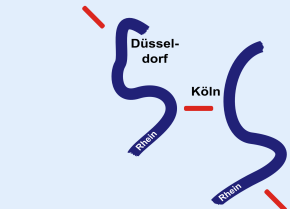




Organization:
Jan Riemer (Cologne) and
Carsten Berndt (Düsseldorf)



**3rd meeting of the study group
redox biology of the German Society
for Biochemistry and
Molecular Biology (GBM)**

4th and 5th of July 2016
in Düsseldorf, Haus der Universität



Sunday, 3rd of July

19.00 get together
"Zum Schlüssel", Altstadt, Bolkerstr. 41-47

Monday, 4th of July

**8.45 arrival and registration at Haus der Universität,
welcome coffee**

- 9.15 Jan Riemer and Carsten Berndt say "hello"
- 9.25 Helmut Sies (Düsseldorf) "Redox research in Düsseldorf and the Rheinland"

Monday, 4th of July cont.

**Session 1 Cysteines and Mechanisms
(discussion leader: Jan Riemer, Cologne)**

- 9.50 *chalk talk*: Johannes Herrmann (Kaiserslautern) meets the amino acid cysteine
- 10.20 Loes van Dam (Utrecht) "The peroxiredoxin redox relay in cellular redox signal specificity"
- 10.35 Fulvio Ursini (Padova) "Mechanism of GPx4 on phospholipids"
- 10.50 Irina Ingold (Munich) "Se-based GPx4 catalysis is evolutionary maintained to defeat peroxide-induced ferroptosis"
- 11.05 Marcel Deponte (Heidelberg) "A glutathione activator & a glutathione scaffold site both determine Grx catalysis"
- 11.20 Guenter Schwarz (Cologne) "Cysteine-catabolism in health and disease"

11.50 Lunch

**Session 2 Small Molecules
(discussion leader: Carsten Berndt, Düsseldorf)**

- 13.00 *chalk talk*: Luise Krauth-Siegel (Heidelberg) meets small molecular weight thiols
- 13.30 Jérémy Couturier (Nancy) "Deciphering the molecular mechanisms of sulfur trafficking in plants"
- 13.45 Jan-Ulrik Dahl (Ann Arbor) "The anti-inflammatory drug mesalamine affects bacterial polyphosphate accumulation"
- 14.00 Frank Albrecht (Aachen) "The Allicin-yeast redoxome"
- 14.15 Mélanie Morel-Rouhier (Nancy) "Atypical features of glutathione transferases"
- 14.30 Joris Messens (Brussels) "Mycothiol"

15.00 coffee break

**Session 3 Redox and Metabolism
(discussion leader: Regina Brigelius-Flohé, Potsdam)**

- 15.30 *chalk talk*: Tobias Dick (Heidelberg) meets the principle of redox disproportionation in metabolism
- 16.00 Ulrich Mühlhoff (Marburg) "Contribution of thiol redox chemistry to mitochondrial and cytosolic iron-sulfur biogenesis"
- 16.15 Bettina Warscheid (Freiburg) "Mitochondria, ROS, and cellular responses"

Session 3 cont.

- 16.30 Sayed Isaac Hashemy (Mashad) "Tissue distribution and activity of TrxR in laryngeal cancer"
- 16.45 Bruce Morgan (Kaiserslautern) "Real-time monitoring of basal H₂O₂ levels with Prx-based probes"
- 17.00 Peter Hildebrandt (Berlin) "Interfacial processes of proteins - electron transfer and ion transport"

18.00 Poster session with drinks and food

Tuesday, 5th of July

**Session 4 Reactive Species
(discussion leader: Andreas Meyer, Bonn)**

- 9.00 *chalk talk*: Wilhelm Stahl (Düsseldorf) meets reactive O, N, and S species
- 9.30 Ivan Bogeski (Homburg) "A Ca²⁺-redox feedback loop controls phagocyte oxidative burst and bacterial killing"
- 9.45 Ingrid Span (Düsseldorf) "Biological Co-S-based systems as potential water oxidation catalysts"
- 10.00 Petra Bauer (Düsseldorf) "ROS-mediated integration of iron deficiency and stress signaling networks"
- 10.15 Sebastian Longen (Frankfurt) "A proteomic approach for the identification of persulfides in mammalian cells"
- 10.30 Veronica Maurino (Düsseldorf) "H₂O₂ signaling in plants"

11.00 poster awards

11.15 coffee break/Lunch

**Session 5 Redox Signaling
(discussion leader: Helmut Sies, Düsseldorf)**

- 12.30 *chalk talk*: Markus Schwarzländer (Bonn) meets redox regulation in plant organelles
- 13.00 Brandán Pedre Perez (Brussels) "The ox-fate in *C. glutamicum* OxyR"
- 13.15 Sasha de Henau (Utrecht) "Cellular polarization as a model to study spatiotemporal redox regulation"
- 13.30 Anna Kipp (Potsdam) "Specificity of the isoforms GPx1 and GPx2 in redox regulation"
- 13.45 Manuela Gellert (Greifswald) "A thiol-disulfide switch in the regulation of cytoskeletal dynamics"
- 14.00 Tobias Dansen (Utrecht) "Redox control of the cell cycle"

14.30 farewell coffee

Poster Session

1. Amponsah (Kaiserslautern), Morgan Investigation of the causal relationship between redox changes and cellular time-keeping
2. Aplak (Düsseldorf), Sack, Brenneisen Redox-active cerium oxide nanoparticle (CNP) as a new therapeutic tool in treatment of skin cancer
3. Bangash (Bonn), Meyer Secondary active transport of glutathione across the plasma membrane
4. Bogacz (Heidelberg), Schaffroth, Krauth-Siegel Mechanism of iron-dependent death in trypanoxin peroxidase Pxl-III lacking *Trypanosoma brucei*
5. Borlinghaus (Aachen), Bolger, Slusarenko The genetic basis of allicin resistance in a highly resistant *Pseudomonas fluorescens* isolate
6. Brenig (Düsseldorf), Schwarzländer, Stühler, Poschmann Analysis of reversibly oxidised cysteine proteins in a model of neuronal differentiation
7. Buday (Munich), Ingold, Yefremova, Doll, Angeli, Habich, Riemer, Conrad Addressing the role of glutathione peroxidase 8 (Gpx8) in the unfolded protein response and lipotoxicity
8. Calabrese (Cologne), Riemer The strange case of Dr. Cytosol and Mr. Matrix
9. Diederich (Heidelberg), Ruppert, Finkenzeller, Krauth-Siegel Stress-dependent protein thiol oxidation in trypanosomes
10. Ebersoll (Heidelberg), Musunda, Dirdjaja, Krauth-Siegel *Trypanosoma glutaredoxin 2* - an essential protein in the mitochondrial intermembrane space
11. Erdogan (Cologne), Riemer Redox processes in IMS protein import and complex I assembly
12. Grube (Düsseldorf), Brenig, Stühler, Poschmann Redox proteomics based identification of reversible cysteine modifications in mouse muscle cells
13. Gruhlke (Aachen), Leontiev, Uebachs, Schlembach, Weiß, Gollwitzer, Slusarenko Activation of the yeast YAP1-transcription factor by Allicin from Garlic (*Allium sativum*)
14. Gütle (Freiburg), Roret, Müller, Couturier, Einsle, Reski, Jacquot Redox regulation of photosynthesis: Biochemical and structural analysis of two CBC enzymes
15. Hartmann (Mainz), Schindeldecker, De Giacomo, Moosmann Lipophilic thiols cause oxidative proteotoxicity and lipotoxicity *in vitro* and induce premature aging *in vivo*
16. Hanschmann (Düsseldorf), Trnka, Hudemann, Lorenzen, Mullen, Lillig Extracellular functions of Thioredoxin family proteins

17. Hildebrandt (Düsseldorf), Poschmann, Stühler, Götz, Aktas, Berndt Glutaredoxin-dependent thiol switches in neurogenesis
18. Höhne (Cologne), Riemer Med29 - a nuclear protein as an unconventional Mia40 substrate
19. Hornsveid (Utrecht), Smits, Meerlo, van Amerfoort, Derksen, Burgering, Dansen Tuning FOXO activity is essential for tumorigenesis
20. Koch (Cologne), Riemer Human AK2 is a substrate of Mia40
21. Lennicke (Halle), Jahn, Hochgräfe, Massa, Gellert, Wessjohann, Lichtenfels, Seliger Modulation of MHC class I surface antigen expression in tumor cells by methylselenic acid
22. Li (Göttingen), Muthreich, Thurow, Gatz Plant-specific glutaredoxin ROXY9 regulate hyponastic growth by inhibiting TGA1 function
23. Lillig (Greifswald) Engineering the substrate specificity of thioredoxin family proteins
24. Moseler (Bonn), Poschet, Wirtz, Hell, Meyer Diminished activity of mitochondrial FeS-coordinating GRXS15 causes pronounced metabolic changes
25. Müller, Eller, Albrecht, Prochnow, Kuhlman, Bandow, Slusarenko, Leichert (Bochum) Allicin from garlic causes thiol stress in *E. coli*
26. Murschall (Cologne), Riemer Lto1 - oxidizing proteins in the chloroplast?
27. Nietzel (Bonn), Mostertz, Meyer, Hochgräfe, Schwarzländer Kick-start of energy metabolism for seed germination involves a global thiol-switch reset in the mitochondria
28. Reiter (Aachen), van der Linden, Levina, Klaas, Dörner, Müller, Martin, Slusarenko Allicin as an addition to conventional antibiotics?
29. Schilasky (Bonn), Aller, Meyer Diminished activity of ER thiol oxidases ERO1 and ERO2 in *Arabidopsis thaliana* highlight a link between oxidative protein folding and ethylene signaling
30. Sobek (Düsseldorf), Böge Redox dependent regulation of mitochondrial transcription by mitochondrial Topoisomerase I
31. Slusarenko (Aachen), Gruhlke, Albrecht, Borlinghaus, Reiter How does the plant defence substance allicin kill cells?
32. Trnka (Greifswald), Hanschmann, Mostertz, Brezesinski, Lillig How does mitochondrial Grx2 protect from doxorubicin toxicity, cardioprotein peroxidation and apoptosis?
33. Uhlenkamp (Greifswald), Masur, Lillig, Gellert CyFip1/Sra1 as a mediator between the CRMP2 signalling pathway and the dynamics of the cytoskeleton

34. Urbainsky (Greifswald), Hochgräfe, Imber, Lillig, Hanschmann Nucleoredoxin and its potential role in disulfide transduction
35. Van Lear (Heidelberg), Morgan, Owusu, Pastor-Flores, Amponsah, Tursch, Dick Utilizing peroxiredoxin-based probes to monitor basal hydrogen peroxide
36. Wang (Heidelberg), Wirtz, Hell Redox regulation of glutathione and cysteine biosynthesis in *Arabidopsis thaliana*
37. Yang (Heidelberg), Jiang, Gromes, Rausch Exploring the role of plant glutamylcysteine ligase (GCL), a redox-sensitive switch in glutathione (GSH) synthesis
38. Zannini (Nancy), Maria, Belli, Herrero, Couturier, Rouhier Towards the function of the chloroplastic *Arabidopsis thaliana* glutaredoxin S16
39. Zimmermann (Kaiserslautern), Kolbenschlag, Morgan Investigating the role of Nde1 and Nde2 in cellular redox homeostasis

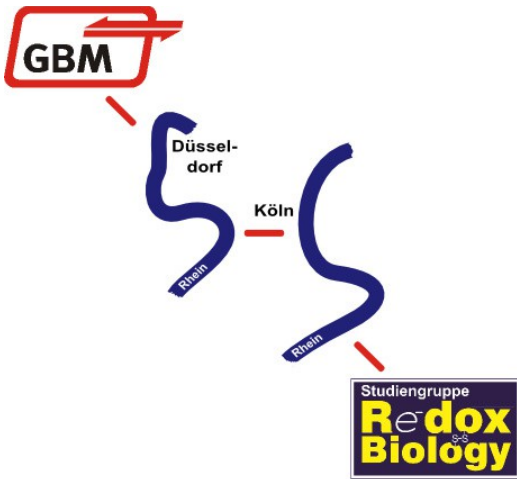


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40212 Düsseldorf

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03.-05.07.2016

in
Düsseldorf

