Annual meeting
of the
Working Group on Myocardial Function
and the
Working Group on Cell Biology
Villa Monastero, ITALY
April 14 to 17, 2011

“Signal transduction and beyond:
from targets to new treatments in cardiac disease”

Thursday 14th April

11.00 – 16.00  Nucleus Meetings: Part 1

16.25  Denise Hilfiker-Kleiner (Hannover, G): Welcome and opening remarks

Session I: News and views on microRNA
Chair: Johann Bauersachs (Hannover, G)/ Gianluigi Condorelli (Milan, I)

16.30 – 17.00  Thomas Thum (Hannover, G) mi-RNA-based therapeutics: where do we go?

17.00 – 17.30  Kai C. Wollert (Hannover, G) GDF-15 - acting through a novel anti-inflammatory mechanism - promotes survival after myocardial infarction

17.30 – 18.10  2 Oral Presentations:
Leonardo Elia (San Diego, USA): Role of microRNA-143 and -145 in cardiovascular diseases
Paula da Costa Martins (Maastricht, NL): Regulation of pathologic cardiac remodeling by miR-199 family members

19.30  Dinner
**Friday 15th April**

**Session II: Genetic/Epigenetic effects in cardiac pathophysiology**  
Chair: Angela Clerk (Reading, GB)/ Stephane Heymans (Maastricht, NL)

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<th>Time</th>
<th>Speaker</th>
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<tr>
<td>09.00 – 09.30</td>
<td>Johannes Backs (Heidelberg, G)</td>
<td>Epigenetic effects in cardiac pathophysiology</td>
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<td>09.30 – 10.00</td>
<td>Stuart Cook (London, GB)</td>
<td>Genetic background in experimental cardiovascular models</td>
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<td>10:00 – 10:40</td>
<td>2 Oral Presentations</td>
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<td>Melanie Hoch (Hannover, G)</td>
<td>Interactions of endogenous EPO/EPOR and CCR2 signaling systems in the cardiac niche regulate the endothelial differentiation of cardiac progenitor cells</td>
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<td>Claudia Noack (Hamburg, G)</td>
<td>Krueppel-like factor 15 controls cardiac progenitor cell fate during aging and stress induced remodeling in the adult heart via inhibition of β-catenin</td>
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<td>10.40 – 11.00</td>
<td>Coffee break</td>
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**Session III: Mitochondrial biogenesis and dynamics**  
Chair: Rainer Schulz (Essen, G)/ Fabio Di Lisa (Padua, I)

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<tr>
<td>11.00 – 11.30</td>
<td>Stephane Heymans (Maastricht, NL)</td>
<td>Role of inflammation-microRNAs in heart failure</td>
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<td>11.30 – 12.00</td>
<td>Luca Scorrano (Padua, I)</td>
<td>Mitochondria-SR interaction</td>
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<td>12.00 – 12.40</td>
<td>2 Oral Abstract presentations</td>
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<td>Mélanie Paillard (Lyon, F)</td>
<td>Sphingosine-1-Phosphate Produced by Sphingosine Kinase 2 in the Mitochondria Interacts with Prohibitin 2 to Regulate Complex IV Assembly and Respiration</td>
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<td>Marisol Ruiz-Meana (Barcelona, E)</td>
<td>Preconditioning of isolated mitochondria</td>
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<td>12.40 – 13.40</td>
<td>Lunch</td>
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Session IV: Moderated Poster session (I)
guided by Charles Steenbergen (Baltimore, USA) and Ralph Knoell (London, GB)

13.40 – 17.20 Poster session (see page 6-7)

17.20 – 17.40 Coffee break

Session V: Mitochondria and cardioprotection
Chair: Michel Ovize (Lyon, F)/ Gerd Heusch (Essen, G)

17.40 – 18.10 Derek Hausenloy (London, UK): Modulation of mitochondrial morphology and cardioprotection

18.10 – 18.40 Sandrine Lecour (Cape Town, SA): The novel pro-survival SAFE pathway – importance of mitochondria?

18.40 – 19.20 2 Oral Abstract Presentations

Michael Kohlhaas (Homburg, D): STAT3 preserves dynamic control of mitochondrial NAD(P)H redox state to prevent ROS-production after chronic ß-adrenergic stimulation in vivo

Anna Fusco (Neapel, I): MITOCHONDRIAL LOCALIZATION A NOVEL ROLE FOR GRK2 IN THE REGULATION OF OXIDATIVE METABOLISM

19.30 Dinner
Saturday 16th April

Session VI: “How to” sessions  
Chair: Leon J. de Windt (Maastricht, NL)/ Guido Tarone (Turin, I)

08:45 – 09.20 Thorben König (Hannover, G): ECG Telemetry
09.20 – 09.55 Oliver Müller (Heidelberg, G): AAV-vectors for cardiac gene transfer
09.55 – 10.10 Coffee break

Session VII: Moderated Poster session (II)  
guided by Barbara Casadei (Oxford, GB)/ Guido Iaccarino (Naples, I)

10.10 – 12.10 Poster session (see page 8-9)

Session VIII:  
Chair: Peter Ferdinandy (Szeged, H) / Adelino Leite-Moreira (Porto, P)

12.10 – 13.00 Special Lecture: Heiko von der Leyen (Hannover, G): Design and Realization of Clinical Trials - from bench to bedside
13.00 –14.00 Lunch

Free afternoon (hiking with Jean-Luc and Denise, boat trip with Michel)
Sunday 17th April

Session IX: Novel aspects of basic and applied NO/cyclic GMP biology in cardiovascular disease
Chair: Denise Hilfiker-Kleiner (Hannover, G)/ Jean-Luc Balligand (Brussels, B)

09.00 – 09.30 Barbara Casadei (Oxford, GB): Altered EC coupling from uncoupled cardiomyocyte NOS

09.30 – 10.00 Ulrich Martin (Hannover, G): iPS cells: just another stem cell or groundbreaking development for future cellular therapies?

10.00 – 10.30 Elizabeth Murphy (Baltimore, USA): Identification of new nitrosylated proteins in the cardiac proteome: potential role in pathology

10.30 – 10.50 Coffee Break

Session X: Special Lecture
Chair: Adelino Leite-Moreira (Porto, P)/ Ralph Knoell (London, GB)

10.50 – 11.40 David Eisner (Manchester, GB): A fresh look at EC coupling mechanisms affecting inotropism and relaxation in HF

11.40 Michel Ovize (Lyon, F): Closing remarks and farewell

13.00 – 17.00 Nucleus Meetings: Part 2

(14.30 – 14.50 Incl. Coffee break)

Organization:
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Session IV: Moderated Poster session (I)
guided by Charles Steenbergen (Baltimore, USA) and Ralph Knoell (London, GB)

Friday 15th April - 13.40 – 17.20

1. Anna Pia Plazzo: Functional role of the specific neuro-cardiac interaction on cardiomyocyte β-AR activation

2. Tania Zaglia: Resting cardiac sympathetic activity regulates cardiomyocyte size by suppressing MuRF-1 expression

3. Tamas Csont: Biglycan: a potential cardioprotective therapy?

4. Nerea Hermida-Blanco: Statins prevent LV remodeling through anti-fibrotic effects rather than direct effects on cardiomyocytes in a mouse model of metabolic syndrome

5. Jan Reil: Ivabradine improves aortic distensibility as well as left ventricular systolic and diastolic function in diabetes type 2 (db-) mice

6. Oktay Tutarel: ADMA IS A MORE SENSITIVE BIOMARKER FOR HEART FAILURE IN ADULTS WITH CONGENITAL HEART DISEASE THAN NT-proBNP

7. Péter Bencsik: The role of nitrosative stress and matrix metalloproteinases in ischemic heart disease patients

8. Michela Noseda: Clonal analysis of adult mouse cardiac progenitor cells

9. Martinus Oerlemans: Inhibition of RIP1-mediated necrosis ameliorates myocardial ischemia-reperfusion injury and attenuates adverse remodeling

10. Jean-Luc Balligand: Inhibition of the endogenous Wnt/beta-catenin signalling pathway mediates differentiation of cardiac resident progenitor cells into cardiomyocytes

11. Alexander Nickel: Mitochondrial transhydrogenase is a key regulator of antioxidative capacity in cardiac myocytes

12. Roberto Gaetani: Cardiac tissue engineering by using tissue printing technology and human Cardiac progenitor Cells


14. Ann Friart: Paracrine NO potentiates the differentiation of adult cardiac resident stem cells in co-culture with cardiac myocytes
15. Julien Auquier: *The AMP-activated protein kinase improves insulin-sensitivity in the heart by multiple molecular mechanisms*

16. Mechthild Westhoff-Bleck: *Gender related differences of the systemic right ventricle after atrial switch operation*

17. Henning Kempf: *Analysis and control of MAPK pathway activity to improve cardiomyogenic differentiation of pluripotent human stem cells with small molecules*

18. Aurélie Timmermans: *The new AMPK activator A-769662 does not stimulate glucose uptake alone but potentiates effects of others AMPK activators in adult cardiomyocytes*

19. Anna Chernova: *The polymorphism of connexin 40 gene is associated with hereditary sick sinus syndrome*

20. Krijn Vrijsen: *Cardiomyocyte Progenitor Cell Derived Exosomes Stimulate Migration Of Endothelial Cells*

21. Elisabetta Borchi: *Monoamine oxidase activity and oxidative stress markers in left and right ventricles from non failing and failing human hearts*

22. Mathias Hohl: *Nuclear export of HDAC4 mediates histone demethylation at H3K9 in the promoter region of ANF in response to elevated cardiac preload*

23. Laura Zelarayan: *The cardiac specific beta-catenin interaction partner, four-and-a-half LIM-protein 2 (FHL2) promotes cardiac differentiation in vitro*

24. Magali Balteau: *Caveolar compartmentalisation of signaling elements required for hyperglycemia-induced ROS production through NADPH oxidase in cardiomyocytes*

25. Magali Balteau: *NADPH oxidase activation by hyperglycemia in cardiomyocytes is independent of glucose metabolism but requires the sodium/glucose cotransporter, SGLT-1*

26. Chris McDermott-Roe: *Endonuclease G regulates mitochondrial biogenesis, tissue steatosis and cardiac hypertrophy*

27. Mauro Sbroggio: *Melusin triggers cardiomyocyte hypertrophy and survival activating MEK-ERK1/2 pathway through Focal Adhesion Kinase and the MAPK scaffold protein IQGAP1*

28. Ines Falcão-Pires: *Diabetes mellitus exacerbates diastolic dysfunction in aortic stenosis patients: importance of myocardial fibrosis, advanced glycation endproducts and resting tension*

29. Byambajav Buyandelger Buyandelger: *MLP, MLP-interacting proteins and heart failure*
30. Faye Drawnel: Interaction between the transcription factors NFAT and AP1 allows integration of cellular signalling pathways during cardiac hypertrophy

31. Carolina Nunes França: Effect of rosuvastatin and clopidogrel alone and combined in endothelial progenitor cells and endothelial microparticles

32. Carolina Nunes França: Influence of different hipolipemiant terapies in endothelial progenitor cells and microparticles levels in patients with subclinical carotid disease

33. Fatih Arslan: Exosomes target multiple mediators to reduce cardiac injury

34. Fatih Arslan: Haptoglobin deficiency reduces PAI-1 activity, microvascular integrity and enhances adverse remodeling after myocardial infarction

35. Rosalinda Madonna: Telomerase and Myocardin-A synergistically regulates survival and expression of promyogenic transcription factors in mesenchymal stem cells of bone marrow and adipose tissue

36. Rosalinda Madonna: Vascularization in human induced pluripotent stem cells under hyperosmolarity induced by high glucose

37. Rosalinda Madonna: Co-Activation of NF-κB and Myocardin/Serum Response Factor in Canine Cardiac Myoblasts Exposed to High Levels of Insulin

38. Tomasz Bonda: Expression and activity of Src is upregulated in atrial tissue of patients with postoperative atrial fibrillation

39. Karol Kaminski: Transcriptional and posttranscriptional regulation of CCN genes in experimental model of heart failure

40. Angela Serena Maione: THE ROLE OF CaMKII IN THE REGULATION OF CARDIAC HYPERTROPHY PROVIDES A NOVEL THERAPEUTIC TARGET

41. Ludovic Gomez: Failure to precondition Sphingosine Kinase 2-KO mice: Mitochondria Not without RISK

42. Luis Bras Rosario: Comparative profiling of microRNA expression in embryos and adult bone marrow and cardiac progenitor cells identifies distinctive markers

43. Roberta De Rosa: FOXO3a-Atrogin-1 pathway in human heart failure

44. Roberta De Rosa: Myocardial expression of FOXO3a-Atrogin-1 pathway in human heart failure
45. Michele Ciccarelli: G-protein-coupled receptor kinase-2 (GRK2) induces insulin resistance in cardiac myocytes

46. Britta Stapel: Low cardiac STAT3 expression is a pre-disposition for heart failure in response to β- but not α-adrenergic stimulation

47. Marie Fertin: New biomarkers of cardiac remodeling after myocardial infarction by proteomic analysis in comparison with B-type natriuretic peptide

48. Angela Lombardi: GLUCOSAMINE-INDUCED ENDOPLASMIC RETICULUM STRESS: NOVEL MOLECULAR APPROACHES

49. Gaetano Santulli: A BETA 2 ADRENERGIC RECEPTOR MECHANISM IN AGE-RELATED IMPAIRED INSULIN SECRETION

50. Arash Haghikia: The Ubiquitin-conjugating enzyme Ube2o protects against enhanced fibrosis and dilated cardiomyopathy after myocardial infarction: Regulation by gp130-JAK/STAT signaling

51. Uma Mukherjee: The Novel Role of DJ-1 in Cardioprotection

52. Emilie Dubois: Role of PKC epsilon-dependent phosphorylation of troponin T in cardiac contractility during heart failure

53. Vikram Sharma: BNIP3 - A potential target of ischaemic preconditioning

54. Carlo Tocchetti: Subtle reductions of left ventricular function are detected by speckle tracking echocardiography in antineoplastic therapy-induced cardiotoxicity

55. Hannah Whittington: Susceptibility to infarction in an aging, diabetic rat model

56. Vivek Krishna (Giuseppe D Norata): MicroRNA 143-145 deficiency is associated with impaired vascular function

57. Evasio Pasini: mTOR EVALUATION AS MARKER OF IMPAIRED INTRACELLULAR SIGNALING TO QUANTITY CARDIOVASCULAR RISK FACTORS IN THE METABOLIC SYNDROME

58. Adelino Leite-Moreira: Diastolic tolerance to afterload is decreased in coronary patients with systolic dysfunction