

“MOLECULAR & CLINICAL RADIOBIOLOGY Workshop”

17 – 19 June, 2015

Division of Radiation Oncology, Department of Oncology

McGill University



Venue: Cedars Cancer Centre,
Glen Site, DS1-1427
McGill University Health Centre
1001 Decarie Blvd, Montreal,
Quebec, H4A 3J1, Canada



Description: The “Molecular and Clinical Radiobiology Workshop” is tailored to engage the participants through a series of lectures, panel discussions, meet-the-lecturer sessions, (June 17-18th) followed by a lab practical tutorial (half-day June 19th) in the state-of-the-art cancer research laboratories at the Research Institute of McGill University Health Centre. This educational intensive program is designed to fulfill the need to integrate the current paradigm shift in radiobiology into a multidisciplinary approach in the practice of radiation oncology and research in clinically-applied radiobiology.

Objectives: The “Molecular and Clinical Radiobiology Workshop” aims to provide the participants with the prerequisite background to understand some of the key concepts of radiobiology including:

1. Molecular mechanisms induced by radiation therapy on the tumor and its microenvironment
2. Radiobiology of normal tissue responses
3. Tumor response to radiotherapy
4. Principles and biology of chemoradiation regimen and targeted therapies
5. Radiobiological modeling

Target Group: Radiation oncology residents, medical physics residents and scientists enrolled in a radiobiology training program.

Radiation oncologists, medical physicists and scientists with research interests in clinically-applied radiobiology who wish to update their knowledge in molecular radiobiology.

Course Director: Siham Sabri, PhD

Scientific Organizing Committee:

Siham Sabri, PhD; Jan Seuntjens, PhD; Bassam Abdulkarim, MD, PhD, FRCPC; Khalil Sultanem, MD; Jean-Claude Bertrand, PhD

Administrative support: Mrs Maria Fossetti, Mrs Elena Popova

For additional information, please contact: siham.sabri@mcgill.ca

For further information about registration (page 4), please contact: elena.popova@mail.mcgill.ca

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Radiation Oncologists, clinician-scientists, physicists, radiobiologists and researchers known for their expertise in the presented topics and involved in teaching of basic and/or clinically-applied radiobiology

Wednesday, June 17th 2015: Theoretical Course – Day 1

Siham Sabri – PhD

Assistant Professor, Department of Oncology, Division of Radiation Oncology, McGill University; Director of "Molecular and Translational Radiation Oncology Laboratory", Cancer Research Program, Research Institute of McGill University Health Centre

Susan Lees-Miller – PhD

Professor, Departments of Biochemistry and Molecular Biology, Oncology and Biological Sciences; University of Calgary and the Southern Alberta Cancer Research (SACRI), Director of Genome Instability and Aging Research Program in SACRI, University of Calgary

Francis Rodier – PhD

Assistant professor, Université de Montréal, Department of Radiology, Radio-oncology and Nuclear Medicine, Centre de recherche du CHUM (CRCHUM) and Institut du cancer de Montréal.

Stanley Liu – PhD, MD, FRCPC

Assistant Professor, Depts. of Medical Biophysics and Radiation Oncology, Clinician-Scientist, Sunnybrook Research Institute; Radiation Oncologist, Odette Cancer Centre, University of Toronto

Kevin Petrecca – MD, PhD, FRCSC

Assistant Professor, Neurosurgeon, Clinician-Scientist Department of Neurology and Neurosurgery, Montreal Neurological Institute and Hospital

Theodoros Tsakiridis – PhD, MD, FRCPC

Associate Professor, Department of Oncology - Division of Radiation Oncology; McMaster University, Clinician-Scientist, Juravinski Cancer Centre, Faculty of Health Sciences, McMaster University

Thursday, June 18th 2015: Theoretical Course – Day 2

George Shenouda – MD, PhD

Associate Professor, Department of Oncology; Associate Director, Division of Radiation Oncology, McGill University Health Centre, McGill University

Janusz Rak – PhD, MD

Jack Cole Chair in Hematology/Oncology; Professor, Department of Pediatrics, Faculty of Medicine, McGill University; Director of Cancer and Angiogenesis Research Laboratory, Research Institute of McGill University Health Centre

Bassam Abdulkarim – MD, PhD, FRCPC

Associate Professor, Department of Oncology; Director of the Division of Radiation Oncology; McGill University; Director of Radiobiology Laboratory; Research Institute of McGill University Health Centre

Thierry Muanza – MSc, MD, FRCPC

Assistant Professor; Department of Oncology, Division of Radiation Oncology, McGill University, Director of Translational Radiation Oncology Laboratory, Segal Cancer Centre, Jewish General Hospital

Bertrand Jean-Claude – PhD

Associate Professor, Department of Medicine, McGill University, co-Director of McGill CIHR Drug Development Training Program (DDTP), Director, Cancer Drug Research Laboratory, Research Institute of McGill University Health Centre

Jan Seuntjens – PhD

James McGill Professor, Director of Medical Physics, Medical Physics Unit, Director of Medical Physics Academic Program, Department of Oncology, Faculty of Medicine, McGill University

Yves Archambault – M.Sc.A.

Physicist, Director "Knowledge-Based Planning", Varian Medical Systems, Oncology Systems

Wednesday, June 17th 2015: Theoretical Course - Day 1

08:00-08:30	Arrival – Breakfast Session: Molecular & Cellular Radiobiology
08:30-09:30	Welcome Remarks Integrating the Hallmarks of Cancer to Radiation Biology (Dr. Siham Sabri)
09:30-10:30	Molecular Mechanisms of radiation-induced DNA damage and repair (Dr. Susan Lees-Miller)
10:30-10:45	<i>Coffee</i>
10:45-11:45	Molecular Mechanisms of Radiation-Induced Cell Fate Decisions (Dr. Francis Rodier)
11:45-12:45	Radiobiology of normal tissue damage (Dr. Stanley Liu)
12:45-13:45	<i>Lunch; Meet-the-lecturer Session</i>
13:45-14:45	Tumor Stem Cells and Radioresistance (Dr. Kevin Petrecca)
14:45-15:45	Modulating the tumor microenvironment: therapeutic strategies for enhancing tumor radioresponse (Dr. Stanley Liu)
15:45-16:00	<i>Coffee</i>
16:00-17:00	Cancer metabolism and radiation biology: molecular stress sensors modifying radiation response (Dr. Theodoros Tsakiridis)
17:00-17:30	Panel Discussion: Moderator Dr. Susan Lees-Miller
18:00-20:00	Networking Dinner Reception

Thursday, June 18th 2015: Theoretical Course - Day 2

08:00-08:30	Arrival – Breakfast Session: Tumor response to Radiotherapy
08:30-09:30	Radiobiology of Time-dose-fractionation; Alternative fractionation schedules in radiotherapy (Dr. George Shenouda)
09:30-10:30	Tumor angiogenesis, Hypoxia, Vascular Responses (Dr Janusz Rak)
10:30-10:45	<i>Coffee</i>
10:45-11:45	Clinical and Biological Insights into Stereotactic ablative radiotherapy (Dr. Bassam Abdulkarim)
11:45-12:45	Combined radiotherapy and chemotherapy (Dr. Thierry Muanza)
12:45-13:45	<i>Lunch; Meet-the-lecturer Session</i>
13:45-14:45	Targeted Therapies: Radiosensitizing Effect of Tyrosine Kinase Inhibitors (Dr. Bertrand Jean-Claude) Session: Radiation Physics
14:45-15:45	Role of radiation physics and Monte Carlo techniques in modern radiation biology (Dr. Jan Seuntjens)
15:45-16:00	<i>Coffee</i>
16:00-17:00	Knowledge-based treatment planning in radiotherapy (Yves Archambault)
17:00-17:30	Panel Discussion: Moderator Dr. Jan Seuntjens

Closing Remarks: Theoretical Courses (Dr Siham Sabri)

Friday, June 19th 2015: Half-Day Lab Practical Tutorial Sessions

09:00-12:00pm	Tutors: Ayman Oweida, Mariia Patyka, Zhor Senhaji; Experimental Medicine, Faculty of Medicine, McGill University; Radiobiology Lab, Molecular and Translational Radiation Biology Lab, (Cancer Research Program) Cancer Drug Discovery Lab, Research Institute of the McGill University Health Centre <ul style="list-style-type: none">• Radiation-induced DNA damage: Comet Assay• Effect of Ionizing Radiation/ In vitro cell survival assay:<ul style="list-style-type: none">- Clonogenic assay versus proliferation assay- Analysis of the radiation dose survival curves• Radiation-induced senescence: senescence-associated β-galactosidase (SA-β-gal) Assay
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"MOLECULAR & CLINICAL RADIOBIOLOGY Workshop"



Registration Form



Please complete your registration form and send it with your cheque (payable to "MGH Foundation Fund # 4402") to the following mailing address: **Mrs. Elena Popova, Research Institute of the McGill University Health Centre; 1001 Decarie Blvd, Bloc E, Lab E01.4126 Montreal, Quebec, H4A 3J1**

You will receive an e-mail confirmation within three to five business days of receipt of your registration form.

Important General Information:

- Registration is on a **first-come, first-served basis**.
- **June 17-18th, 2015: Registration includes light breakfast, coffee, lunch and networking evening reception.**
- Participants must arrange for their trip and accommodation and cover their own travel and accommodation expenses.
- Registration is **mandatory** for all participants including McGill trainees and staff members.
- Photo ID is **required** to pick up a badge onsite.

Full Name (Dr./ Mr./ Mrs./ Ms.)	
Position:	
Primary Affiliation:	
Address:	
Telephone:	
Email:	
Registration Fees	<p>1) Free of Charge for:</p> <ul style="list-style-type: none"> - McGill Radiation Oncology Residents - McGill Medical Physics Residents - Graduate students: supervisor must be a lecturer in this workshop affiliated with the Division of McGill Radiation Oncology or Research Institute of McGill University Health Centre <p>Please provide your McGill ID and select your registration option:</p> <p>McGill ID: Full Workshop <input type="checkbox"/> 2-days Lectures <input type="checkbox"/> Single-Day Lectures June 17th <input type="checkbox"/> Single-Day Lectures June 18th <input type="checkbox"/> or Half-Day Lab practical tutorial June 19th <input type="checkbox"/></p> <p>2) McGill staff Members, other trainees and External Participants:</p> <ul style="list-style-type: none"> - Full Workshop: June 17-19: 2-day Lectures and Half-Day Lab practical tutorial \$250 <input type="checkbox"/> - 2-day Lectures June 17-18 \$150 <input type="checkbox"/> - Single-Day Lectures June 17th \$100 <input type="checkbox"/> - Single-Day Lectures June 18th \$100 <input type="checkbox"/> - Half-Day Lab practical tutorial June 19th \$100 <input type="checkbox"/>
Registration Discounts	<p>1) Early registration discount: 10% Discount until May 15th, 2015 <input type="checkbox"/></p> <p>2) Group registration Discounted Rates: 15% Discount rate will be applied <input type="checkbox"/> for registration of <u>5 or more participants from the same institution and on the same campus.</u></p> <ul style="list-style-type: none"> - Completed registration forms for the same group must be sent with payment in one envelope to the mailing address above with the label: MCRW 2015 Group Registration - Discount group rates will not be offered to groups of participants registering onsite. - Standard cancellation fees apply to all group discount registrations.
Payment	<p>1) Cheque: All cheques should be payable to "MGH Foundation Fund # 4402" <input type="checkbox"/> and sent with the Registration Form to the mailing address indicated above</p> <p>2) Cash: Only onsite based on registration space availability <input type="checkbox"/></p> <p>3) Cancellation Policy: Cancellations received on or before June 1st, 2015 are entitled to a refund minus 20% processing fee.</p>
Dietary Restrictions	Vegetarian <input type="checkbox"/>
Networking Reception	Please advise if you will not attend the networking evening reception <input type="checkbox"/>