

## **Program**

### ***15<sup>th</sup> International Wolfsberg Meeting on Molecular Radiation Biology/Oncology***

**Wolfsberg Castle, Ermatingen, Lake Constance, Switzerland**

**June 17-19, 2017**

#### **Organizers:**

Michael Baumann (GER), Stephan Bodis (CH), Robert Bristow (CAN), Rob Coppes (NL), Nils Cordes (GER), Albert van der Kogel (NL), Jens Overgaard (DK), Martin Pruschy (CH), Bradly Wouters (CAN), and H. Peter Rodemann (GER)

#### **Scientific Committee:**

Daniel Aebersold (CH), Jan Alsner (DK), Kerstin Borgmann (GER), Gerben Borst (NL), Martin Brown (USA), Jan Bussink (NL), Anthony Chalmers (UK), Wolfgang Doerr (A), Ludwig Dubois (NL), Anna Dubrovskaya (GER), Vincent Grégoire (BE), Ester Hammond (UK), Paul Harari (USA), George Iliakis (GER), Penny Jeggo (UK), Michael Joiner (USA), Anne Kiltie (UK), Marianne Koritzinsky (CAN), Mechthild Krause (GER), Martin Lavin (AUS), Markus Löbrich (GER), Peter Lukas (A), Eva Petermann (UK), Kasper Rouschop (NL), Brita Singers Sørensen (DK), Stéphane Supiot (FR), Randi Syljuasen (NOR), Conchita Vens (NL), Marcel Verheij (NL), Marc Vooijs (NL), Marie-Catherine Vozenin (CH), Daniel Zips (GER)

#### **Honorary Members of the Scientific Committee:**

Fiona A. Stewart, (NL)  
Yolande Lievens (BE), Philip Poortmans (NL), Umberto Ricardi (IT),

**Saturday, June 17, 15:30-18:15**

- 15:30                    **Opening and Welcome Address**  
H. Peter Rodemann, Tübingen, GER
- Session 1**                    **Young Investigators Platform**  
Chairs: Stephan Bodis, Aarau, & Rob Coppes, Groningen
- 15:45-16:15                **Invited Lecture**  
Scott Bratman, Toronto, CAN  
*Utilizing circulating tumor DNA in radiation oncology*
- 16:15-16:35                **Late-Breaking Abstract Lecture**  
Tord Hompland, Oslo, NO  
*Imaging hypoxia in prostate cancer: Oxygen consumption versus supply*
- 16:35-17:00                *Coffee break*
- 17:00-18:15                **ESTRO-Wolfsberg Travel Award Presentations**
- 17:00-17:15                Peter W. Nagle, Groningen, NL  
*Low dose sensitivity of normal tissue stem cells and its potential clinical relevance*
- 17:15-17:30                Charlotte Degorre, Nantes, FR  
*Radiation-induced mitochondrial injuries and chronic activation of p53 leading to microvascular endothelial cell senescence*
- 17:30-17:45                Christian Naucke, Oslo, NO  
*Novel flow cytometry-based compound screens for identification of promising combination treatments*
- 17:45-18:00                Tom Keulers, Maastricht, NL  
*GABARAPL1 is required for hypoxia-induced extracellular vesicle secretion*
- 18:00-18:15                Fokko J. Huizing, Nijmegen, NL  
*Characterization of <sup>111</sup>In-girentuximab-F(ab')<sub>2</sub> as radiotracer for the imaging of carbonic anhydrase IX in head and neck xenografts*
- 19:30                        *Wolfsberg Barbecue*

**Sunday, June 18, 8:00-12:00**

<b>Session 2</b>	<b>Topic I: DNA Repair and Signaling</b> Chairs: Robert Bristow, Toronto & Martin Pruschy, Zürich
08:00-08:30	<b>Keynote Lecture 1</b> Stéphan Vagner, Paris, FR <i>Role of RNA binding proteins in the DNA damage response</i>
08:30-09:00	<b>Keynote Lecture 2</b> Frank J. Slack, Boston, USA <i>MicroRNA-based therapeutics in cancer</i>
09:00-11:00	<i>Coffee Break / Poster Session Topic I (Poster numbers PI.1-PI.44)</i>
11:00-12:00	<b>Proffered Paper Talks</b>
11:00-11:20	Sandeep Burma, Dallas, USA <i>Regulation of DNA end resection by EXO1</i>
11:20-11:40	Kristoffer Valerie, Richmond, USA <i>ATM phosphorylates the PP2A subunit A resulting in nuclear export and spatio-temporal regulation of the DNA damage response</i>
11:40-12:00	Shane Harding, Philadelphia, USA <i>Checkpoint slippage underlies activation of inflammatory signaling in epithelial cells</i>
12:15-13:15	<i>Lunch</i>

**Sunday, June 18, 13:30-17:30**

<b>Session 3</b>	<b>Topic II: Influence of Microenvironmental Parameters on Radiation Response of Tumor and Normal Tissue</b> Chairs: Jens Overgaard, Aarhus, & Nils Cordes, Dresden
13:30-14:00	<b>Keynote Lecture 1</b> Andy J. Minn, Philadelphia, USA <i>Combination of cancer therapies with immune checkpoint blockade</i>
14:00-14:30	<b>Keynote Lecture 2</b> Saskia I. J. Ellenbroek, Utrecht, NL <i>Intravital imaging of the hallmarks of cancer</i>
14:30-16:30	<i>Coffee Break / Poster Session Topic II</i> (Poster numbers PII.1-PII.42)
16:30-17:30	<b>Proffered Paper Talks</b>
16:30-16:50	Ahn G-One, Pohang, KOR <i>A novel role of tumor-associated macrophages (TAMs) in contributing to resistance to radiotherapy</i>
16:50-17:10	Anne Vehlow, Dresden, GER <i>beta1 integrin/JNK co-deactivation effectively targets adhesion- and stress-related adaptation radiochemoresistance in glioblastoma</i>
17:10-17:30	Gael Boivin, Epalinges, CH <i>Optimization of radio-immunotherapy schedule after immunophenotyping in a pre-clinical lung adenocarcinoma model</i>
<b>18:30-19:30</b>	<b>Wolfsberg Cup</b>
<b>20:00</b>	<b>Wolfsberg Dinner</b>

**Monday, June 19, 8:00-12:30**

<b>Session 4:</b>	<b>Topic III: Biomarkers and Interventional Strategies in Radiation Oncology</b> Chairs: Michael Baumann, Heidelberg, & Brad Wouters, Toronto
08:00-08:30	<b>Keynote Lecture 1</b> Bernd Pichler, Tübingen, GER <i>Translation of preclinical multimodal imaging for personalized cancer therapy</i>
08:30-09:00	<b>Keynote Lecture 2</b> Philippe Lambin, Maastricht, NL <i>Radiomics: a window to biology?</i>
09:00-11:00	<i>Coffee Break / Poster Session Topic III</i> (Poster numbers PIII.1-PIII.31)
11:00-12:00	<b>Proffered Paper Talks</b>
11:00-11:20	Frank Pajonk, Los Angeles, USA <i>Inhibition of radiation-induced phenotype conversion as a novel strategy to increase the efficacy of radiation in GBM</i>
11:20-11:40	Kaye Williams, Manchester, UK <i>Monitoring post-radiotherapy inflammation by positron-emission tomography: imaging validation and correlation with response</i>
11:40-12:00	Melvin Chua, Singapore, SGP <i>Genomic architecture of prostate cancer at recurrence following radiotherapy</i>
12:00-12:25	<b>Award Ceremony</b> <i>Wolfsberg Poster Awards and ADRIAN C. BEGG Award</i>
12:25-12:30	<b>Closing Remarks</b>
12:30-13:15	<i>Lunch</i>
13:30	<i>Bus Departure to Zürich Airport / Railway Station Konstanz</i>

**List of Posters to be presented in Session 2**

**Topic I**

***DNA Repair and Signaling***

**Poster no. Presenting author and title**

- PI.1** Navita Somaiah, London, UK: Molecular mechanisms modulating radiotherapy fraction size sensitivity
- PI.2** Cläre von Neubeck, Dresden, GER: Improving the  $\gamma$ H2AX Foci Assay – correlating patient characteristics with foci data and automated vessel recognition for reliable foci counting
- PI.3** Judith Reindl, Neubiberg, GER: Using DNA DSB protein clusters as a potent marker for biological microdosimetry on high-LET particle tracks in human cells
- PI.4** Lara Barazzuol, Groningen, NL: A coordinated response of adult neural stem cells to radiation-induced DNA damage: spatial and age-dependent differences
- PI.5** Kerstin Borgmann, Hamburg, GER: Interplay of DNA repair and stem-like phenotype determines the sensitizing effect of CHK1, RAD51 and PARP1 inhibition in TNBC
- PI.6** Sabine Bender, Zürich, CH: Role of SUV39H1 in ADAM17-mediated radioresistance
- PI.7** Isabelle Corre, Nantes, FR: Nucleophosmin, a new signaling actor in the response of endothelial cell to oxidative stress and ionizing radiation
- PI.8** Emil Mladenov, Essen, GER: The DNA-PKcs-ATM-ATR module
- PI.9** Benjamin Chen, Dallas, USA: A Ku-independent mechanism in DNA-PKcs recruitment and association with ATR at stalled replication forks
- PI.10** David Chen, Dallas, USA: Phosphorylation of Ku70 dictates DNA double-strand break repair pathway choice in S phase
- PI.11** Tahereh Mohamadian Gol, Tübingen, GER: Function of Rad51 in Akt1-mediated Homologous Recombination Repair pathway
- PI.12** Pascale Bertrand, Fontenay-aux-Roses, FR: Lamin B1 controls double-strand breaks repair through its interaction with 53BP1
- PI.13** Randi Syljuasen, Oslo, NO: PNUMS-PP1 suppresses ATR activity by dephosphorylating RNA polymerase 2
- PI.14** Amir Mofidi, Darmstadt, GER: DNA-double strand break repair in murine embryonic stem cells: similarities and distinctions to repair in neural stem cells
- PI.15** Anugrah Gawai, Darmstadt, GER: Role of Rad52 in homologous recombination
- PI.16** Claudia Rübe, Homburg/Saar, GER: Clustering of DSBs following high-LET irradiation perturbs efficient DNA repair and is associated with long-lasting chromatin decondensation
- PI.17** Sebastian Diegeler, Cologne, GER: Finding NEMO – radiation induced bystander effects elicit NF-kappa B dependent survival
- PI.18** Anne-Catherine Wéra, Namur, BE: Radiation induced synthetic lethality to sensitise NSCLC cells to proton irradiation: Antagonist and synergistic effects of PARP and RAD51 inhibitors
- PI.19** Anthony Davis, Dallas, USA: Targeted Disruption of the Kinase Domain of DNA-PKcs in Human Cells Confers Severe Radiosensitivity and Genomic Instability
- PI.20** Anthony Chalmers, Glasgow, UK: Regulation of DNA double strand break repair by EGF and VEGF signalling reveals Akt to be a critical therapeutic target in glioblastoma
- PI.21** Sissel Hauge, Oslo, NO: Synergistic S-phase DNA damage by combined inhibition of Wee1/Chk1 or Wee1/ATR checkpoint kinases

- PI.22 Heidi Lyng, Oslo, NO:** The cell cycle regulator CKS2 links mitochondrial function with cell cycle progression and associates with chemoradioresistance in cervical cancer
- PI.23 Debabrata Saha, Dallas, USA:** The role of DAB2IP on mitosis transition and spindle checkpoint
- PI.24 Francois Paris, Nantes, FR:** MAPK-p38-dependent endothelial cell apoptosis is under the control of ceramide and membrane remodelling
- PI.25 Ali Nowrouzi, Heidelberg, GER:** Genomic mapping and longitudinal tracing of ionizing radiation induced DNA double-strand-breaks identifies genomic vulnerabilities with functional relevance for DNA repair and survival
- PI.26 Laure Marignol, Dublin, IE:** Radioresistance profiling identifies Notch-3 signalling as a molecular switch to molecular radiation response of prostate cancer cells
- PI.27 Pallavi Srivastava, Varanasi, IN:** Targeting DNA double strand break repair with PNKP inhibition to enhance the effect of carbon ion radiation in cancer cell line
- PI.28 Anna Tyutyunnykova, Dresden, GER:** Glutamine metabolism as potential target for prostate cancer radiosensitization
- PI.29 Bipasha Mukherjee, Dallas, USA:** Augmented homologous recombination repair mediates acquired-temozolomide resistance in glioblastoma
- PI.30 Cordula Petersen, Hamburg, GER:** Sorafenib: a radiosensitizer for HNSCC
- PI.31 Pegah Johansson, Gothenburg, SE:** Development of assays to predict cellular sensitivity to radiation treatment for clinical applications
- PI.32 Katharina Neuhäuser, Hannover, GER:** Chromosomal radiosensitivity of breast epithelial cells and lymphocytes determined by  $\gamma$ -H2AX and 53BP1 foci in repeated diagnostic CT scans
- PI.33 Treewut Rassamegevanon, Dresden, GER:** Translation of gamma H2AX foci assay for clinical application: study in human head and neck squamous cell carcinomas (hHNSCC)
- PI.34 Steffen Nielsen, Aarhus, DK:** Proton and photon irradiation elicit differential regulation of gene expression: an in vitro study of 30 primary fibroblast cultures
- PI.35 Sebastian Zahnreich, Mainz, GER:** Cellular and molecular basis of cancer proneness in survivors of a first primary and second primary malignancy during childhood
- PI.36 Annemarie Post, Nijmegen, NL:** The DNA cytosine deaminase APOBEC3B is associated with sensitivity to radiotherapy in breast cancer
- PI.37 Gerben Borst, Amsterdam, NL:** Chemoradiation; effectivity and concentration of cisplatin during the course of RT
- PI.38 Odilia Popanda, Heidelberg, GER:** Epigenetic modulation of chromatin at the diacylglycerol kinase alpha enhancer as a potential mechanism to mitigate radiation-induced fibrosis risk
- PI.39 Debora Grasso, Brussels, BE:** Cancer radiosensitivity under metabolic control
- PI.40 Brita Singers Sørensen, Aarhus, DK:** RBE and distal edge effects of proton radiation on acute damage in an in vivo model
- PI.41 Wael Mansour, Hamburg, GER:** ERG overexpression in prostate cancer shifts repair towards alternative PARP1-dependent end joining, causing sensitivity to combined radiation / PARP inhibitor therapy
- PI.42 Lorena Giuranno, Maastricht, NL:** Improving lung cancer outcome by reducing normal lung toxicity
- PI.43 Karl Butterworth, Belfast, IE:** Inhibition of ATR improves therapeutic index in pre-clinical models of non-small cell lung cancer (NSCLC) radiotherapy
- PI.44 Katharine Herbert, Oxford, UK:** TOPK as a novel target for tumour-specific modulation of radiation sensitivity



**List of Posters to be presented in Session 3**

**Topic II**

*Influence of Microenvironmental Parameters on Radiation Response of Tumor and Normal Tissue*

**Poster no. Presenting author and title**

- PII.1** **Bradly Wouters, Toronto, CAN:** Autophagy promote tolerance to hypoxia through maintenance of mitochondrial and ER homeostasis.
- PII.2** **Verena Schoeneberger, Toronto, CAN:** Characterizing metformin sensitivity in MCT1 and MCT4 null head and neck cancer cells
- PII.3** **Pedro Boasquevisque, Toronto, CAN:** Targeting lactate transporters MCT-1 and MCT-4 to inhibit the growth of hypoxic HNSCC cells in vitro
- PII.4** **Elizabeth Koch, Toronto, CAN:** Targeting epigenetic regulation of DICER by hypoxia to improve radiation response
- PII.5** **Christin Glowa, Heidelberg, GER:** Carbon ions are more effective than photons and show faster morphological changes after 1, 2 and 6 fractions in a syngeneic rat prostate tumor
- PII.6** **Eloy Moreno Roig, Maastricht, NL:** Unique and overlapping roles of HIF proteins in tumor cell metabolism
- PII.7** **Anne-Sophie Wozny, Oullins, FR:** Role of HIF-1 $\alpha$  in the resistance of cancer stem cells to photon and carbon ion irradiations
- PII.8** **Mrinal Joel, Oslo, NO:** The impact of hypoxia on the efficacy of ATR-inhibitors
- PII.9** **Linda Spiegelberg, Maastricht, NL:** The hypoxia-activated prodrug TH-302 sensitizes esophageal carcinomas to radiotherapy without enhancing normal tissue toxicity
- PII.10** **Marike van Gisbergen, Maastricht, NL:** Mitochondrial dysfunction inhibits hypoxia-induced HIF-1 $\alpha$  stabilization and expression of downstream targets
- PII.11** **Maria Likhatcheva, Manchester, UK:** Unravelling how the DNA-damage response is activated by hypoxia: regulation of chromatin structure
- PII.12** **Marijke Zonneveld, Maastricht, NL:** Autophagy-dependence of extracellular vesicle secretion during hypoxia
- PII.13** **Eva-Leonne Göttgens, Nijmegen, NL:** Does HPV influence the efficacy of AKT-inhibition in hypoxic head and neck squamous cell carcinomas?
- PII.14** **Johann Matschke, Essen, GER:** Role of metabolic adaptations for survival and radiation resistance of hypoxic cancer cells
- PII.15** **Ivo Grgic, Zürich, CH:** Modulation of tumor hypoxia for hypofractionated radiotherapy
- PII.16** **Arnulf Mayer, Mainz, GER:** Using QuPath to investigate mechanisms of melanoma immune escape in human whole slide tumor sections
- PII.17** **Antje Güttler, Halle/Saale, GER:** Targeting of carbonic anhydrase IX in combination with radiotherapy in human breast cancer cells
- PII.18** **Carmen Klein, Heidelberg, GER:** Overcoming hypoxia-induced radioresistance by targeting the DNA damage response in combination with proton, helium-, carbon- and oxygen ion beams
- PII.19** **Kasper Rouschop, Maastricht, NL:** EGFRvIII expression triggers a metabolic dependency and therapeutic vulnerability sensitive to autophagy inhibition
- PII.20** **Michaela Wank, Munich, GER:** The influence of high- and low-LET irradiation on the migration and invasion of glioblastoma cells
- PII.21** **Verena Kopatz, Vienna, AU:** Effects of integrin antagonists +/- irradiation in 2D monolayer vs. 3D spheroid tumor cell culture



- PII.22** **Nils Cordes, Dresden, GER:** Discoidin Domain Receptor 1 controls GBM radiochemo-sensitivity by modulating autophagy
- PII.23** **Diana Klein, Essen, GER:** Caveolin 1-deficient stromal fibroblasts mediate radiation resistance
- PII.24** **Xiaohong Peng, Groningen, NL:** Role of glial-cell-derived neurotrophic factor in salivary gland stem cell response to irradiation
- PII.25** **Karen Clement-Colmou, Saint Herblain, FR:** Influence of the radiation dose per fraction on tumour vasculature and hypoxia
- PII.26** **Azadeh Fahim Golestaneh, Heidelberg, GER:** Identifying molecular mechanisms of tumor radio-resistance via high throughput in-vivo microRNA knock down screen
- PII.27** **Lauryn Werner, Madison, USA:** Impact of radiation and EGFR inhibition on the expression of immune susceptibility markers in head and neck squamous cell carcinomas
- PII.28** **Karolin Schneider, Brussels, BE:** Lack of differences in radiation-induced immune stimulation between HPV-positive and HPV-negative head and neck squamous cell carcinoma
- PII.29** **Veronica Olivo Pimentel, Maastricht, NL:** Low dose radiation combined with the immunocytokine L19-IL2 results in tumor growth delay and is associated with the PD-1/PD-L1 axis upregulation
- PII.30** **Paul Span, Nijmegen, NL:** Cross-resistance for radiotherapy in tamoxifen-resistant breast cancer: a role for interferon stimulated genes
- PII.31** **Verena Jendrossek, Essen, GER:** The immunoregulatory CD73/Adenosine system promotes radiation-induced pulmonary fibrosis by shaping a pro-fibrotic environment
- PII.32** **Gabriele Niedermann, Freiburg, GER:** Theranostic evaluation of the combination of hypofractionated radiotherapy and IL-2/anti-IL-2 complexes in tumor-bearing mice
- PII.33** **Randall J. Kimple, Madison, USA:** A role for EGFR in radiation induced autophagy
- PII.34** **Michael Story, Dallas, USA:** The radioprotector GC4419 has significant anti-tumor properties when used in combination with high dose per fraction radiation regimens
- PII.35** **Sven de Mey, Brussels, BE:** Radiosensitizing potential of phenformin in a preclinical colorectal cancer model
- PII.36** **Nagwa Sorour, Dresden, GER:** Photon vs. proton irradiation: benefit of metabolic targeting for combinatorial treatment of pancreatic cancer cells
- PII.37** **Burkhard Jakob, Darmstadt, GER:** Establishing a new tool for measuring chromatin modulation induced by chemotherapeutic drugs
- PII.38** **Richard P. Hill, Toronto, CAN:** Plerixafor and normal tissues response to irradiation
- PII.39** **Anne Kiltie, Oxford, UK:** Modification of the classical jejunal crypt assay for use in lower abdominal irradiation experiments using a small animal radiation research platform
- PII.40** **Ashish Sharma, Zürich, CH:** The novel tubulin-binding ‘tumor checkpoint controller’ BAL101553 display superior anti-tumor activity in combination with Radiotherapy or Bevacizumab
- PII.41** **Ludwig Dubois, Maastricht, NL:** Nintedanib safely reduces radiation-induced lung damage: a preclinical study with a high precision image-guided irradiator
- PII.42** **Ryan S. Elliott, Toronto, CAN:** A novel high throughput platform for studies in radiobiology

**List of Posters to be presented in Session 4**

**Topic III**

***Biomarkers and Interventional Strategies in Radiation Oncology***

**Poster no. Presenting author and title**

- PIII.1 Paul Harari, Madison, USA:** Advancing head and neck cancer radiation oncology research through the NCI-funded multi-investigator SPORE grant at the University of Wisconsin
- PIII.2 Anna Dubrovskaja, Dresden, GER:** CD98hc as a potential marker of radioresistance in head and neck squamous cell carcinoma
- PIII.3 Kevin Chua, Singapore, SGP:** Lymphocyte apoptosis as a predictive biomarker for radiotherapy de-intensification in EBV-associated nasopharynx cancer
- PIII.4 Jacqueline Kessler, Halle/Saale, GER:** Radiosensitization of human malignant glioma cells expressing isocitrate dehydrogenase 1 (IDH1) mutant protein: dissecting the mechanisms
- PIII.5 Dan G. Duda, Boston, USA:** Common and disease specific biomarkers of response and toxicity in a phase II study of hypofractionated proton beam therapy for liver cancers
- PIII.6 Michael Orth, Munich, GER:** Combining radiotherapy with HSP90 inhibition is of special attractiveness for the treatment of p53-deficient tumors: A proof-of-principle study
- PIII.7 Zachary Morris, Madison, USA:** Impact of radiation on the expression of immune susceptibility markers in melanoma
- PIII.8 Apostolos Menegakis, Amsterdam, NL:** Ex vivo  $\gamma$ H2AX radiosensitivity assay in prostate cancer patient tumour samples. Evaluation of inter-patient and intra-patient heterogeneity
- PIII.9 Franz Rödel, Frankfurt, GER:** Prognostic impact of RITA expression in patients with anal squamous cell carcinoma treated with chemoradiotherapy
- PIII.10 Aadhya Tiwari, Tübingen, GER:** K-RAS(G13D) mutation interferes with radiation-induced activation of Y-box binding protein-1 in triple-negative breast cancer cells.
- PIII.11 Marc Vooijs, Maastricht, NL:** Synergy of a pan-NOTCH inhibitor with chemoradiation in non-small cell lung cancer (NSCLC).
- PIII.12 Theodoros Tsakiridis, Hamilton, CAN:** Metabolic targeting with combined metformin and salicylate treatment provides improved tumor suppression and radio-sensitization in prostate cancer
- PIII.13 Raymon Niemans, Maastricht, NL:** Anticancer effects of SN36506, a novel hypoxia-activated prodrug: in vitro and in vivo effects with external validation
- PIII.14 Hui Wang, Brussels, BE:** Clinical drug auranofin enhances tumor radioresponse through targeting redox system
- PIII.15 Stephan Bodis, Aarau, CH:** Does androgen deprivation therapy lower the alpha/beta values of prostate cancer? Evidence from isoeffective phase III trials and its implications
- PIII.16 Antje Dietrich, Dresden, GER:** Combined fractionated external and internal irradiation using <sup>90</sup>Y-Cetuximab: Optimization of treatment scheduling and proof of curative potential
- PIII.17 Natividad Gomez-Roman, Glasgow, UK:** Mitochondrial poisoning as a novel therapy for glioblastoma
- PIII.18 Markus Bredel, Birmingham, USA:** Characterization of a novel EGFR mutation that confers ligand-independent activation in head and neck Cancer

- PIII.19** **Christopher Willey, Birmingham, USA:** MARCKS Regulation of glioblastoma growth and radiation sensitivity depends on its phosphorylation status
- PIII.20** **James Bonner, Birmingham, USA:** Non-coding MIR491 is associated with less EGFR expression and greater radiosensitivity in human head and neck cancer cell lines
- PIII.21** **Eddy Yang, Birmingham, USA:** Let-7a microRNA status is crucial for PARP1 expression in HER2-overexpressing breast tumors
- PIII.22** **Michael Orth, Munich, GER:** Exploiting novel combined-modality approaches for the treatment of highly aggressive pancreatic ductal adenocarcinomas (PDACs)
- PIII.23** **Mozhgan Dehghan Harati, Tübingen, GER:** Role of stem cells marker in Akt isoforms mediated radioresistance
- PIII.24** **Melanie Schneider, Dresden, GER:** HPV status and cancer stem cell markers as prognostic factors for patients with early-stage head and neck squamous cell carcinoma
- PIII.25** **Anna Danielsson, Gothenburg, SE:** Epigenomic patterns and radiation-induced DNA methylation alterations in patient-derived stem-like cells from paediatric brain tumours and neural cells
- PIII.26** **Ina Kurth, Heidelberg, GER:** Changes in epithelial to mesenchymal transition (EMT) characteristics in the development of radioresistance in head and neck squamous carcinomas
- PIII.27** **Enric Domingo, Oxford, UK:** Multi-omic profiling and radiotherapy response in rectal cancer biopsies of COPERNICUS trial: results from SCORT (Stratification in COloRec-Tal cancer)
- PIII.28** **Klaus Dittmann, Tübingen, GER:** Radiation-activated EGFR kinase regulates stability of VEGF signalling-associated mRNAs by MiRNA guided cNot1-deadylase activity
- PIII.29** **Simon Boeke, Tübingen, GER:** Voxel-based simultaneous hypoxia PET and functional MR imaging in experimental tumours
- PIII.30** **Cristina Müller, Villigen, CH:** First steps towards the combination of proton irradiation and targeted radionuclide therapy
- PIII.31** **Annika Reddig, Magdeburg, GER:** Application of automated  $\gamma$ H2AX-foci analysis to assess the impact of 7 Tesla magnetic resonance imaging on DNA damage formation in human lymphocytes