria Bagarolo
Identification and validation of peptide biomarkers in a cohort of CKD patients through LS-MS and bioinformatics tools.

Guzide Bender
A new bend in the rood: novel interactions between HDL and chemokine receptors.

Shruti Bhargava
Active site of calcification blocking factor.

Jeppe Christensen
Data anonymization and prediction models for proteomics data.

Carina Ciliox
The role of cytoskeleton dynamics in intimal and medial calcification.

Irene Cortijo
Participation of uremic retention solutes on vascular calcification. The effects of lanthionine and H2S as well as glutathione, diallyl disulfide and diallyl trisulfide.

Program Cardiorenal Winter School and Annual Retreat 2020

Wednesday, 05 February 2020

18.00 - 19.20 Cutting edge technology II (15' + 5')

Chair: Barbara Klinkhammer and Alexander Nickel

18.00-18.20 Single cell RNA sequencing
Rafael Kramann (UKA)

18.20-18.40 Insights into calcium signaling
Barbara Niemeyer (USAAR)

18.40-19.00 Methodological aspects of molecular imaging using PET and PET-CT
Felix Mottaghy (UKA)

19.00-19.20 Protein-protein interaction
Emiel van der Vorst (UKA)

19.20 - 19.30 Announcement of poster presentation finalists

19.30 - 19.45 DFG campaign: Ich habe mich #fürdasWissen entschieden/ Because research matters
Sandra Knarren (UKA)

From 19.45 Dinner and networking
Thursday, 06 February 2020

07.30 - 08.30 Breakfast

Chair: Mathias Hohl and Constance Baaten

08.30 - 09.15 Poster presentation by the four finalists (5´+5´)

09.15 - 10.10 Early career program (5´+5´)
Rapid fire presentations

Sumra Nazir
Bilal Mir
Andrea Buscher
Pascal Mann
Maryam Amini

10.10 - 10.30 Coffee Break

10.30 - 11.10 Early career program (5´+5´)
Rapid fire presentations

Barbara Klinkhammer
Fabian Peisker
Eva Harlacher
Sebastian Maxeiner

11.10 - 11.40 Peer-to-peer (P2P)
Andrea Buscher, Anika Himmelsbach, Fabian Peisker (UKA)

11.40 - 12.00 Award ceremony for best poster presentation/
best rapid fire presentation

12.00 - 13.00 Developing a research career - International trends &
gender challenges: Equal opportunity session
Beate Scholz

13.00 - 14.00 Lunch with opportunity for discussion with Beate Scholz

END of Cardiorenal Winter School

Program Cardiorenal Winter School and Annual Retreat 2020

Thursday, 06 February 2020

14.15 - 15.45 Keynote lecture session 1

Chair: Danilo Fliser

14.15-15.00 Integrative Analysis of Prognostic Biomarkers
Derived from Multi-omics Panels
Andreas Heinzel, Medical University of Vienna

15.00-15.45 Cardiovascular comorbidity in children with CKD
and transplantation-results of the 4C/4C-T study
Anette Melk, Hannover Medical School

15.45 - 16.15 Coffee Break

16.15 - 18.30 Keynote lecture session 2

Chair: Nikolaus Marx

16.15-17.00 Novel mechanisms of cardiovascular repair and
regeneration
Stefanie Dimmeler, Frankfurt University

17.00-17.45 Tissue Engineering in CVD
Carlijn Bouten, Eindhoven University

17.45 - 18.30 Mitochondria as targets of cardioprotection
Derek Hausenloy, National Heart Centre Singapore

18.30 Group picture

From 19.00 Dinner (restaurant) and networking (bar)

END of Cardiorenal Winter School