

19th Annual Meeting of the Society for Biological Radiation Research 26th to 28th September 2016

Monday, September 26th 2016

8:30	15:00	On-site Registration (Cauerstr. 11, 91058 Erlangen)
9:45	10:00	Opening GBS Young Investigators (YI) Session Cläre von Neubeck (Young Investigators) and Udo Gaipl (Congress President)
10:00	11:00	Invited Lecture Michael Scholz (<i>GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt</i>) Integrative Science – Interplay of Physics, Biology and Medicine in Radiation Research
11:00	11:30	Invited Lecture Katrin Schiebel and Nora Anton (<i>Friedrich-Alexander-Universität Erlangen-Nürnberg</i>) National and International Opportunities for Young Investigators
11:30	12:00	Invited Lecture Serge M. Candéias (<i>CEA-Grenoble, France</i>) Biomedical Research in France
12:00	12:45	Lunch Break GBS YI
12:45	13:15	Opening ceremony Prof. Dr. Udo Gaipl (<i>Congress President, Universitätsklinikum Erlangen</i>) Prof. Dr. Joachim Hornegger (<i>President of Friedrich-Alexander-Universität Erlangen-Nürnberg</i>) Dr. Florian Janik (<i>Lord Mayor of Erlangen</i>) Prof. Dr. Rainer Fietkau (<i>Head of Department of Radiation Oncology, Universitätsklinikum Erlangen</i>)

DNA damage and related responses induced by ionizing and non-ionizing radiation

Chairs: Luitpold Distel, Erlangen and Thorsten Rieckmann, Hamburg

13:15	13:45	Keynote Presentation Gerhard Fritz (<i>Universitätsklinikum Düsseldorf</i>) DNA damage and related stress responses stimulated by ionizing radiation (IR): prevention of IR-induced normal tissue damage by statins
13:45	14:00	Markus Wolfien (<i>University of Rostock</i>) NGS based analysis for structural DNA variation with applications to radiation research
14:00	14:15	Jörg Fahrer (<i>University Medical Center Mainz</i>) Protein kinase B/AKT curtails pro-survival autophagy induced by DNA double-strand breaks
14:15	14:30	Anna Friedl (<i>Ludwig-Maximilians-University of Munich</i>) Depletion of histone demethylase Jarid1A resulting in histone hyperacetylation and radiation sensitivity does not affect DSB repair
14:30	14:45	Fabian Weipert (<i>Goethe-University Frankfurt/Main</i>) The threonine 34 phosphorylation site of Survivin is essential for modulating the non-homologous end-joining DNA damage repair pathway
14:45	15:00	Katharina Mück (<i>Eberhard Karls University Tuebingen</i>) Role of Akt1 and Akt3 in homologous recombination-dependent repair of ionizing radiation-induced DNA DSB
15:00	15:15	Thorsten Rieckmann (<i>University Medical Center Hamburg Eppendorf</i>) Extensive resection of newly replicated DNA in irradiated HPV-positive HNSCC cell lines
15:15	15:50	Coffee Break
15:50	17:00	Bullet Poster Session Detailed program see next page
17:00	17:30	Coffee Break
17:30	19:30	Award Ceremony (I) Ulrich-Hagen-Award Dieter-Frankenbergs-Award
19:30		Open Poster Session and Ice Breaker with Brezel and Franconian Beer

Bullet Poster Session (detailed program)

Chairs: Serge M. Candéias, Grenoble, France and Michael Orth, München

- 15:50 17:00 ✓ **Each speaker has the possibility to draw the attention to her/his research topic.**
✓ **Each participant has 3 slides and 3 min for the presentation.**
✓ **After the 3 min the speech will be stopped by the chairpersons.**

DNA damage and related responses induced by ionizing and non-ionizing radiation

Ann Christin Parplys (*University Medical Center Hamburg-Eppendorf*)

Radioresistance is determined by recruitment of DNA repair factors to replication forks in a PTEN-dependent manner

Viviane Ponath (*University Medical Center Mainz*)

DNA repair deficiency in the myeloid lineage of the human immune system

Daniela Kraft (*GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt*)

The DNA damage response is different in human hematopoietic stem and progenitor cells compared to differentiated cells from peripheral blood

Matthias Krufczik (*Kirchhoff-Institute for Physics, Heidelberg*)

Analysing Nucleosomal Arrangements after Irradiation and during Repair with High Resolution Localisation Microscopy

Friedo Zölzer (*University of South Bohemia, České Budějovice, Czech Republic*)

Micronuclei as indicators of radon exposure

Biomarkers and strategies to modify radiation responses as well as imaging the effects of radiation exposure

Paul Rühle (*Universitätsklinikum Erlangen*)

RAD-ON01 study: Modulations in the serum levels of the pro-inflammatory cytokine IL-18 following radon spa treatment

Marco Rainer Kesting (*Technische Universität München*)

Post radiogenic wound healing disorders following surgical intervention to the head and neck

Margret Rave-Fränk (*Universitätsmedizin Göttingen*)

Impact of anaerobic condition-related transporters on outcome after definitive radiochemotherapy (RCT) in head and neck squamous carcinoma

Mahmoud Toulany (*University of Tübingen*)

Dual targeting of PI3K and MEK enhances the radiation response of K-RAS mutated non-small cell lung cancer

Radiation risk, cancer induction and anti-cancer reactions: the tumor and its microenvironment

Julian Hartmann (*University of Lübeck*)

Hyperactivation of the TGF-beta signaling pathway caused by ionizing radiation increases the migration behavior of human lung carcinoma cells

Monique Zwar (*University Medical Centre Rostock*)

Comparative study of the effects of neutrons and photons on normal human breast cells

Radiation responses of cells and tissues: from local events to systemic effects with emphasis on preclinical animal models of radiation therapy and response

Christin Glowa (*German Cancer Research Center, Heidelberg*)

Carbon ion radiotherapy decreases the impact of tumor heterogeneity on radiation response in experimental prostate tumors

Günther Dollinger (*Universität der Bundeswehr München*)

Reduced Side Effects by Proton Minibeam Radiotherapy- Study in a Mouse Ear Model

Antje Dietrich (*German Cancer Consortium (DKTK) and OncoRay, TU Dresden*)

Are established glioblastoma models suitable to mirror the radiobiology of patient tumors?

Monika Bäuml (*Universitätsklinikum Erlangen*)

Role of EGFR and STAT signaling on the expression of PD-L1 and EGFR on melanoma and glioblastoma cells after chemoradiation

Markus Hecht (*Universitätsklinikum Erlangen*)

PD-L1 is increased after neoadjuvant radiochemotherapy of rectal adenocarcinoma patients

Tuesday, September 27th 2016

8:55 **Opening of Day 2**

Radiation responses of cells and tissues: from local events to systemic effects with emphasis on preclinical animal models of radiation therapy and response

Chairs: Katalin Lumniczky, Budapest, Hungary and Johann Matschke, Essen

- 9:00 9:30 **Keynote Presentation**
Grit Herter-Sprie (*Uniklinik Köln*)
 Title tba
- 9:30 9:45 **Benjamin Stegen** (*Ludwig-Maximilians-Universität München*)
 Contrast-enhanced, CT-based, fractionated radiotherapy of orthotopic mouse glioblastoma: A proof-of-concept study
- 9:45 10:00 **Ivo Grgic** (*University Hospital Zürich, Switzerland*)
 Modulation of tumor hypoxia for hypofractionated radiotherapy
- 10:00 10:15 **Zoe Schmal** (*Saarland University, Homburg/Saar*)
 Impact of repetitive low-dose irradiation on the neurogenesis in the adult and juvenile hippocampus
- 10:15 10:30 **Jos Philipp** (*German Research Center for Environmental Health GmbH, Neuherberg*)
 Ionizing radiation leads to senescence and inflammation in human coronary artery endothelial cell line
- 10:30 10:45 **Lisa Deloch** (*Universitätsklinikum Erlangen*)
 The influence of LD-RT on inflammation and bone metabolism in the hTNF- α tg mouse model
- 10:45 11:00 **Lisa Hintz** (*Technische Universität Darmstadt*)
 Biodosimetry of radon-induced DNA double-strand breaks in mice
- 11:00 11:15 **Karl T. Butterworth** (*Queen's University Belfast, UK*)
 Modelling responses to spatially fractionated radiation fields using the small animal radiotherapy research platform (SARRP)
- 11:15 12:00 **Brunch Break**
- 12:00 13:30 **Guided Poster Session (ALL Posters with an even abstract number) and Coffee**

Radiation risk, cancer induction and anti-cancer reactions: the tumor and its microenvironment

Chairs: Soile Tapio, Neuherberg and Ramon Lopez Perez, Heidelberg

- 13:30 14:00 **Keynote Presentation**
Serge M. Candéias (*CEA-Grenoble, France*)
 Effects of low dose radiation on the immune system, *in vitro* and *in vivo*
- 14:00 14:15 **Luitpold Distel** (*Universitätsklinikum Erlangen*)
 The Spatial Interactions of Regulatory- and Cytotoxic T cells has the Potential to Predict Functionally Active Inflammatory Cells
- 14:15 14:30 **Roland Wunderlich** (*Helmholtz Center Munich, Neuherberg*)
 Immune Modulatory Properties of Head and Neck Cancer Cell Lines on the Transcriptional Profile of Different Innate Immune Cell Subtypes
- 14:30 14:45 **Kaga Gomarteli** (*University Medical Center Mannheim*)
 A little to a lot vs. a lot to a little after mediastinal AP/PA radiotherapy and VMAT in the tumor-prone p53^{+/+} rat model
- 14:45 15:45 **Coffee Break with Open Poster Session**
- 15:45 16:00 **Nicole Goerig** (*Universitätsklinikum Erlangen*)
 Frequent occurrence of therapeutically reversible CMV-associated encephalopathy during radiotherapy of the brain
- 16:00 16:30 **Hot Topic Lecture**
Claudia Fournier (*GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt*)
 Introduction of Osteoimmunology for Radiation Research
- 16:30 18:00 **GBS General Assembly (for members only)**
- 18:00 19:30 **Break**
- 19:30 **GBS Social Evening (Redoutensaal Erlangen, Theaterplatz 1, Entrance at 19:00)**
 Travel Grants, Bullet Poster Session Award,
 20th Anniversary of GBS, Honorary Member Award and Fun with the Band Acoustilicious

Wednesday, September 28th 2016

8:55 **Opening of Day 3**

Biomarkers and strategies to modify radiation responses as well as imaging the effects of radiation exposure

Chairs: Franz Rödel, Frankfurt am Main and Alexander Rapp, Darmstadt

- 9:00 9:30 **Keynote Presentation:**
Kirsten Lauber (*Ludwig-Maximilians-Universität München*)
In situ tumor vaccination by radiotherapy: Chances and challenges
- 9:30 9:45 **Johann Matschke** (*University Hospital Essen*)
Targeted inhibition of glutamine-dependent glutathione metabolism overcomes death resistance induced by chronic cycling hypoxia
- 9:45 10:00 **Kristian Unger** (*Helmholtz Zentrum München, Neuherberg*)
A 4-miRNA signature predicts the therapeutic outcome of glioblastoma
- 10:00 11:30 **Guided Poster Session (ALL Posters with an odd abstract number) and "enhanced" Coffee**
- 11:30 11:45 **Anne Vehlow** (*Technische Universität Dresden and Helmholtz-Zentrum Dresden - Rossendorf*)
Dual β 1 integrin and JNK inhibition decreases radiochemoresistance and invasion of Glioblastoma stem-like cells
- 11:45 12:00 **Katalin Lumniczky** (*National Research Directorate for Radiobiology and Radiohygiene, Budapest, Hungary*)
Extracellular vesicles as mediators of radiation induced bystander signals in vivo
- 12:00 12:15 **Maxim Shevtsov** (*Technische Universität München and Russian Academy of Sciences (RAS), St.Petersburg, Russia*)
Functionalized superparamagnetic iron oxide nanoparticles for theranostic MRI-radiosensitization
- 12:15 13:00 **Award Ceremony (II)**
Best Paper Award
Best Poster Award
- 13:00 13:15 **Farewell and Welcome to GBS2017 and GBS2018**
- 13:15 **End of the Conference and Packed Lunch**