

Radiation Physics

Invited Lecture

- 001 **Can stochastic models of radiation track test reaction mechanisms in DNA and related systems and be helpful for the estimation of biological risks of exposure to ionizing radiations?**
H. Nikjoo and K. Sankaranarayanan

Oral Presentations

- 002 **Development of nanodosimetric methods for the investigation of radiation damage to DNA**
Gerhard Hilgers, Elisabetta Gargioni, Bernd Großwendt, Hans Rabus
- 003 **Study of nanodosimetric quantities obtained by Geant4 and PTB Monte Carlo code for particles in liquid water**
M. U. Bug, E. Gargioni, S. Guatelli, S. Incerti, P. Lazarakis, M. Reinhard, A. B. Rosenfeld
- 004 **A Monte Carlo based assessment of the biophysical efficiency of incorporated H-3, C-14 and I-131**
Ekkehard Pomplun and Michel Terrissol
- 005 **Low electron energy driven reactions at ultra cold temperatures**
F. Ferreira da Silva, S. Denifl, T. D. Märk, P. Limao-Vieira, and P. Scheier

Posters

- 006 **Total, elastic and inelastic electron scattering cross sections of Tetrahydrofuran in the energy range between 20 eV and 1.0 keV**
W. Y. Baek, B. Grosswendt, M. U. Bug and H. Rabus
- 007 **NanoCoRD: A network for advanced concepts of radiation dosimetry based on radiobiology and nanodosimetry**
H. Rabus, E. Gargioni, G. Hilgers, U. Giesen, M. Gomolka, R. Kriehuber, C. Seidl, M. Bug, B. Großwendt, S. Hornhard, U. Kulka, U. Oestreicher, E. Pomplun, U. Rössler, R. Semenkowitsch-Schmidtke
- 008 **STORE – Sustaining access to tissues and data from Radiobiological Experiments**
Mandy Birschwilks and The STORE-Consortium
- 009 **e.ERA - The electronic European Radiobiological Archives database animates old data**
M. Birschwilks, C. Adelman, S. Tapio, M. Gruenberger, P. Schofield and B. Grosche
- 010 **Modification of DNA radiolysis by DNA-binding proteins**
Marie Davidková, Viktorie Štisová, Stéphane Goffinot, Bertrand Castaing, Melanie Spothem-Maurizot

Molecular Targets for Radioenhancement, Radiation Sensitivity

Invited Lecture

- 011 **Interplay of erbB receptors and DNA damage pathways as a regulatory component of cellular radiation sensitivity**
H. Peter Rodemann

Oral Presentations

- 012 **The mitotic checkpoint response to ionising radiation exposure**
A. Velissariou, F. Lyng, R. Rowan, J. O'Sullivan, B. Nolan, O. Howe
- 013 **Radiosensitivity of lymphocytes from HIV positive individuals**
A. Baeyens, J.P. Slabbert, P. Willems, S. Josela, D. van der Merwe, A. Vral
- 014 **Comparative analysis of intrinsic radiosensitivity of lymphocytes from cervix cancer patients and healthy donors**
A. Wegierek-Ciuk, M. Arabski, A. Lankoff, H. Lisowska, A. Banasik-Nowak, P. Kedzierawski, A. Florek, P. Kukolowicz, S. Gozdz, D. Solowiej, J-M. Bertho, B. Allenet-Lepage, P. Voisin, P. Gourmelon, and A. Wojcik
- 015 **Effect of harvesting time on the frequency of micronuclei in lymphocytes exposed to low and high LET radiation**
Elina Staaf, Karl Brehwens, Christian Johannes, Andrzej Wojcik

Posters

- 016 **Inhibition of type III TGF- β receptor abrogates lung fibrotic process**
Ji-Yeon Ahn, Sarah Park, Yeon-Sook Yun, and Jie-Young Song
- 017 **Effect of Caffeine on changes in phosphorylation of histone H2A.X, p21 and Mcl1 expression in response of peripheral blood mononuclear cells to gamma radiation**
Z. Vilasová, Z. Šinkorová, J. Pejchal, J. Vávrová and J. Österreicher
- 018 **Quantification of γ -H2AX foci following exposure to γ -rays and α -particles in Jurkat cells**
Marcus Unverricht, Ulrich Giesen, Ralf Kriehuber
- 019 **RBE of alpha particles from At-211 for cell survival and DNA damage in relation to cell cycle positron**
K.Magnander, K. Claesson, H. Kahu, D. Hultborn and K. Elmroth
- 020 **Cell cycle arrest after exposure to high- or low-LET radiation in relation to chromatin compactness**
Kristina Claesson, Karin Magnander, Ulla Delle and Kecke Elmroth
- 021 **Intervariability of cytogenetic parameters of human lymphocytes sensitivity to ionizing radiation**
Natalia Ryabchenko

Stem Cells

Invited Lecture

- 096 Mechanisms of stem cell resistance**
J. Mokry, T. Soukup, M. Rezacova, B. Visek, L. Bruckova

Oral Presentations

- 097 Proliferation, senescence and cell death of adult human stem cells of dental pulp (DPSC) after gamma irradiation**
M. Rezacova, D. Muthna, T. Soukup, J. Mokry, J. Cmielova, B. Visek, A. Jiroutova, R. Havelek and J. Vavrova
- 098 The immunophenotyping study of hematopoietic stem cells after whole body irradiation and following lin- stem cells transplantation**
Zuzana Sinkorova, Lenka Zarybnicka, Jirina Vavrova

Genetic Instability, Bystander Effect and Radio-Adaptation

Invited Lecture

- 099 **Genetic and dose effects on radiation-induced Genomic Instability (GI)**
Munira A. Kadhim

Oral Presentations

- 100 **Non-targeted effects of ionising radiation (NOTE) / An ongoing European integrated project, 2006-2010**
Sisko Salomaa, Eric G. Wright, Guido Hildebrandt, Munira Kadhim, Mark P. Little, Kevin M. Prise and Oleg V. Belyakov
- 101 **Low dose radiation induced bystander effects and genome instability in primary human fibroblast cells**
Hargita Hegyesi, Nikolett Sándor, Boglárka Schilling and Géza Sáfrány
- 102 **Chromosomal instability induced by mammography X-rays in cells from BRCA mutation carriers**
Marlis Frankenberg-Schwager, Anke Gregus
- 103 **Studies of bystander effects in tissue system after exposure to charged particle microbeam irradiation**
Oleg Belyakov
- 104 **The Cosmic Silence experiment: transcriptomics analysis of the adaptive response induced by ultra-low dose rate**
Massimo Pinto, Giustina Simone, Maria Antonella Tabocchini, Mauro Belli and Luigi Satta
- 105 **Role of FOXO transcription factor in the adaptive response and hormesis in *Drosophila Melanogaster***
Mikhail Shaposhnikov, Alexey Moskalev
- 106 **Bystander factors from blood samples of Chernobyl victims induce damage in *in vitro* cell culture**
P. Marozik, I. Mosse, C. Seymour, C. Mothersill
- 107 **Modeling of low-dose radiation effects**
M. Iosjpe, A. Jaworska

Posters

- 108 ***P53* gene function is not required for bystander signals induction and transmission**
Maria Widel, Agnieszka Szurko, Waldemar Przybyszewski, Lidia Brodziak, Anna Lalik, Joanna Rzeszowska-Wolny

- 109 **Low-dose x-ray induces an adaptive response in unirradiated bystander-lymphocytes by DNA-signaling pathway**
Marina S. Konkova, Aleksei V. Ermakov, Svetlana V. Kostyuk, Liudmila V. Efremova, Natalya A. Egolina, Natalya N. Vei
- 110 **The influence of low dose gamma-irradiation on life span of *Drosophila* mutants with GADD45 overexpression**
Alexey A. Moskalev, Ekaterina N. Plusnina
- 111 **Mechanisms underlying cellular responses to low dose/low LET ionizing radiation in primary haemopoietic cells**
Kim Chapman, Stefania Militi, Deborah Bowler, Denise Macdonald, Munira Kadhim
- 112 **Radio-adaptive response of different T-lymphocyte sub-types**
Marco Filipe Alves Valente, Sandrine Roch-Lefevre, Pascale Voisin, Laurence Roy
- 113 **Non-targeted cytogenetic effects of human radiation exposure in delayed terms following Chernobyl accident**
Maria Pilinskaya, Sergey Dibskiy, Olena Shemetun
- 114 **Non-irradiated bystander fibroblast of mice and human origin protect radiation targeted tumour cells against cytogenetic damage and apoptosis**
Waldemar Przybyszewski, Maria Widel, Agnieszka Szurko, Robert Herok, Lidia Brodziak, and Joanna Rzeszowska-Wolny
- 115 **Radiation induced adaptive response and bystander effect in C3H10T1/2 cells**
Karine S. Voskanyan, Gennady V. Mytsin, Victor N. Gaevskiy
- 116 **The impact of a changing dose rate on the cellular effects of ionising radiation**
Karl Brehwens, Elina Staaf and Andrzej Wojcik
- 117 **Cell fusion and premature chromosome condensation induction as a means to study bystander effects**
Georgia I. Terzoudi, George Iliakis and Gabriel Pantelias
- 118 **Another type of hormesis induced by low dose radiation and its potential mechanism involving free radicals**
Liyuan Zhang, Yongyou Wu, Ye Tian, Hongmei Huo, Yusong Zhang
- 119 **Modifying effects of Mn(II)(NicotinyL-L-Tyrosinate)₂ and Mn(II)(NicotinyL-L-Tryptophanate)₂ on direct radiation and bystander response**
Carmel Mothersill, Colin Seymour, Margarita Malakyan, Sergey Bajinyan
- 120 **Change of breast cancer patients' genome instability during radio- and chemotherapy**
I. Strelkova, G. Snigireva, V. Bezlepkin

Radioecology

Invited Lecture

- 121 **Consequences of the Chernobyl catastrophe as a prototype of nuclear terrorism**
Dmitry Grodzinsky

Oral Presentations

- 122 **State of the lipid peroxidation process as test for the estimation of the radiation accident consequences**
L.N. Shishkina, N.G. Zagorskaya, A.G. Kudyasheva, O.G. Shevchenko
- 123 **Estimation of radiation exposure on biota from industrial area with high level natural background radiation**
T. Evseeva, T. Majstrenko, E. Belykh, J. Brown

Posters

- 124 **Inherited non-mutational effects of ionizing radiation**
Elena I. Sarapultseva, Irena B. Bychkovskaya
- 125 **Dynamics of chromosome aberration rate in freshwater snail's embryos in the Chernobyl accident exclusion zone**
E.V. Dzyubenko, D.I. Gudkov, A.B. Nazarov
- 126 **Some morphological and productional changes of Hydrobionts within the Chernobyl accident exclusion zone**
A.A. Yavnyuk, N.L. Shevtsova, O.N. Protsenko, D.I. Gudkov
- 127 **Biological effects in *Pinus sylvestris* population growing on high natural radiation background area**
E. Belykh, T. Evseeva, T. Majstrenko, J. Brown
- 128 **Molecular mechanisms of soybean adaptation toward chronic ionizing radiation**
M. Danchenko, L. Skultety, N. Rashydov, M. Hajduch
- 129 **Using the method of radiocapacity in investigation of cross adaptations of modeling plants ecosystem**
Anastasiya Salivon
- 130 **Using the radiocapacity parameter for estimations of the effect of combined γ -irradiation and $CdCl_2$ action on plants**
Svitlana Pchelovskaya
- 131 **The effects of low doses ionizing radiation on living organism: informational approach**
Klaudziya Bulanova, Leanid Labanok, Yaugen Kanaplya

- 132 **Current radioecological situation in Semipalatinsk nuclear test site**
T.A. Majstrenko, T.I. Evseeva, E.S. Belykh
- 133 **Distribution of the physicochemical forms of radionuclides in aquatic plants in the Chernobyl exclusion zone**
Ch.D. Ganzha, D.I. Gudkov, V.G. Klenus, Z.O. Shirokaya
- 134 **Nuclear geochronology of the Black Sea ecosystems**
Sergey Gulin, Larissa Gulina
- 135 **Trends of ^{90}Sr and ^{137}Cs contamination of the Black Sea after the Chernobyl NPP accident**
V.N. Egorov, G.G. Polikarpov
- 136 **Changes in functional activity of hydrobionts influenced by low electromagnetic radiation**
Julia V.Igolkina

Radiation Protection, Accidents, and Consequence Management

Invited Lectures

- 137 **Interleukin-1 β in radioprotection and therapy of radiation injuries**
A. N. Grebenyuk
- 138 **Development of somatostatin analogs for the prevention or mitigation of radiation injury**
Martin Hauer-Jensen, and K. Sree Kumar
- 139 **Gamma-tocotrienol as a radiation countermeasure drug: Efficacy and mechanisms**
K. Sree Kumar and Martin Hauer-Jensen

Oral Presentation

- 140 **Medical countermeasures against the acute hematopoietic and gastrointestinal (GI) syndromes**
A. M. Farese, M. V. Cohen, E. McFarland, C. Potten, C. Booth, T. MacVitti

Posters

- 141 **Modeling and assessment of effects of acute radiation syndrome**
S.V. Osovets, T.V. Azizova, M.V. Sumina, M.B. Druzhinina
- 142 **Enhanced recovery from radiation-induced hematopoietic damage with Gamma-tocotrienol**
Sanchita P. Ghosh, Shilpa Kulkarni, Kevin Hieber, Lyudmila Romanyukha, Kristen Gambles, Raymond Toles, Martin Hauer-Jensen, K. Sree Kumar
- 143 **Oxidative homeostasis behaviour in clean-up workers in long-term period after the Chernobyl accident**
Ludila Ovsyannikova, Anatoliy Chumak, Olena Nosach, Svitlana Alekhina, Alla Kubashko
- 144 **The Chernobyl clean-up workers with registered equivalent doses more than 25 cSv have higher level of the respiratory system diseases primary morbidity starting from the fourth decade of life**
Marat Karamullin, Anatoly Sosukin, Konstantin Nerobotsky, Vadim Tirenko, Atexev Choutko, Sergey Ignatiev, Alexey Babak, Ludmila Ekimova
- 145 **Radioprotective activity of Manganese(II)bis(Nicotinyl-L-Tyrosinate) *in vivo***
Margarita Malakyan, Sergey Bajinyan, Anna Boyajyan, Armenuhi Abrahamyan, Zhasmena Petrosyan, Nektar Haroutyunyan, Dianna Yeghiazaryan, Hripsime Aghjoyan, Lilit Vardevanyan, Karen Babayan, Vladimir Matosyan, Vahan Tonoyan
- 146 **Antiradiation vaccine: Technology development of prophylaxis, prevention and treatment of biological sequelae from neutron irradiation**
Dmitri Popov, Jeffrey Jones, Slava Maliev



Normal Tissue Damage

Invited Lecture

- 147 **Predictive assays of normal tissue toxicity**

Catharine West

Oral Presentations

- 148 **Effects of acute low dose irradiation on the functional characteristics of dendritic cells and regulatory T cells**

Andrea Balogh, Enikő Noémi Bogdándi, Nikolett Felgyinszky, Katalin Lumniczky, Géza Sáfrány

- 149 **Immunologic alterations in mice irradiated with low doses**

Katalin Lumniczky, Enikő Noémi Bogdándi, Andrea Balogh, Nikolett Felgyinszky, Géza Sáfrány

- 150 **Amelioration of radiation-induced oral mucositis through mobilization of bone marrow stem cells by AMD3100**

Julia Haagen, Margret Schmidt, Wolfgang Dörr

- 151 **Expression of EGFR and distribution of Cetuximab in normal tissues (mouse)**

Martin Puttrich, Margret Schmidt, Wolfgang Dörr

- 152 **Involvement of SNPs in the development of acute and late radiotoxicity for IMRT treated H&N cancer patients**

J. Werbrouck, K. De Ruyck, F. Duprez, W. De Neve and H. Thierens

- 153 **Mechanisms of normal tissue response: a task of the EU project ALLEGRO on the risks to healthy tissues in RT**

Angelica Facoetti, Klaus R. Trott, Vere Smyth, Andrea Ottolenghi

Posters

- 154 **Effect of Lovastatin on oral mucositis (mouse) during daily fractionated irradiation**

Stefanie Büttner, Margret Schmidt, Wolfgang Dörr

- 155 **Effects of Palifermin on radiation-induced changes of ILK expression in oral mucosa (mouse)**

Bettina Habelt, Margret Schmidt, Nils Cordes, Wolfgang Dörr

- 156 **Optimization of Palifermin administration for amelioration of oral mucositis after single radiation exposure**

Katja Rajewski, Wolfgang Doerr

- 157 **Modulation of radiation-induced oral mucositis by inhibition of TNF- α : experimental studies in mice**

Sophie Röllig, Kathrin Wolfram, Julia Haagen, Margret Schmidt, Wolfgang Dörr

158 **Bioindicators of nitrosative stress in Wistar rats following whole body irradiation**
Andrea Babicova, Zuzana Havlinova, Jaroslav Chladek, Martina Rezacova,
Milos Hroch, Jaroslav Kejchal, Jirina Vavrova

159 **Reactive oxygen species produced by NADPH oxidase 4 mediates radiation or bleomycin induced lung fibroblast differentiation**
Ji-Yeon Ahn, Sarah Park, In-Sung Jung, Yeon-Sook Yun, and Jie-Young Song

Non-Ionizing Radiation

Invited Lecture

- 160 **Non-surgical laser treatment of chronic diseases: advantages and limits**
L. Longo

Oral Presentations

- 161 **PDT and aspirin determine proteasome malfunctioning in lung adenocarcinoma cells**
Giuseppe Palumbo, Angela Chiaviello
- 162 **Tissue laser interaction in endovenous treatment**
L. Veverková, J. Konečný, P. Vlček, V. Jedlička, I. Čapov, L. Páč, V. Pitr
- 163 ***In vitro* effects of exposure to radiofrequency on DNA damage induced by high-LET ionising radiation**
Lorenzo Manti, Rita Massa, Luigi Campajola, Annalisa d'Arco, Paola Scampoli, Gianfranco Grossi
- 164 **The possibilities of e-learning for low level laser therapy**
Vaclav Navratil, Leos Navratil, Jozef Rosina, Blanka Navratilova
- 165 **Effects of the static magnetic field generated by a 1.5 T MRI unit on the TNF alpha release on human monocytes**
Sergio Salerno, Carmela La Mendola, Nadia Cacciamo, Antonio Lo Casto
- 166 **Oxidative stress in mice after therapeutic laser irradiation and gamma irradiation**
Z. Freitinger-Skalicka, V. Navratil, J. Racek, Z. Hon, J. Rosina, F. Zölzer, L. Navratil

Posters

- 167 **Photodynamic and sonodynamic treatment of cancer cells**
Hana Kolarova, Katerina Tomankova, Robert Bajgar, S. Binder, Petr Kolar, Miroslav Strnad
- 168 **Another aspect of the HT-29 cells resistance in the twofold photoactivation of hypericin *in vitro***
Lucia Kuliková, Jaromír Mikeš, Martina Hýžd'alová, Giuseppe Palumbo, Peter Fedoročko
- 169 **The effects of repetitive microsecond microwave pulses on regeneration of a skin wound of mice**
L. P. Zharkova, M. A. Bolshakov, I. R. Knyazeva, V. V. Rostov
- 170 **The study of photodynamic therapy impact on HeLa cell line morphology by atomic force microscopy**
K. Tomankova, H. Kolarova, P. Kolar, S. Binder

Radiation Oncology

Invited Lecture

171 **Latest Developments in Radiation Oncology**

Michael Baumann

Oral Presentations

172 **α/β ratios for low/intermediate/high risk prostate cancer deduced from seven primary institutional datasets**

Raymond Miralbell, Stephen Roberts, Eduardo Zubizarreta, Jolyon Hendry

173 **Dose escalation in prostate radiotherapy up to 82 Gy using simultaneous integrated boost – direct comparison of acute and late toxicity with 3D CRT 74 Gy and IMRT 78 Gy**

M. Doležel, K. Odrážka, M. Vaculíková, J. Vaňásek, J. Šefrová, P. Paluska, M. Zouhar, J. Jansa, Z. Mačingová, M. Vošmik, J. Petera, M. Broďák, and P. Morávek

Posters

174 **Prostate cancer after treatment: Imaging modalities at follow-up**

A.L. Valentini, B. Gui, V.I. Di Molfetta, G. Mattiucci, G. Mantini, L. Bonomo

175 **Measurement of dose equivalent fields near phantom at the treatment room for proton therapy in Dubna**

S.V. Shvidkij, A.G. Molokanov, M. Zielczynski, M. Gryzinski

176 **Biological effects of scattered radiation generated with penetration of medium depth inside a water phantom**

M. Konopacka, J. Rogoliński, K. Ślosarek

177 **The circulating hematopoietic progenitor cells level and rate of cancer patient's death**

A. N. Shutko, V. P. Sokurenko, L.P. Ekimova, E. Nemkova, L.I. Koritova, V. Ph. Mus

- 022 **Assessment of individual radiosensitivity by exploiting G₂-checkpoint abrogation in irradiated lymphocytes**
Georgia I. Terzoudi, Vasiliki I. Hatzii, Katarzyna Barszczewska, Ioanna Karachristou, Ph. Angelakis, George Iliakis and Gabriel E. Pantelias
- 023 **Risk assessment of chemicals at non-clastogenic doses by means of G₂-chromosomal radiosensitization**
Vasiliki I Hatzii, Georgia I Terzoudi, Vasilios Makropoulos, Gabriel E. Pantelias
- 024 **Comparison of individual radiosensitivity of peripheral blood lymphocytes from prostate cancer patients and healthy donors**
K. Brzozowska, A. Wojcik, M. Eble, M. Pinkawa, R. Kriehuber, S. Schmitz
- 025 **Sensibilizing and protective mechanisms triggered by low doses of radiation in human mammary carcinoma cells.**
O.V. Komova, L.A. Melnikova, E.A. Nasonova, N.L. Shmakova, T.A. Fadeeva.
- 026 **Modulation of stability of DNA damage response factors as a means to enhance radiation sensitivity**
Ji-Hyun Lee, Yun-Sil Lee and Sangwoo Bae
- 027 **External X-irradiation of a cell line of papillary Thyroid carcinoma inhibits proliferation via a p53-dependent mechanism**
Khalil Abou-El-Ardat, Arlette Michaux, Ann Janssen, Pieter Monsieurs, Hanane Derradji, Rafi Benotmane, Sofie Bekaert, Wim van Criekinge, Sarah Baatout
- 028 **Combined treatment of glioblastomas with ionizing radiation and ABT-737, a novel Bcl-2/Bcl-XL inhibitor**
K.E. Tagscherer, A. Fassel, M. Farhadi, C. Herold-Mende, W. Roth
- 029 **The nucleotide pool is a target for radiation induced oxidative stress**
Siamak Haghdoost and Mats Harms-Ringdahl
- 030 **Radiosensitivity and antioxidant biomarkers in multiple sclerosis patients**
I. Petcu, D. Savu, H. Thierens, G. Nagels, A. Vral
- 031 **Assessment of male infertility growth in Ukrainian population due to radiation pollution of territories**
S. Andreichenko, A. Klepko, V. Talko
- 032 **Radiation induced effects on the differentiation process of neural cells**
A. Bajjinskis, H. Lindegren, L. Johansson, M. Harms-Ringdahl and A. Forsby
- 033 **Effect of low dose of radiation on neurite outgrowth and nervous network formation**
N. Samari, G. Pani, L. de Saint-Georges, S. Baatout, L. Leyns, M.A. Benotmane
- 034 **Phospholipid composition of the murine liver as target after radiation exposure at a wide range of dose rates**
N.V. Khrustova, EV. Kushnireva, L.N. Shishkina

Transgenerational Effects

Oral Presentations

- 178 A genetic risk estimate of radiation in mice based on whole genome scanning by two-dimensional DNA gel**
Jun-ichi Asakawa, Mieko Kodaira, Hiroaki Katayama, Harry M. Cullings, Nori Nakamura
- 179 Radiation-induced transgenerational instability in mammals**
Yuri E. Dubrova
- 180 Induction of adaptive response and genetic instability in mice by bendazole and chronic high-LET radiation**
S. Sorokina, S. Zaichkina, O. Rozanova, G. Aptikaeva, H. Smirnova,
S. Romanchenko, A. Dyukina, A. Shemyakov

Posters

- 181 Signs of genome instability in the progeny of rats irradiated with gamma rays**
Viera Hanova, Martina Semelakova, Eva Misurova
- 182 Low dose irradiation effect on microsatellite mutation rate**
V.A. Orekhov, G.O. Shaikhaev, A.V. Aghajanyan, G.P. Snigiryova

Biological Dosimetry

Invited Lecture

- 035 **On-going biological dosimetry improvements**
Laurence Roy

Oral Presentations

- 036 **The role of chromatin structure in DNA damage and its monitoring**
Martin Falk, Emilie Lukasova, Alena Bacikova, Stanislav Kozubek
- 037 **Towards a European network of excellence in biological dosimetry**
Andrzej Wojcik, Horst Romm, Laurence Roy, David Lloyd
- 038 **γ -H2AX foci as biomarker for x-ray exposure in pediatric cardiac catheterization**
Laurence Beels, Klaus Bacher, Daniel de Wolf, Joke Werbrouck, Hubert Thierens
- 039 **Developing a portable biological dosimeter for rapid patient classification following a radiological incident**
Iestyn A. Pope, Paul R. Barber, Pat Hone, Simon Horn, Vivien Prise, Elizabeth Ainsbury, Michael Woodcock, Kai Rothkamm, and Borivoj Vojnovic
- 040 **F and C ratios as potential cytogenetic fingerprints of high LET radiation**
Marta Deperas-Kaminska, Ekaterina M. Zaytseva, Joanna Deperas-Standylo, Polina V. Kutalo and Andrzej Wojcik
- 041 **Studies on application of SCGE (comet) assay as a screening test in biological dosimetry**
A. Cebulska-Wasilewska, M. Krzysiek, A. Panek, Z. Rudek, J. Miszczyk
- 042 **Automated micronucleus (MN) scoring for population triage in case of large radiation events**
Petra Willems, Liezel August, Jakobus Slabbert, Horst Romm, Ursula Oestreicher, Hubert Thierens and Anne Vral
- 043 **ESR study of proton irradiation response of watch glasses**
M. Marrale, A. Longo, S. Basile, G. Gennaro, G.A.P. Cirrone, M. Brai

Posters

- 044 **The service experience in emergency biodosimetry**
Igor K. Khvostunov, Alexander V. Sevan'kaev
- 045 **Impact of the radiation ionization on the participants in diminishing of consequences of the Chernobyl nuclear accident and their children health**
Liubov S. Koretskys, Lilia I. Koretskya, Alexandra Kornesku

- 046 **Semi-automated micronucleus-centromere scoring to assess low dose radiation exposure in human lymphocytes**
A. Baeyens, R. Swanson, J.P. Slabbert, P. Willems, H. Thierens, A Vral
- 047 **Methodological variations of the micronucleus-centromere test**
Friedo Zölzer, Zdeněk Hon, Jozef Rosina, Jiří Škopek, Leoš Navrátil
- 048 **Comparative analysis of the in vitro sensitivity of human lymphocytes exposed to radiation of different LET**
Ekaterina M. Zaytseva, Marta Deperas-Kaminska, Raisa D. Govorun, Joanna Deperas-Standylo and Andrzej Wojcik
- 049 **The effects of temperature and ionizing radiation on γ -H2AX and chromosome aberrations in peripheral blood lymphocytes**
H. Lisowska, A. Banasik-Nowak, A. Wegierek-Ciuk, A. Lankoff
- 050 **Retrospective dose reconstruction in the group occupationally exposed to tritium using FISH method**
G.P. Snigiryova, T.I. Khaimovich
- 051 **Improvement of cytogenetical dosimetry**
Emiliya Domina
- 052 **Multicolour immunophenotyping of swine peripheral blood T lymphocytes and their sensitivity to gamma radiation**
L. Zarybnicka, Z. Sinkorova, J. Sinkora
- 053 **Possible biomarkers for radiation exposure**
Young Yon Kwon, Hyun Jin Yun, Sun Young Kim, Eun Ju Kim, Chang-Mo Kang
- 054 **Expression of activated p38 MAPK in rat colon transversum after whole body γ -irradiation**
Jaroslav Pejchal, Jan Österreicher, Jakub Novotný
- 055 **Gene expression pattern analysis as a tool for radiation biodosimetry**
Katja Knops, Sonja Boldt, Olaf Wolkenhauer, Ralf Kriehuber

Pharmacological Modulation of Radiation Damage

Invited Lecture

- 056 **Evaluation and treatment of ARS damage in the rhesus macaque: establishing an ARS animal research platform**
Thomas J. MacVittie, Ann M. Farese, Melanie V. Cohen, Catherine Booth, Chris Potten, Emylee McFarland

Oral Presentations

- 057 **Activation of adenosine A3 receptors in treatment of radiation-induced myelosuppression**
Michal Hofer, Milan Pospíšil, Antonín Vacek, Jiřina Holá, Lenka Weiterová, Denisa Štreitová, Zuzana Hoferová
- 058 **Assessment of selected parameters of humoral and cell mediated immunity in workers of X-ray departments**
Piotr Klucinski, Bogdan Mazur, Lukasz Sedek, Barbara Wiechula, Malgorzata Romanik, Pawel Cieslik

Invited Lectures

- 059 **Development of radiation-protective agents**
Joseph F. Weiss
- 060 **Radioprotective effects and mechanisms of action of genistein**
Michael R. Landauer

Oral Presentations

- 061 **γ -tocotrienol protects hematopoietic stem cells and induces G₂ arrest in mouse marrow after total body irradiation**
Shilpa Kulkarni, Sanchita P. Ghosh, Steven Mog, Kevin Hieber, Lyudmila Romanjukha, Kristen Gambles, Raymond Toles, Martin Hauer-Jensen, K. Sree Kumar
- 062 **Effect of new radio-protectors (nicotinamide, 1-methylnicotinamide) on radiosensitivity and DNA repair in human lymphocytes**
Agnieszka Panek, Aldona Karabin, Jerzy Gębicki, Antonina Cebulska-Wasilewska

Posters

- 063 **Radio-protective, radio-remedial, and anti-metastatic functions of 1,4-dimethylpyridine**
Jolanta Wrembel-Wargocka, Ewa M. Nowosielska, Aneta Cheda, Jerzy Gebicki, Stefan Chlopicki, Andrzej Marcinek, Marek K. Janiak

- 064 Reduction of metastases and 7.5 Gy γ -rays-induced mortality of mice by nicotinamide**
Marek K. Janiak, Ewa M. Nowosielska, Aneta Cheda, Jolanta Wrembel-Wargocka, Stefan Chlopicki, Andrzej Marcinek, Jerzy Gebicki
- 065 Potential radio-protective, radio-remedial, and anti-metastatic activities of 1-methylnicotinamide**
Andrzej Marcinek, Aneta Cheda, Ewa M. Nowosielska, Jolanta Wrembel-Wargocka, Jerzy Gebicki, Stefan Chlopicki, Marek K. Janiak
- 066 1-methyl-3-acetylpyridine as a radio-protective, radio-remedial, and anti-metastatic agent**
Stefan Chlopicki, Ewa M. Nowosielska, Aneta Cheda, Jolanta Wrembel-Wargocka, Jerzy Gebicki, Andrzej Marcinek, Marek K. Janiak
- 067 Potential radio-protective, radio-remedial, and anti-metastatic activities of nicotinic acid**
Jerzy Gebicki, Aneta Cheda, Ewa M. Nowosielska, Jolanta Wrembel-Wargocka, Stefan Chlopicki, Andrzej Marcinek, Marek K. Janiak
- 068 Radio-protective, radio-remedial, and anti-metastatic activities of various doses of 1-methylnicotinamide**
Ewa M. Nowosielska, Aneta Cheda, Jolanta Wrembel-Wargocka, Andrzej Marcinek, Jerzy Gebicki, Stefan Chlopicki, Marek K. Janiak
- 069 Radioprotective effects of Mn(II)(NicotinyL-L-Tyrosinate)₂ and Mn(II)(NicotinyL-L-Tryptophanate)₂: Improved melting characteristics of irradiated rats liver DNA**
Nelli Karapetyan, Anahit Torosyan, Margarita Malakyan, Sergey Bajinyan
- 070 Radioprotective efficiency IL-1 β at an irradiation of peripheral blood *in vitro***
Alexander Timoshevskiy, Alexander Grebenyuk, Nataliya Kalinina
- 071 Fenofibrate decreases radiation sensitivity via SOD induction in HeLa cells**
Xianguang Liu, Zhengze An, Seong Soon Jang, Hye Jin Song, Won Dong Kim, Jae-Ran Yu, Woo-Yoon Park
- 072 Modification of Calcium homeostasis in thymocytes of irradiated rats after synthetic dipeptide action**
Natalya V. Prokopenko, Nanakya V. Gerasimovich
- 073 Temperature stress as modulator of radiation effects in experimental animals**
L.I. Makovetska, O.B. Ganzha, N.M. Ryabchenko, N.K. Rodionova, M.O. Druzhyna

DNA Repair

Invited Lecture

- 074 The role of ATM signalling and the mediator proteins in DNA double strand break (DSB) repair**
Penny A. Jeggo, Aaron Goodarzi, Angela Noon, Atsushi Shibata, Andrea Beucher and Markus Löbrich

Oral Presentations

- 075 Inhibition of homologous recombination shunts early double strand break repair to non-homologous end-joining in G2 phase cells**
J.W.J. Bergs, P.M. Krawczyk, R. ten Cate, T. Borovski, H. Rodermond, JP Medema, J. Haveman, J.A. Aten, N.A.P. Franken
- 076 The radiosensitizing effect of Ku70/80 knockdown in MCF10A cells irradiated with X-rays and neutrons**
Veerle Vandersickel, Monica Mancini, Jacobus Slabbert, Emanuela Marras, Hubert Thierens, Gianpaolo Perlet
- 077 Molecular and genetic factors influence DNA repair efficiency and health hazard**
Cebulska-Wasilewska Antonina
- 078 Effect of new radio-protectors (nicotinamide, 1-methylnicotinamide) on radiosensitivity and DNA repair in human lymphocytes**
Agnieszka Panek, Aldona Karabin, Jerzy Gębicki, Antonina Cebulska-Wasilewska

Poster

- 079 Increase of extracellular mitochondrial DNA with mutations in blood plasma of X-irradiated mice**
S.A. Abdullaev, V.N. Antipova, A.I. Gaziev

Heavy Ions

Invited Lecture

080 New developments in heavy ion biophysics

Marco Durante

Oral Presentations

081 Apoptotic cell death and cell cycle accumulation in p53 mutated small cell lung cancer cells irradiated with boron and nitrogen ions

Margareta R. Edgren, Annelie E. Meijer, Woo-Chul Kim and Anders Brahme

082 mFISH study of aberrations in lymphocytes of prostate cancer patients treated with IMRT and C-ions: an update

Ryonfa Lee, Carola Hartel, Anna Nikoghosyan, Marco Durante, Sylvester Sommer, Elena Nasonova, Claudia Fournier, Jürgen Debus, Daniela Schulz-Ertner, Sylvia Ritter

083 Laser particle accelerators for radiotherapy – first radiobiological in vitro cell characterisation

Doreen Naumburger, Elke Beyreuther, Wolfgang Enghardt, Malte Kaluza, Leonhard Karsch, Lydia Laschinsky, Elisabeth Leßmann, Maria Nicolai, Jörg Pawelke, Christian Richter, Roland Sauerbrey, Hans-Peter Schlenvoigt, Michael Baumann

084 Does the high pulse dose rate affect the biological efficiency of laser accelerated electron beams?

Elke Beyreuther, Leonhard Karsch, Lydia Laschinsky, Elisabeth Leßmann, Doreen Naumburger, Christian Richter, Jörg Pawelke

Posters

085 Insights in the spore resistance to low and high LET particle radiation: the interplay of DNA repair mechanisms

Ralf Moeller, Thomas Berger, Petra Rettberg, Ryuichi Okayasu, and Günther Reitz

086 Mechanism of enhancement effect of carbon-beam irradiation and topoisomerase II inhibitor on two cell lines

Takeo Takahashi, Yukari Yoshida, Atsushi Musha, Hidemasa Kawamura, Koichi Ando, Takashi Nakano

087 Antiradiation vaccine: Technology and development of prophylaxis, prevention and treatment of biological sequelae from heavy ion irradiation

Dmitri Popov, Jeffrey Jones, Slava Maliev

Radiation Carcinogenesis

Invited Lecture

- 088 **The *how* and *why* of radiation carcinogenesis**
Tom K. Hei

Oral Presentations

- 089 **Carcinogenesis by low dose radiation passes through the same route as natural carcinogenesis**
Masami Watanabe, Kimiko Watanabe, Hanako Yoshii, Hisakatsu Nawata, Keizo Tano
- 090 **Impact of long-term exposure to chemical agents on radiation responses**
Otilia Nuta, Simon Bouffler, David Lloyd, Ovnair Sepai and Kai Rothkamm

Posters

- 091 **Estimation of the radiation induced cancer risk and the linear non-threshold model**
I.L.Shafransky, A.R.Tukov
- 092 **Dose formation and biological efficacy of long-term internal irradiation**
A.I. Lypska, Ya.I. Serkiz, I.P. Drozd
- 093 **Quantitative microdistribution of plutonium in the liver of the former Mayak workers**
Maxim V. Belosokhov, Yekaterina V. Lyovkina
- 094 **Threshold for the stimulation of NK cells and macrophages in mice by single irradiations with X-rays**
Aneta Cheda, Ewa M. Nowosielska, Jolanta Wrembel-Wargocka, Marek K. Janiak
- 095 **Threshold for the stimulation of NK cells and macrophages in mice by fractionated exposures to X-rays**
Ewa M. Nowosielska, Aneta Cheda, Jolanta Wrembel-Wargocka, Marek K. Janiak