

# **14th International Congress of Radiation Research 2011**

**(ICRR2011)**

**Warszawa, Poland**

**28 August - 1 September 2011**

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## Detailed program

Sunday 28 August 2011	
Start time	18:00
<p><b>Opening ceremony and welcome reception (LR1 Kongresowa)</b></p> <p>Chair: Marek K Janiak (Poland)</p> <p>Addresses: Maciej Żylicz, Advisor to Bronisław Komorowski, President of Poland, Waldemar Pawlak, Minister of Economy, Honorary Patron of ICRR2011 Hanna Gronkiewicz-Waltz, Mayor of the capital city of Warsaw Michał Kleiber, President of the Polish Academy of Sciences Ohtsura Niwa, President of IARR Antonina Cebulska-Wasilewska, President of ICRR2011</p> <p>Stage performance by the Polish folklore dancing group PROMNI</p> <p>Welcome reception in the foyer of LR1 Kongresowa</p>	

### Acronyms:

CL – Conference lecture  
 CR – Coffee and lunch room  
 EO – Eye opener  
 LR – Lecture room  
 MR – Meeting room  
 PL – Plenary lecture  
 POS – Poster session  
 PR – Poster room  
 S – Symposium

### Lecture rooms:

LR1 Kongresowa  
 LR2 Ratuszowa  
 LR3 Skłodowska  
 LR4 Warszawska  
 LR5 Mikołajska  
 LR6 Kruczkowski

### Poster rooms:

PR1 Starzyński  
 PR2 Broniewski

### Coffee and lunch rooms:

CR1 Marmurowa  
 CR2 Korczak

### Meeting rooms:

MR1 Rudniew  
 MR2 Rudniew annex  
 MR3 – MR5 Warszawska annexes  
 MR6 Puszkini

Please see rear part of the book for a layout of the rooms and an explanation of the room names.

**Monday 29 August 2011**

Start time	ROOM	LR1 Kongresowa	LR2 Ratuszowa	LR3 Skłodowska	LR4 Warszawska	LR5 Mikolajska	LR6 Kruczkowski
<b>08:30</b>	<b>Eye opener lectures E01-E06 - pg. 19</b>	EO1. Chair: M.K. Janiak S. Akiba (Japan): Low-level radiation exposure and cancer risk.	EO2. Chair: H. Tanooka M. Atkinson (Germany): The genetics of radiation induced cancer.	EO3. Chair: A. Ottolenghi E. Gudowska-Nowak (Poland): Modelling radiobiological responses: where are we?	EO4. Chair: S. Chandna Y. Wang (USA): Outline the role and importance of microRNAs in cell function including response to radiation.	EO5. Chair: M. Kruszewski G. Bauer (Germany): Reactive oxygen and nitrogen species involved in radiation-induced signalling/bystander effects.	EO6. Chair: K. Bobrowski C. Chatgililoglu (Italy): Chemical radiation studies related to radical-based DNA damage.
<b>09:30</b>	<b>Coffee break (CR1 Marmurowa and CR2 Korczak)</b>						
<b>10:00</b>	<b>Symposia S1 – S6 - pg. 20</b>						
	<b>S1. Normal tissue effects of radiation</b> Chair: M. Robbins, J. Williams 10:00 C. Limoli (USA): Stem Cells, Oxidative Stress, and Normal Tissue Injury. 10:25 M. Robbins (USA): Use of anti-inflammatory therapies to modulate radiation-induced late effects. 10:50 M.C. Vozenin (France): Inflammation and fibrosis 11:15 K. Fleckenstein (Germany): Hypoxia and inflammation in radiation induced normal tissue injury.	<b>S2. Chromatin modifications and DNA damage response</b> Chair: I. Szumiel, J. Dobrucki 10:00 J. Dobrucki (Poland): Histone methylation and heterochromatin protein 1 in DNA damage response. 10:25 T. Pandita (USA): Chromatin modifications and DNA damage response. 10:50 J.R. Morris (UK): Regulation of post-translational modifications in the double-strand break response. 11:15 M. Falk (Czech Republic): Induction, repair and misrepair of DNA double-strand breaks (DSBs) in the	<b>S3. Space research</b> Chair: F. Cucinotta, M.A. Tabocchini 10:00 F. Cucinotta (USA): Introduction 10:10 G. Zhou (China): Different responses between G0 and exponentially growing cells exposed to ionizing radiation. 10:30 M.A. Tabocchini (Italy): DNA damage and repair after low doses of charged particles. 10:50 J. Pluth (USA): Radiation quality dependent effects on phosphorylation kinetics of proteins involved in early DNA damage response. 11:15 M.K. O'Banion (USA): Hippocampal neurogenesis and contextual fear response	<b>S4. Radiation and immune response modifiers</b> Chair: E. Repasky, S. Demaria 10:00 E. Repasky (USA): Defining a role for body temperature in cytokine regulation and neutrophil homeostasis following total body irradiation. 10:25 S. Demaria (USA): Cancer cells stressed by radiotherapy become targets for CD8 T cells activated by anti-CTLA-4 treatment. 10:50 J.W. Hodge (USA): The tipping point for combination therapy: cancer vaccines with radiation. 11:15 C.-S. Chiang (Taiwan): Distinct in vivo responses of tumor-associated macrophages	<b>S5. RRS President's symposium - biological significance of complex DNA damage: physics, chemistry and biology of complex damage</b> Chair: P. O'Neill 10:00 A. Ottolenghi (Italy): Modelling of DNA damage dependence on radiation quality. 10:25 M. Lomax (UK): The pros and cons of processing clustered DNA damage sites. 10:50 K. Elmroth (Sweden): Formation and consequences of complex DNA lesions using radiation with different LET. 11:15 A. Georgakilas (USA): New insights into the processing of	<b>S6. Radiation damage to biomolecules (I): peptides, proteins, membrane lipids</b> Chair: C. Ferreri, K. Bobrowski 10:00 E.F. Garman (UK): Radiation damage in macromolecular crystallography: current challenges. 10:25 W.H. Koppenol (Switzerland): Formation and repair of protein radicals. Role of thyl radicals. 10:50 B. Mihaljevic (Croatia): A new biomimetic model of free radical reactivity in lipids. 11:15 M. Stuart (Canada): Fatty acid composition of muscle tissue measured in amphibians living in radiologically contaminated and non-	

Continued from Symposia S1 – S6

	context of higher-order chromatin structure.	in C57BL/6 mice exposed to 2 Gy whole body protons.	to irradiation.	oxidatively induced clustered DNA lesions. Clinical applications?	contaminated environments.	
<b>12:00</b>	<b>Conference lectures CL1 – CL6 - pg. 25</b>					
	CL1. Chair: I. Guseva Canu R. Wakeford (UK): Chernobyl effects: what do we know after 25 years?	CL2. Chair: A. Haimovitz-Friedman N. Cordes (Germany): A sticky matter: ECM and radiation cell survival.	CL3. Chair: I. Stratford S. Formenti (USA): Clinical relevance of the immune response.	CL4. Chair: B. Cedervall C. Mothersill (Canada): Chronic exposures, multiple stressors and other uncomfortable issues in radiation protection.	CL5. Chair: A. Lankoff H. Shen (USA): Nanotechnology in cancer therapy CL6. Chair: W. H. Koppenol C. Houée Levin (France): Protein radiation chemistry: one electron oxidation of methionine in peptides and proteins.	
<b>13:00</b>	<b>Lunch break (CR1 Marmurowa and CR2 Korczak)</b>					
<b>14:00</b>	<b>Plenary lecture PL1 (LR1 Kongresowa) - pg. 27</b>					
	Chair: C. Streffler (Germany) T. Ohnishi (Japan): Disaster of Fukushima-Daichi nuclear power plant (Japan) by earthquake and tsunami and RI-pollution.					
<b>15:00</b>	<b>Poster sessions POS1 – POS13 (PR1 Starzyński and PR2 Broniewski) - pg. 59</b>					
	POS1 Adaptive response; POS2 Biological dosimetry; POS3 Bystander effects; POS4 Cell signalling; POS5 Effects of radiation on inflammation and immunity; POS6 Computational/theoretical studies in radiation physics and chemistry; POS7 Radiation chemistry and space research; POS8 Radiation chemistry of bioactive compounds ; POS9; Boron neutron capture therapy (BNCT); POS10 Epidemiology; POS11 Molecular imaging in diagnosis and therapy; POS12 Hadrontherapy; POS13 Interdisciplinary studies. Authors of odd poster numbers are asked to be at their posters from 15:00 to 15:45 Authors of even poster numbers are asked to be at their posters from 15:45 to 16:30					
<b>16:30</b>	<b>Coffee break (CR1 Marmurowa and CR2 Korczak)</b>					
<b>17:00</b>	<b>Plenary lecture PL2 (LR1 Kongresowa) - pg. 27</b>					
	Chair: Hans Menzel (Switzerland) Dudley Goodhead (UK): On the track to clustered damage and radiation effects. ICRU L.H. Gray award lecture.					
<b>18:00</b>	<b>Symposia S7 – S12 - pg. 27</b>					
	S7. Advances in combined therapies: ionizing radiation, hyperthermia and chemotherapy Chair: E. Azzam, E.A. Rapasky 18:00 F. Wenz (Germany): Combined radio-xyz-therapy. A	S8. Environmental radiobiology Chair: C. Mothersill, D. Oughton 18:00 M. Stuart (Canada): Adaptive responses and bystander effects in a multiple stressor context. 18:20 T.G. Hinton (France): Lessons	S9. Doses received from modern medical procedures Chair: S. Mattsson, A. Almén 18:00 A. Almén (Sweden): Diagnostic radiology and interventional procedures. 18:30 S. Mattsson	S10. Autophagy: a double-edged sword in cellular radiation response Chair: B.G. Wouters, D. Chan 18:00 B.G. Wouters (Canada): The unfolded protein response enables high rates of autophagy	S11. Radiation damage to biomolecules (II): nucleic acids and their constituents Chair: M.D. Sevilla, T. Majima 18:00 T. Majima (Japan): Charge transfer in DNA. 18:30 A. Adhikary (USA): Formation of	S12. Ethics of radiation protection Chair: F. Zölzer, C. Streffler 18:00 C. Streffler (Germany): Ethical aspects and culture of radiological protection in medicine and research. 18:30 J. Loehard

**Continued from Symposia S7 – S12**

	<p>clinical perspective. 18:30 Z. Vujaskovic (USA): Combined therapies in treatment of bladder cancer. 19:00 E.A. Repasky (USA): Can targeting normal, homeostatic vasomotor function by mild hyperthermia result in improved responses to radiation or chemotherapy?</p>	<p>Learned....Lessons Lost...Observations in Radioecology 25 Years after Chernobyl. 18:40 G. Rudolfsen (Norway): Chernobyl birds. 19:00 D. Oughton (Norway): Radiation effects on earthworms.</p>	<p>(Sweden): Nuclear medicine for diagnostics and therapy. 19:00 W. Bulski (Poland): Doses from radiotherapy.</p>	<p>and protection against metabolic stress in tumors. 18:30 D. Chan (USA): Induction of autophagic cell death in renal cell carcinoma. 19:00 H. Kim (USA): Radiation dose protection and mitigation by Carbamazepine (CBZ) is autophagy independent.</p>	<p>radiation-induced DNA sugar-phosphate backbone radicals via ionization and excitation pathways. 19:00 D. Hunting (UK): How can we exploit the properties of low energy and hydrated electrons to improve radiotherapy?</p>	<p>(France): The ethical foundation of the radiation protection system. 19:00 B. Taebi (Netherlands): Ethics of radiological protection for nuclear power production and waste management.</p>
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**Tuesday 30 August 2011**

Start time	<b>Tuesday 30 August 2011</b>					
ROOM	LR1 Kongresowa	LR2 Ratuszowa	LR3 Skłodowska	LR4 Warszawska	LR5 Mikolajska	LR6 Kruczkowski
08:30	<b>Eye opener lectures EO7-EO12 - pg. 31</b>					
	EO7. Chair: M. Atkinson J. Williams (USA): Animal models: the good, the bad and the useless.	EO8. Chair: W. Blakely K. Rothkamm (UK): Advances in biological indicators of radiation exposure.	EO9. Chair: W.F. Morgan O. Kovalchuk (Canada): Radiation induced epigenetic effects.	EO10. Chair: M. Harms-Ringdahl G. Hildebrandt (Germany): Radiation-induced cardiovascular effects.	EO11. Chair: E. Szajdzinska-Piętek P. Wardman (UK) Radiation chemistry in the 21st century: current status and perspectives.	EO12. Chair: S. Ptasińska P. Denfl (Austria): Electron driven reactions in doped helium nanodroplets - investigations on the radiation damage of biomolecules.
09:30	<b>Coffee break (CR1 Marmurowa and CR2 Korczak)</b>					
10:00	<b>Symposia S13-S18 - pg. 32</b>					
	<b>S13. New modalities for cancer treatment</b> Chair: G. McKenna, I. Stratford G. 10:00 McKenna (UK): Manipulating the tumour microenvironment in combined modality therapy. 10:25 T. Paunesku (USA): Nanoparticle targeting and radiosensitization. 10:50 I. Stratford (UK): Targeting tumour metabolism to improve the outcome of radiotherapy. 11:15 A. Chalmers (UK): Combining PARP inhibitors with radiation therapy: rationale, strategy and potential biomarkers.					
	<b>S14. Non-targeted effects: its mechanism and significance</b> Chair: M. Kadhim, M. Watanabe 10:00 M. Kadhim (UK): Introduction to non-targeted effects. 10:05: T. Hei (USA): Is radiation-induced non-targeted response relevant to human health. 10:30: M. Watanabe (Japan): The origin of radiation carcinogenesis is not DNA damage. 10:50: F. Cucinotta (USA): Modular systems biology and low dose radiation responses. 11:10: M. Little (USA): Circulatory disease from exposure to low-level ionising radiation and estimates of potential population risks: a meta-analysis of					
	<b>S15. The use of archiving data and biological material - examples and strategies</b> Chair: B. Grosche, G.A. Thomas 10:00 P.N. Schofield (UK): The STORE data warehouse; an international infrastructure for data sharing in radiobiology. 10:30 W.F. Morgan (USA): Mining the lifespan studies of beagles exposed to radiation <i>in utero</i> or as juveniles. 10:50 G.A. Thomas (UK): The Chernobyl Tissue Bank – a model for integrating “omics” research on single blocks of tissue. 11:10 E. Douple (Japan): The use of unique archived data and biological samples by the					
	<b>S16. Induction of secondary cancers by ionizing radiation</b> Chair: I. Toma-Dasu, D. Averbeck 10:00 D. Brenner (USA): Understanding and potentially reducing second cancers after radiotherapy. 10:25 Y. Dubrova (UK): The delayed genetic effects of radiotherapy – what we know and what we do not. 10:50 J. Hall (France): Relation between DNA repair defects and development of secondary cancers. 11:15 I. Toma-Dasu (Sweden): Modelling the induction of secondary cancers from radiotherapy.					
	<b>S17. Multiple stressors (covers humans and environmental studies)</b> Chair: D. Oughton, C. Mothersill 10:00 C. Seymour (Canada): Multiple stressors – issues to ponder. 10:20 P. Eriksson (Sweden): Developmental co-exposure to low doses of ionising radiation and environmental toxicants during a critical period of brain development exacerbate cognitive defects in adult mice. 10:50 M. Maier (Germany): Portable Langendorff system for determination of effects of nanoparticles after radiation. 11:10 I. Guseva Canu (France): Epidemiology of uranium workers in					
	<b>S18. Radiation-produced intermediates - basic problems</b> Chair: I. Carmichael, S. Pimlott 10:00 S. Ptasińska (USA): DNA damage induced by fast-flowing metastable species in a cold plasma. 10:25 A. McNamara (Australia): A comparison of X-ray, proton and alpha beam track structures using Monte Carlo simulations. 10:50 R. Edge (UK): Reaction of carotenoids with free radicals and singlet oxygen. 11:15 I. Carmichael (USA): Scavengers as a mitigating strategy against radiation damage in macromolecular crystallography.					

**Continued from Symposia S13-S18**

	epidemiological studies. 11:30 S. Salomaa (Finland): Highlights of the NOTE program 2006- 2010.	Radiation Effects Research Foundation. 11:30 S. Tapio and O. Azimzadeh (Germany): Qualitative and quantitative proteomic analysis using formalin- fixed paraffin-embedded (FFPE) tissue.	France. Radiological and not-radiological exposure and its effects. 11:30 B. Salbu (Norway): Sublethal effects in juvenile atlantic salmon (Salmo salar) induced by multiple stressors (gamma radiation and metals).	
<b>12:00</b>	<b>Conference lectures CL7 – CL12 - pg. 38</b>			
	CL7. Chair: G. Iliakis T. Halazonetis (Switzerland): ATM- 53BP1 pathway in response to DNA double strand breaks and cancer development.	CL8. Chair: S. Demaria W. McBride (USA): Inflammatory responses to radiation.	CL9. Chair: A. Wojcik E. Cardis (Spain): Mobile phones and health risks.	CL10. Chair: K. Skladowski B. van der Kogel (Netherlands): Hypoxia and its role in radiotherapy of tumours.
<b>13:00</b>	<b>Lunch break (CR1 Marmurowa and CR2 Korczak)</b>			
<b>14:00</b>	<b>Poster session POS14 – POS22 (PR1 Starzynski and PR2 Broniewski) - pg. 109</b>			
	POS14 DNA repair; POS15 Genetic instability; POS16 Individual radiation sensitivity; POS17 Radioecology; POS18 Radiation chemistry in materials science; POS19 Radiation research and nuclear power; POS20 Combination treatments; POS21 Non-cancer effects; POS22 Heavy ions. Authors of odd poster numbers are asked to be at their posters from 14:00 to 14:45 Authors of even poster numbers are asked to be at their posters from 14:45 to 15:30			
<b>15:30</b>	<b>Coffee break (CR1 Marmurowa and CR2 Korczak)</b>			
<b>16:00</b>	<b>Plenary lecture PL3 (LR1 Kongresowa) - pg. 39</b>			
	Chair: O. Niwa R. Hill (Canada): The varied faces of hypoxia in cancer: from radiation resistance to metastasis to stem cell niche. IARR H.S. Kaplan award lecture.			
<b>16:45</b>	<b>Debate (LR1 Kongresowa)</b>			
	Chair: J. Williams, J. Turesson Debate title: This house believes that further advances in radiation oncology will come from physics rather than from radiation biology. Debaters: B. Maciejewski (Poland) and S. Bentzen (USA)			
<b>19:30</b>	<b>Conference gala dinner (Warsaw Centre EXPO XXI)</b>			



Wednesday 31 August 2011					
Start time	ROOM	LR1 Kongresowa	LR2 Ratuszowa	LR3 Skłodowska	
08:30		<b>Eye opener lectures EO13 – EO17 – pg 39</b>	EO13. Chair: R. Wakeford K. Kodama (Japan): Update on radiation risk estimates from A-bomb survivors.	EO14. Chair: D.G. Jones S. Chandna (India): Molecular mechanisms of extreme radioresistance displayed by insect cells.	
				EO15. Chair: W. McBride K. Skladowski (Poland): Combined chemo-radiation therapy.	
				EO16. Chair: D. Goodhead W. Friedland (Germany): Track structure simulations for radiation physics, chemistry and biology.	
				EO17. Chair: J. Michalik J.F. Wishart (USA): Ionic liquid radiation chemistry and its applications in nuclear fuel treatment.	
09:30		<b>Coffee break (CR1 Marmurowa and CR2 Korczak)</b>			
10:00		<b>Symposia S19 – S24 – pg. 40</b>			
		<b>S19. Vascular endothelial cell response to radiation – a new dimension</b> Chair: M. Natarajan, A. Haimovitz-Friedman 10:00 M. Natarajan (USA): Irradiated endothelium and mechanotransduction signalling. 10:25 M. Hauer-Jensen (USA): Vascular-mediated normal tissue injury - where are we and where are we going? 10:50 D.F. Kucik (USA): Adhesiveness of aortic endothelium is increased in response to high LET radiation. 11:15 A. Haimovitz-Friedman(USA): Targeting vascular endothelium for radiosensitization and tumor cure.	<b>S20. What, if anything have 'omics technologies taught us about radiation effects/risks?</b> Chair: M. Sowa, A.L. Brooks 10:00 A.L Brooks (USA): Influence of omics research on radiation paradigms and risk: past and future. 10:25 S. Amundson (USA): Insight into the bystander effect from functional genomics. 10:50 P. Stambrook (USA): What 'OMICS' can and cannot tell us about DNA damage response and DNA repair in embryonic stem cells? 11:15 M. Sowa (USA): What have 'omics studies taught us about health risks?	<b>S21. Theragnostic radiotherapy</b> Chair: K. Skladowski, R. Suwiński 10:00 R. Suwiński (Poland): The perspectives of TPMCC (Therapeutic Personalized Multimodality cancer Care) in combined treatment for cancer of the head and neck. 10:20 R. Tamawski (Poland): Feasibility and Safety of reducing the irradiation dose in regions of active neurogenesis for prophylactic cranial irradiation in patients with small-cell lung cancer. 10:40 L. Miszczyk (Poland): Radiotherapy of painful vertebral hemangiomas. 11:00 J. Wydmański (Poland): Is there a role for neoadjuvant therapy in gastric cancer? 11:20 K. Skladowski	<b>S22. Nanotechnology targeting DNA damage and repair pathways: advances from the clinic</b> Chair: A. Georgakilas, E.S. Yang 10:00 (USA): Targeting the epidermal growth factor receptor (EGFR) family to render tumor cells susceptible to poly (ADP-Ribose) polymerase (PARP) inhibition. 10:25 W.S. Dynan (USA): Re-engineering the DNA double strand break machinery for therapeutic purposes. 10:50 O. Martin (Australia): Use of gamma-H2AX to monitor DNA damage and repair in translational cancer research. 11:15 Karl T Butterworth (UK): Application of gold nanoparticles as radiosensitising agents.
				<b>S23. New developments in radiation dosimetry</b> Chair: S. Simon, F. Trompier 10:00 S. Simon (USA): Dosimetry techniques to support long-term health risk studies. 10:25 P. Kukulowicz (Poland): Developments in dosimetry methods in radiotherapy. 10:50 J. Brown (Norway): Developments in dosimetry for exposures in the environment. 11:25: F. Trompier (France): Developments and new trends for radiation accident dosimetry with biological samples and personal items.	
				<b>S24. Radiation chemistry in materials science</b> Chair: J. Belloni, S. Tagawa 10:00 M. Washio (Japan): Nano-/micro-fabrication of polymeric materials using focused ion beams. 10:30 M. Mostafavi (France): New strategy to form by radiolytic method nanoparticles of metal and semiconductor. 11:00 T. Kozawa (Japan): Reaction of thermalized electrons in resist materials.	
				<b>LR4 Warszawska</b>	
				<b>LR5 Mikolajska</b>	
				<b>LR6 Kruczkowski</b>	

Continued from Symposia S19 – S24

			(Poland): Does accelerated radiotherapy reflect radiobiology: 15 year experience with CAIR (7 days irradiation).		
<b>12:00</b>	<b>Plenary lecture PL4 (LR1 Kongresowa) - pg. 46</b>	Chair: P. O'Neill D. Brenner (USA): Exploring the two two-edged swords. RRS G. Failla award lecture.			
<b>13:00</b>	<b>Lunch break (CR1 Marmurowa and CR2 Korczak)</b>				
<b>14:00</b>	<b>Poster session POS23 – POS29 (PR1 Starzyński and PR2 Broniewski) - pg. 162</b>	POS23 Radiation protection; OS24 Low dose effects; POS25 Stem cells; POS26 Radiation damage to biomolecules; POS27 Normal tissue damage; POS28 Microdosimetry; POS29 Physical dosimetry. Authors of odd poster numbers are asked to be at their posters from 14:00 to 14:45 Authors of even poster numbers are asked to be at their posters from 14:45 to 15:30			
<b>15:30</b>	<b>Coffee break (CR1 Marmurowa and CR2 Korczak)</b>				
<b>16:00</b>	<b>Plenary lecture PL5 (LR1 Kongresowa) - pg. 46</b>	Chair: K. Williams D. Hirst (UK): Nanoparticle therapy with the Midas touch. ARR Weiss award lecture.			
<b>16:45</b>	<b>Plenary lecture PL6 (LR1 Kongresowa) - pg. 46</b>	Chair: A. Wojcik P. Jeggo (UK): Revealing the complexity of DNA double strand break repair: the processes, the lesion and the environment. ERRS Bacq and Alexander award lecture.			
<b>17:30</b>	<b>Symposia S25 – S29 - pg. 47</b>				
	<b>S25. Cell adhesion/migration in response to irradiation</b> Chair: M.H. Barcellos-Hoff, N. Cordes 17:30 M. Pruschy (Switzerland): Targeting the irradiation-induced proangiogenic and pro-invasive phenotype. 18:00 M.H. Barcellos-Hoff (USA): Mechanisms and consequences of radiation-induced phenotypes. 18:30 N. Cordes (Germany): Should I stay or should I go? Cell	<b>S26. Radiation research award session</b> Chair: P. O'Neill 17:30 M. Boerma (USA): Experimental radiation-induced heart disease: 18:00 A. Paun (Canada): Genetic variation in immunity alters murine response to whole thorax irradiation.	<b>S27. Tumor hypoxia and radioresistance</b> Chair: B. Wouters, H. Harada 17:30 H. Harada (Japan): Molecular mechanism behind HIF-1-mediated radioresistance and postirradiation recurrence of tumors. 18:00 Brad Wouters (Canada): Novel oxygen sensitive signalling pathways and their potential as therapeutic targets. 18:30 R. Ali (USA): Imaging of hypoxia-	<b>S28. Computational approach to understanding DNA protection by protein binding</b> Chair: M. Davidkova, R. Martin 17:30 M. Davidkova (Czech Republic): Effect of protein binding to direct and indirect radiation damage to DNA. 17:50 S. Prasincka (USA): The action of amino acids on electron irradiated DNA films. 18:10 R. Martin (Australia): The	<b>S29. Radiation chemical studies of bioactive compounds</b> Chair: J.L. Gębicki, T. Mukherjee 17:30 T. Mukherjee (India): Mechanistic studies on herbal drugs and their active ingredients in relation to their antioxidant and radioprotection ability. 18:00 M. Landauer (USA): Radioprotection by the soy isoflavone genistein. 18:30 A. Sikora (Poland): Novel tools in the research

**Continued from Symposia S25 – S29**

		migration after irradiation.		induced radiation resistance and treatment response.	development of new radioprotectors – DNA binding studies with methylproamine analogues. 18:30 H. Fujimoto (Japan): Structural analysis of the interaction between the Ku protein and DNA.	on antioxidants - the global profiling of ROS/RNS in cell-free and cellular systems.
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**Thursday 1 September 2011**

Start time	ROOM	LR1 Kongresowa	LR2 Ratuszowa	LR3 Skłodowska	LR4 Warszawska	LR5 Mikolajska	LR6 Kruczkowski
08:30		<b>Eye opener lectures EO18 – EO23 – pg. 50</b> EO18. Chair: P. Jeggo W. Bonner (USA): The ins and outs of DNA DSB repair foci.	EO19. Chair: E. Azzam B. Marples (USA): Cell death pathways: mechanisms and relevance to the radiation response.	EO20. Chair: D. Brenner G. Taucher-Scholz (Germany): Radiation and DNA lesions: when quality matters.	EO21. Chair: J. Hendry P.-K. Zhou (China): Health effects of exposure to radiation from residential radioactive building materials.	EO22. Chair: P. Wardman R. Anderson (New Zealand): Optimising drugs that target redox pathways.	EO23. Chair: J. Williams V. Meineke (Germany): Planning/responding to nuclear terrorism.
09:30		<b>Coffee break (CR1 Marmurowa and CR2 Korczak)</b>					
10:00		<b>Symposia S30 – S35 – pg. 51</b>					
		<b>S30. Biological effects of low doses</b> Chair: S. Salomaa, D. Averbek 10:00 S. Salomaa (Finland): Biological effects at low doses - European Low Dose Risk Research Strategy 10:15 C. Badie (UK): What do we know about the mechanisms of cancer induction and how might this affect the shape of the dose-response at low doses. 10:30 R. Wakeford (UK): The risk of cancer from low level exposure to radiation – the epidemiological evidence. 10:45 M. Atkinson (Germany): What do we know about the factors underlying individual susceptibilities and how large is this variation? 11:00 E. Cardis (Spain): Molecular epidemiology and low dose risk.	<b>S31. Dynamics of repair of radiation-induced cellular DNA damage in real time</b> Chair: D. Chen, A. Yasui 10:00 A. Yasui (Japan): Repair mechanisms of DNA strand breaks identified by visualizing proteins in human cells. 10:25 B. Jakob (Germany): Study of early DNA damage responses after charged particle irradiation by beamline microscopy. 10:50 J. Aten (Netherlands): Movement of DNA double-strand breaks. 11:15 A. Asaithamby (USA): Visualization of spatio-temporal dynamics of ionizing radiation induced clustered DNA lesions.	<b>S32. New tools in biological dosimetry</b> Chair: P. Voisin, B. Thierens 10:00 B. Thierens (Belgium): The automated micronucleus assay as a reliable biodosimetric tool for population triage in large scale radiation accidents. 10:20 A. Jaworska (Norway): MULTIBIODOSE: multi-disciplinary biodosimetric tools to manage high scale radiological casualties. 10:40 M. Gmar (France): BOOSTER: Bio-dosimetric Tools for triage to Responders. 11:00 G. Gruel (France): Towards the validation of gene expression modifications as a biodosimeter. 11:20: P. Voisin (France): Standardisation of biological dosimetry by cytogenetics: status,	<b>S33. Countermeasures in case of accidental radiation exposure</b> Chair: V. Meineke, J. Williams 10:00 J. Williams (USA): Animal Models for countermeasure research. 10:25 M. Drouet (France): Mesenchymal stem cell therapy for treatment of localized radiation injuries (the minipig model). 10:50 XZ Ran XZ (China): Studies on hematopoietic protection and immunity adjustment in combined radiation-thermal injury. 11:15 M. Hauer-Jensen (USA): The somatostatin analog, SOM 230, is a highly effective mitigator of intestinal radiation injury.	<b>S34. Stem cells and regenerative medicine for the treatment of radiotherapy side effects</b> Chair: M. Benderitter, C. Limoli 10:00: P Van Luijk (Netherlands): Stem cell sparing radiotherapy: a novel approach to the prevention of radiation-induced xerostomia. 10:15: C Limoli (USA): Cognitive restoration after cytotoxic cancer treatments. 10:30: C Guha (USA): Hepatocyte transplantation for amelioration of RILD. 10:45: A Chapel (France): Mesenchymal stem cell ameliorates severe radiation pelvic complication: clinical transfer. 11:00: O Malard (France): Bone regeneration and engineering in irradiated fields. 11:15: R Tamarat	<b>S35. Radiation research and nuclear power</b> Chair: D. Swiatla-Wojcik, A. Chmielewski 10:00 B. Mincher (USA): Radiation chemistry effects on nuclear solvent extraction: examples from CMPO radiolysis. 10:25 A. Chmielewski (Poland): Chemistry for the nuclear energy of the future. 10:50 J. Wren (Canada): Radiation-induced aqueous chemistry and corrosion in nuclear reactor environments. 11:15 D. Swiatla-Wojcik (Poland): Modelling and simulation for controlling chemistry in advanced nuclear energy systems.

**Continued from Symposia S30 – S35**

	11:15 J.-R. Jourdain (France): What do we know about the mechanisms of non-cancer effects at low and moderate doses? 11:30 K. Ozasa (Japan): Radiation risk of cancer and noncancer mortality in atomic bomb survivors, 1950-2003.		advantages and limitations.	(France): Regenerative medicine based on stem cell injection for radiation burn treatment. 11:30: M Klinger (Italy): Fat grafting after mastectomy and radiotherapy.	
<b>12:00</b>	<b>Conference lectures CL13 – CL18 – pg. 57</b>				
	CL13. Chair: H. Paretzke M.H. Barcellos-Hoff (USA): Systems biology - where are we and where can we go?	CL14. Chair: E. Blakely M. Durante (Germany): Particle therapy: from the laboratory to the clinic.	CL15. Chair: M. Mostafaei P. Ulański (Poland): Radiation chemistry and technology of polymers: recent advances.	CL16. Chair: Y. Dubrova C. West (UK): Genomics and the therapeutic response.	CL17. Chair: C. Badie J.-L. Ravanat (France): Radiation-induced DNA damage in mammalian cells - novel types of lesions.
<b>13:00</b>	<b>Lunch break (CR1 Marmurowa and CR2 Korczak)</b>				
<b>14:00</b>	<b>Plenary lecture PL7 (LR1 Kongresowa) - N/A</b> Chair: A. Cebulska-Wasilewska H. Langevin-Joliot (France): Maria Skłodowska-Curie				
<b>15:00</b>	<b>Coffee break (CR1 Marmurowa and CR2 Korczak)</b>				
<b>15:30</b>	<b>Poster session POS30 – POS41 (PR1 Starzyński and PR2 Broniewski) – pg. 218</b> POS30 Systems biology; POS31 Modulation of radiation damage; POS32 Nonionizing radiation; POS33 Non-targeted effects of radiation; POS 34 Proteomics; POS35 Radiation carcinogenesis; POS36 Tumour biology; POS37 Radiation chemistry: basic problems; POS38 Radiation technologies; POS39 Radiotherapy effects; POS40 Radiation biophysics; POS41 Track structure. Authors of odd poster numbers are asked to be at their posters from 15:30 to 16:15 Authors of even poster numbers are asked to be at their posters from 16:15 to 17:00				
<b>17:00</b>	<b>Closing ceremony (LR1 Kongresowa)</b> Chair: M.K. Jamiak Closing words: Ohtsura Niwa – President of IARR and Antonina Cebulska-Wasilewska – President of ICRR2011 Invitation to ICRR2015 in Kyoto, Japan: Masahiro Hiraoka - President of the ICRR2015				