

MELUSYN Workshop Synchrotron Radiation Based Radiobiology

June 25-26, 2007

Synchrotron SOLEIL – 91190 Saint-Aubin (France)

Time schedule

Monday – June 25 th		Tuesday – June 26 th	
		8 :30	Session 3 Primary steps of signaling
		<i>10:30-10:50 Coffee break</i>	
		12:10	
13:00	Welcome		Lunch
13:30	Introductory session	13:30	Session 4 Differentiation and radio sensitivity
14:30	Session 2		
<i>15:50-16:10 Coffee break</i>	Molecular lesions and collective processes	<i>15:30-15:50 Coffee break</i>	
17:30	Visit of SOLEIL	17:00	Round table Prospective synthesis
	Discussions around beamline posters		
19:30	Dinner at SOLEIL	18:00	<i>End of the workshop</i>

Scientific Program

Monday – June 25th, 2007

13:00 - 13:30 *Welcome and coffee*

Introductory session

13:30 - 13:45 Jean DOUCET (SOLEIL) - Jean-Pierre GEX (ECRIN)

13:45 - 14:00 Denis RAOUX - Directeur général de SOLEIL

14:00 - 14:30 Yann A. GAUDUEL (INSERM, LOA-CNRS UMR 7639, Ecole Polytechnique – ENSTA)
New challenges for spatio-temporal radiation biology

Session 2

Molecular lesions and collectives processes

Chair : D. Markovitsi – E. Sage

14:30 - 15:10 Katsumi KOBAYASHI (Tsukuba, Japan)
Spectroscopy of biological samples. From absorption to biological effects.

15:10 - 15:50 Alain TOUATI (IMPMC, Université Paris 6, Paris 7)
Radiobiological effects in cell. The role of DNA core ionisation, as probed by ultrasoft X-rays

15:50 - 16:10 *Coffee break*

16:10 - 16:50 Dimitra MARKOVITSI (Lab. Francis Perrin, CNRS URA 2453, CEA Saclay)
UV induced DNA damage studied by time-resolved spectroscopy

16:50 - 17:30 Christophe NICOLAS (SOLEIL)
Soft X-ray synchrotron radiation studies of isolated biomolecules: towards a realistic “bottom-up” description of radiation damage on DNA

17:30 - 19:00 **Visit of SOLEIL** – Discussion around beamline posters

19H30 *Dinner at SOLEIL*

Tuesday – June 26th, 2007

Session 3

Primary steps of signaling

Chair: C. Houée Lévin – L. Sabatier

8:30 - 9:10 Chantal HOUÉE LEVIN (Lab. Chimie Physique, CNRS UMR 8000, Université Paris Sud)
From free radicals to signal induction

9:10 - 9:50 Jean CADET (CEA Grenoble)
Molecular effects of ionizing radiation on cellular DNA

9:50 - 10:30 Georg BAUER (University of Freiburg, Germany)
Low dose radiation and intercellular induction of apoptosis: potential impact on the control of oncogenesis

- 10:30 - 10:50 *Coffee break*
- 10:50 - 11:30 François PARIS (INSERM U 601, Nantes)
Ionizing radiation induces p38-mediated endothelial cell death through ceramide generation and membrane remodeling
- 11:30 - **12:10** Chrysostomos CHATGILIALOGLU (ISOF-CNR, Bologna, Italy)
Trans fatty acids and radical stress

12:30 – 13:30 *Lunch at SOLEIL*

Session 4 **Differentiation and radio sensitivity**

Chair: M. Martin – F. Moati – J.M. Constans

- 13:30** - 14:10 Elizabeth SCHULTKE (College of Medicine, Saskatoon, Canada)
Microbeam radiation therapy - a therapeutic concept for the treatment of malignant brain tumors
- 14:10 - 14:40 Michèle MARTIN (Lab. de Génomique Fonctionnelle, CEA Evry)
Sensing radiosensitivity of human epidermal stem cells
- 14:40 - 15:10 Laure SABATIER (Lab. Radiobiologie et Oncologie, CEA Fontenay aux Roses)
Damage transmission in the progeny of irradiated human cells
- 15:10 - 15:40 Sandrine LACOMBE (LCAM, Université Paris Sud)
Low energy NEXAFS spectroscopy: new tool for studying the radical chemistry induced by radiosensitizers
- 15:40 - 16:00 *Coffee break*
- 16:00 - 16:30 Nicolas FORAY (INSERM, ESRF, Grenoble)
Recent advances in anti-cancer strategies using synchrotron X-rays
- 16:30 - **17:00** Jean-Marc CONSTANS (CHU Caen)
About spectroscopic measures variability in the evaluation of the therapeutic answer of glial tumours

Round table Prospective synthesis

Chair: C. Miron, Y. Gauduel

- 17:00 -18:00** Anne FLURY-HERARD (CEA) - Jean BOURHIS (IGR, Villejuif) - Alberto BRAVIN (ESRF, Grenoble) - Jacques BALOSSO (CHU Grenoble) - Hafid BELHADJ-TAHAR (Groupe Santé Recherche, Toulouse)
- 18 :00 End of the workshop