# International 'Radiobiology' Satellite Meeting of the 15<sup>th</sup> National Conference of Biophysics

September 10, 2018, Măgurele-Bucharest, Romania

Organized by **Romanian Society of Pure and Applied Biophysics** (RSPAB)

in collaboration with Horia Hulubei National Institute for Physics and Nuclear Engineering (IFIN-HH)

> Extreme Light Infrastructure – Nuclear Physics (ELI-NP)





## **Organising committee**

Diana Savu, IFIN-HH Mihai Radu, IFIN-HH Paul Vasos, ELI-NP Mihaela Bacalum, IFIN-HH Călin Mircea Rusu, IFIN-HH

## Location of the event

Extreme Light Infrastructure – Nuclear Physics, Reactorului 30 Conference room (Office Building, Ground floor)

### Programme

8:30-9:20 – Transport from Hotel Siqua to ELI-NP

#### 9:20-9:30 Opening ceremony

#### 9:30-11:00 - Session 1

Chairpersons: Serge Candéias and François Chevalier

**9:30-9:55** <u>Serge Candéias</u>: Radiation-induced bystander signals modulate immune cell activation

**9:55-10:20** Charlotte Lepleux, Aurélie Marie-Brasset, Mihaela Temelie, Marion Boulanger, Émilie Brotin, Christophe Hirtz, Diana Savu, Tetsuo Nakajima, Yannick Saintigny and <u>François Chevalier</u>: Bystander Effects of human chondrosarcoma cells irradiated with accelerated ions

**10:20** – **10:40** Mihaela Temelie, Nicoleta Moisoi and <u>Diana Savu</u>: Intracellular and intercellular signaling mechanisms following DNA damage are modulated by the mitochondrial kinase PINK1

**10:40- 11:00** Diana Iulia Savu and <u>Nicoleta Moisoi</u>: Mitochondria-Nucleus communication protects against neurodegenerative processes

#### 11:00-11:30 - Coffee break / Poster session

#### 11:30-13:00 – Session 2

Chairpersons: Yannick Saintigny and Marlon Veldwijk

**11:30-11:55** Utpal Ghosh, François Chevalier, Paul Lesueur, Mihaela Temelie, Diana Savu, Siamak Hachdoost and <u>Yannick Saintigny</u>: Multimodal treatments of radio-resistant cancer: emerging effective combined therapy of PARP-1 inhibitors and high-LET particle therapy

**11:55-12:20** <u>Marlon Veldwijk</u>, Petra Seibold, Akke Botma, Irmgard Helmbold, Elena Sperk, Frank A. Giordano, Nicole Gürth, Anne Kirchner, Sabine Behrens, Frederik Wenz, Jenny Chang-Claude and Carsten Herskind: Association of CD4+ radiation-induced lymphocyte apoptosis with fibrosis and telangiectasia after radiotherapy in 272 breast cancer patients with >10-year follow-up

**12:20-12:40** Loredana Marcu: Radiobiological Challenges in the Management of Head and Neck Cancer – an *In Silico* Approach

12:40-13:00 Ion Christian Chiricuță: Radiotherapy: lessons from the routine

13:00-14:00 – Lunch / Poster session

14:00-15:50 – Session 3

#### **Chairpersons: Mihai Radu and Paul Vasos**

**14:00 -14:30** <u>Daniel Fologea</u>: Artificial Nano-Carriers for Radiation-Initiated Drug Delivery and Cancer Therapy

**14:30-14:50** <u>Valentin Cernea</u>: From classic to molecular radiobiology: The new paradigm and its relevance to the practice of radiotherapy

**14.50-15.10** <u>Ioan Oswald</u>, Dozimed Bucharest, Alicia Moga, Camelia Mraz, Alina Venter, Vlad Silviu, Lucia Daina, Ioana Tecsi, Elisabeta Antonescu: Dosimetric Assessments on Staff Professionally Exposed to Ionizing Radiations in the Angiography Laboratory

**15:10–15:30** <u>Gina Manda</u>, Maria Dobre, Ionela Victoria Neagoe, Cristian Postolache, Marina Nechifor and Mariana Bobeica: Gene Expression Profiles in Monocytic Cells Exposed To gamma and X Rays

**15:30-15:50** <u>Paul Vasos</u>: New biomarkers based on magnetic resonance for monitoring the effects of high dose-rate radiation



15:50-16:50 - ELI-NP visit

16:50-17:30 – Transport from ELI-NP to Hotel Siqua

# List of posters

**P-01** The Dose of Ionizing Radiation Received by Patients in Radiological Investigations, Elisabeta Antonescu, Ioan Oswald, Juliánna Szakács

**P-02** Optimization and dosimetry of IFIN-HH 3 MV TandetronTM proton beam for radiobiology experiments, <u>Mihaela Bacalum</u>, Simona Dîrleci, Mihai Straticiuc, Ion Burducea, Radu Andrei, Decebal Iancu, Radu Vasilache, Diana Savu and Mihai Radu

P-03 Simulation of high intensity pulsed electromagnetic fields exposure of developing pre B lymphocytes undergoing V(D)J gene recombination, <u>Elena Ionită</u> and Mihai Ciubotaru

**P-04** Effects Induced by UV Irradiation and Chemical Exposure on In Vitro Fibroblast Cultures Evaluated by Comet Assay, <u>Cosmin Cătălin Mustăciosu</u>, Ileana Petcu, Diana Savu and Mihai Radu

**P-05** Quality Indicators of the Antitestosterone Antibody-3 H Testosterone System for the RIA Technique for Dosing the Testosterone Level in Biological Samples, <u>Livia Neagu</u> and Ioan Dorobanțu

**P-06** Can We Use Nanoparticles to Improve Radiation Therapy? <u>R.C. Popescu</u>, I. Dorobanţu, B.S. Vasile, H. Hosser, F. Schneider, E. Andronescu, F. Wenz, C. Herskind, D. Savu and M.R. Veldwijk

**P-07** New radiobiology setup for proton irradiation adapted at the TR19 cyclotron of IFIN-HH, <u>Mihai Radu</u>, Liviu Craciun, Mihaela Temelie, Mihaela Bacalum, Mihai Straticiuc, Ana Chiriacescu, Tiberiu Esanu, Radu Vasilache and Diana Savu

**P-08** Ionizing Radiation Exposure for Professionally Exposed Workers in an Imaging Nuclear Medicine Laboratory – a Retrospective Dosimetry Study, <u>Alexandra Saviuc</u>, Vlad Ghizdovăţ, Cătălin Borcia, Cipriana Ștefănescu, Alexandru Grațian Naum

**P-09** The In Vitro Evaluation Of The Radiotoxicity Of Gallium-68 Labelled Pharmacological Compounds, <u>Radu-Marian Şerban</u>, Mihaela Temelie, Alina Raicu, Dana Niculae and Anca Dinischiotu

**P-10** Neuronal Differentiation Exacerbates Vulnerability to Genotoxic Stress in a Parkinson's Disease Cellular Model, <u>Mihaela Temelie</u>, Cosmin Cătalin Mustăciosu and Diana Savu

**P-11** Effect of gamma radiation on fluorescent peptides, <u>Bogdan Zorilă</u>, Mihaela Bacalum, Constantin Daniel Negut, Mihalis Cutrubinis and Mihai Radu

# **Sponsors**



