



DoReMi Workshop:
**Low dose radiation effects on the immune system: current
knowledge and future research needs**

**Budapest, Hungary
November 5-7, 2013**

Final program

Tuesday, November 5

- 17.00 Registration
- 18.00 Welcome address and introduction:
Géza Sáfrány, host of the workshop
Serge Candéias: Introduction to the workshop
- 18.25 **Keynote lecture** Chair: Géza Sáfrány
András Falus (Semmelweis University, Budapest, Hungary)
Genetic and epigenetic regulation of the immune response

19.00 – 20.30 Welcome reception

Wednesday, November 6

- Overview of the DoReMi consortium** Chair: Serge Candéias
- 9.00 – 9.15 Sisko Salomaa presenting the DoReMi consortium
- 9.15 – 9.30 Christophe Badie presenting WP5 activity
- 9.30 – 10.05 Jean-René Jourdain presenting WP7 activity and OPERRA project
- 10.05– 10.30 Coffee break**

Tumor immunity Chair: Udo Gaipl

- 10.30 – 11.05 Alexandros G. Georgakilas (National Technical University of Athens, Greece): *Non-targeted effects in vivo: from radiation to growing tumors, a unifying model?*
- 11.05 – 11.25 Takai Daisaku (Institute for Environmental Sciences, Rokkasho, Aomori, Japan): *Enhancement of tumor cell transplantability and alteration of chemokine receptor gene expression in mice exposed continuously to low dose-rate irradiation.*
- 11.25 – 11.45 Patrick Finkel (University Hospital Erlangen, Germany): *Role of NK cells during immune activation induced by X-ray and hyperthermia*

Inflammatory responses and bystander effects Chair: Sisko Salomaa

- 11.45 – 12.05 Franz Rödel (Goethe University, Frankfurt-am-Main, Germany): *Immunomodulatory Properties in Inflammatory Diseases of Low-dose X-Irradiation*
- 12.05 – 12.25 Udo Gaipl (University Hospital Erlangen, Germany): *Modulation of inflammation by ionizing irradiation – impact on radiation risk and immune activation by danger signals*

12.25 – 13.45 Lunch

- 13.45 – 14.05 Stéphanie Moreno (CEA, France): *Are macrophages the cellular sensors of low doses of irradiation?*

14.05 – 14.25 Munira Kadhim (Oxford Brookes University, UK): *The role of Microvesicles / Exosomes communication in Non-Targeted Effects of Ionizing Radiation*

Basic mechanisms and pathways

Chair: Benjamin Frey

14.25 – 15.00 Rhodri Ceredig (Remedi, Galway, Ireland): *Effects of hypoxia on the DDR of mesenchymal stromal cells*

15.00 – 15.35 Christine Hellweg (German Aerospace Center, Köln): *Cellular Radiation Response: Molecular Profile of a Reaction to Extraneous Danger*

15.35 – 16.00 Coffee break

16.00 – 16.20 Serge Candéias (CEA, Grenoble, France): *Effects of total body irradiation on T lymphocyte development in the mouse*

16.20 – 16.40 Jorg Tost (CEA, France): *High-throughput DNA methylation analysis reveals epigenetic modulation of immune related genes after ionizing radiation*

Risk of low dose irradiation

Chair: Christophe Badie

16.40 -17.05 Claudia Fournier (GSI Helmholtz Center, Germany): *Genetic risk and anti-inflammatory effects of low doses of different types of ionizing irradiation (GREWIS-project)*

17.05 – 17.20 Piroska Virág (Institute of Oncology, Cluj, Romania): *The effects of computed tomography (CT) derived low doses on human peripheral blood mononuclear cells*

17.20 – 17.35 Cristoforo Simonetto (Helmholtz Center, Munich, Germany): *Ischemic Heart Disease in Workers at Mayak PA: Radiation risk and its evolution with age and time*

17.35 – 17.50 Balázs Madas (Center for Energy Research, Budapest, Hungary): *Chronic cell death may play a crucial role in mutagenesis and carcinogenesis due to radon exposure*

19.30 – 22.00 Dinner at Új Sípos Fishgarden

The bus will start from the hotel to Új Sípos Restaurant at 18.30 and will return to the hotel between 22.00 and 22.30.

Thursday, November 7

Radiation induced immune modulation

Chair: Franz Rödel

8.45 – 9.20 Gabrielle Multhoff (Technical University, Munich): *Immunomodulatory effects of irradiation*

9.20 – 9.55 Dörthe Schaeue (UCLA, USA): *Adjusting the immune rheostat with radiation*

9.55 – 10.20 Katrin Manda (University of Rostock, Germany): *Immune modulatory effects of low dose radiation therapy*

10.20 – 10.45 Coffee break

10.45 – 11.05 Katalin Lumniczky (National Research Institute for Radiobiology and Radiohygiene, Budapest, Hungary): *Low dose induced quantitative and functional alterations in the lymphocyte subpopulations of total-body irradiated mice*

11.05 – 11.15 Gabriele Babini (UNIPV, Pavia, Italy): *An integrated experimental theoretical approach to try to unravel the complex non-linear dynamics of the inflammatory pathway*

3D models in inflammation and immunity

Chair: Katalin Lumniczky

11.15 – 11.35 Anna Acheva (STUK, Helsinki, Finland): *Pro-inflammatory pathways activated in 3D organotypic skin model after low LET irradiation*

11.35 – 11.45 Sabine Schröder (Rostock University, Germany): *Influence of low-dose ionising radiation on murine endothelial cells – comparison between 2D and 3D cultivation conditions*

11.45 – 12.45 Round table discussion: Radiation and immunology: where we are now and what are the main priorities?

Moderator: Udo Gaipl

Summary and closing of the workshop

12.45 – 13.45

Lunch