



# 1st International Radiation Proteomics Workshop

**May 27-28, 2009**

**Neuherberg by Munich, Germany**

*Organisers:*

*Helmholtz Centre Munich, German Research Centre for Environmental Health (HMGU)*

*Federal Office for Radiation Protection, Germany (BfS)*

*Radiation and Nuclear Safety Authority, Finland (STUK)*

**Wednesday, 27.05.2009**

## ***Welcome and Opening words***

9:30 **Dr. Axel Böttger**, Federal Ministry for the Environment  
**Dr. Thomas Jung**, BfS

## ***Session 1: Systems biology in proteomics, Chair Stefan Thalhammer, HMGU***

10:00 **Dr. Eduardo Mendoza**, Faculty of Physics and Center for Nano Science, Ludwig Maximilian University, Munich, Germany

The synapse: where proteomics and systems biology meet in neuroscience

10:30 **Dr. Christopher J. Portier**, National Institute of Environmental Health Sciences, Research Triangle Park, USA

Omics for risk assessment: pathways to disease

**11:00-11:30 Coffee/tea**

## ***Session 2: Methodical highlights, Chair Dr. Hakan Sarioglu, HMGU***

11:30 **Dr. Juan-Pablo Albar**, Proteomics Facility at the National Centre for Biotechnology of the Spanish Council for Scientific Research, Madrid, Spain  
New developments in liquid phase MS

12:15 **Dr. Dieter Stoll**, Bioorganic and Bioanalytics Department, Natural and Medical Sciences Institute (NMI), University of Tuebingen, Germany  
Immunoaffinity based tools for proteomics

**13:00 – 14:00 Lunch**

**Session 3: Proteomics of the organelles, Chair Anton Posch, HMGU**

- 14:00 **Dr. Taras Stasyk**, Biocenter, Innsbruck Medical University, Innsbruck, Austria  
Cellular fractionation
- 14:30 **Dr. Hans Zischka**, Institute of Toxicology, HMGU, Munich, Germany  
Analyzing dying mitochondria

**Session 4: Proteomics challenges, Chair Hans Zischka, HMGU**

- 15:00 **Dr. Marius Ueffing**, Head of Proteomic Core facility, HMGU, Munich, Germany  
Functional proteomic strategies to tackle proteins and markers involved in neurodegenerative diseases
- 15:30 **Prof. Dr. Jacek R. Wisniewski**, Max-Planck-Institute for Biochemistry, Munich, Germany  
Identification and analysis of proteins not predictable from genomic data

**15:30 – 16:00 Coffee / tea**

**Session 5: Databases, archives and statistics, Chair Christopher Portier, NIEHS**

- 16:00 **Dr. Jochen Schwenk**, KTH, Stockholm, Sweden  
Human protein atlas for normal and disease tissues
- 16:40 **Dr. Karl-Friedrich Becker**, TUM, Munich, Germany  
New perspectives for monitoring signal pathways in clinical tissue samples
- 17:10 **Dr. Stefan Müllner**, Protagen AG, Dortmund, Germany  
Quality standards for statistically significant proteome analysis

**17:40 – 18:40 Poster session**

**19:00 Dinner**

**Thursday 28.05.2009**

**Opening of the 2<sup>nd</sup> day**

- 9:00 **Dr. Stefan Thalhammer**, Institute of Radiation Protection, HMGU, Munich, Germany  
Radiation proteomics – why is it important?

**Session 1: Proteomics of non-ionizing radiation, Chair Monika Asmuß, BfS**

- 9:15 **Prof. Dariusz Leszczynski**, STUK, Helsinki, Finland  
Use of high-throughput screening techniques of proteomics and transcriptomics in search for biomarkers of the response to non-ionizing radiation - experience from Finland
- 10:00 **Prof. Zhengping Xu**, Bioelectromagnetics Laboratory, Zhejiang University School of Medicine, Hangzhou, China  
Use of high-throughput screening techniques of proteomics and transcriptomics in search for biomarkers of the response to non-ionizing radiation - experience from China
- 10:30 **Dr. Reetta Nylund**, STUK, Helsinki, Finland  
Non-ionizing radiation-induced changes in proteome of human endothelial cells

**11:00-11:30 Coffee/tea**

**Session 2: Proteomic applications in radiation sensitivity, Chair Maria Gomolka, BfS**

- 11:30 **Dr. Soile Tapio**, Institute of Radiation Biology, HMGU, Munich, Germany  
Proteomic approach in radiation-induced cardiovascular diseases
- 12:00 **Dr. Olivier Guipaud**, IRSN, Paris, France  
Using proteomics to predict the severity of radiation-induced lesions
- 12:30 **Dr. Anton Posch**, Institute of Radiation Biology, HMGU, Munich, Germany  
Proteome alterations after in vitro irradiation of immortalized lymphocyte cell lines from radiation sensitive lung cancer patients

**13:00 – 14:00 Lunch**

**Session 2: Continued, Chair Sabine Hornhardt, BfS**

- 14:00 **Dr. Mats Harms-Ringdahl**, GTM, Stockholm, Sweden  
Influence of different radiation qualities on protein expression profiles in primary human fibroblasts, CHO cells and neuronal cells.
- 14.30 **Dr. Hans Peter Rodemann**, University of Tübingen, Tübingen, Germany  
Radiation-induced changes in protein expression of cells derived from radioresistant and radiosensitive individuals

**15:00 Poster session with Coffee / tea**

**Session 3: High-throughput arrays in radiobiology, Chair Dariusz Leszczynski, STUK**

- 15:45 **Dr. Sarah Baatout**, SCK-CEN, Mol, Belgium  
Multiplex array assay for high-throughput protein detection in radiobiology

**Session 4: Non-targeted effects, Chair Soile Tapio, HMGU**

- 16:15 **Dr. Carmel Mothersill**, McMaster University, Hamilton, Canada  
Mechanisms implicated in the direct and non-targeted radiation proteomes - adaptive and stress responses

**16:45 Conclusions, Mike Atkinson, HMGU**

**17:00 End of the meeting**