

PRESENTS

# The 6th Alberta Genome Instability, Cancer and Aging Research Symposium

**June 24th-25th, 2015**

at the Southern Alberta Cancer Research Institute,  
Cumming School of Medicine



**UNIVERSITY OF  
CALGARY**

Organizers: Dr. Aaron Goodarzi, Dr. Jennifer Cobb, Dr. Susan Lees-Miller

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## Wednesday June 24<sup>th</sup>, 2015

12:00-1:00pm Registration desk opens, outside Theatre Four, Health Sciences, Cumming School of Medicine, University of Calgary

1:00-1:05pm Welcome address from **Jennifer Chan, MD**, Deputy Director of the Southern Alberta Cancer Research Institute.

### **Session 1:** **Chair - Aaron Goodarzi, PhD**

1:05-1:10pm Introduction to Keynote Lecturer

1:10-1:50pm **Peter McKinnon, PhD** (Dept. Genetics, St. Jude Children's Research Hospital, Memphis, TN) KEYNOTE LECTURE I

Title: *Maintaining Genome Stability in the Nervous System: convergence of neurological disease, genome instability and cancer.*

1:55-2:20pm **Aaron Goodarzi, PhD** (Robson DNA Science Centre)

Title: *CHD enzymes and the maintenance of genomic stability under conditions of oxidative stress*

2:25-2:50pm **Corinne Doll, MD** (Tom Baker Cancer Centre, University of Calgary, Canada)

Title: *Expression of DNA Damage Response Proteins in Cervical Cancer Patients Treated with Radical Chemoradiation Therapy*

2:55-3:10pm **Dustin Pearson, MSc** (Robson DNA Science Centre)

Title (short talk): *The major radiation-induced substrate of Artemis is a DNA double strand break with an inter-strand cross-linked terminus*

3:15-3:45pm **Coffee and Tea break** with Fruits and Sweet Delights.  
Poster set-up in the Health Research Innovation Centre atrium

### **Session 2:** **Chair - Shaun Moore, BSc**

3:45-4:10pm **Marco Muzi Falconi, PhD** (Department of Biosciences, Università degli Studi di Milano, Milano Italy)

Title: *The Importance of Being DNA: rNTP Incorporation During DNA Synthesis and RNase H Modulate Genome Stability*

4:15-4:40pm **Chris Nelson, PhD** (University of Victoria, BC, Canada)

Title: *FKBP prolyl-isomerase participation in DNA repair*

- 4:45-5:10pm **Ismail H. Ismail, PhD** (University of Alberta, Canada)  
Title: *RNF138 is an E3 ubiquitin ligase that displaces Ku to promote DNA end resection and regulate DNA repair pathway choice*
- 5:15-5:35pm **Tara Beattie, PhD** (Robson DNA Science Centre)  
Title: *Influence of telomere dynamics on disease progression and therapeutic response in bone marrow failure syndromes*
- 5:35 - 7:00pm **Poster session and reception in HRIC atrium with savory appetizers and bar**
- 7:00 - 9:00pm **Conference Banquet (menu below)**

First Course

Baby Greens Salad Bundle wrapped in a Cucumber with Charred Grape Tomato, Pickled Red Onion, Peppered Feta and a Sweet Pepper Cider and Rosemary Vinaigrette

Fresh baked bread rolls and butter

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Second Course\*

Grilled Herb and Spice Beef Tenderloin (6oz) with a Cabernet, Maple and Wild Mushroom Compote served with Herb Fingerling Potatoes and Steamed Asparagus, Glazed Baby Beets and Roasted Baby Peppers

or

Brown Butter and Pecan Crusted Salmon (6oz) with Lemon Butter Sauce served with Herb Fingerling Potatoes and Steamed Asparagus, Glazed Baby Beets and Roasted Baby Peppers

or

Red Lentil and Roasted Mediterranean Vegetable Stuffed Vine Tomato served with a Yellow Pepper and Clover Honey Coulis, Fingerling Potatoes, Steamed Asparagus, Glazed Baby Beets and Roasted Baby Peppers

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Third Course

Buttery Lemon Curd with Madagascar Vanilla Bean Pastry Cream in a Pate Sucre Tart, topped with Fresh Mixed Berries and served with Cinnamon Whipped Cream and Rolled Chocolate Stick

Served with fresh coffee, tea and herbal tea selections

Cash bar available  
throughout

\*Your selection of entree made in advance (send your choice to [dnascience@ucalgary.ca](mailto:dnascience@ucalgary.ca) by June 16<sup>th</sup>, 2015)

## Thursday June 25th, 2015

8:25-8:55am Coffee, Tea, Juices and Registration Desk Open outside Theatre 4

**Session 3: Chair - Jennifer Cobb, PhD**

8:55-9:00am Introduction to Keynote Lecturer

9:00-9:40am **Anthony Carr, PhD** (Director of the Genome Damage and Stability Centre, University of Sussex, UK) KEYNOTE LECTURE II

Title: *Mechanisms of DNA replication-induced genome instability*

9:45-10:10am **Damien D'Amours, PhD** (Université de Montréal, Canada)

Title: *Deconstructing the Smc5-6 complex: Roles of the DNA- and microtubule-binding activities of the complex during the cell division cycle*

10:15-10:45am **Coffee and Tea break** in the HSC atrium with Savory Breakfast Pastries, Sweet Cakes and a Fruit Selection

**Session 4: Chair - Fintan Stanley, BSc**

10:45-11:10am **Johanne Murray, PhD** (Genome Damage and Stability Centre, University of Sussex, UK)

Title: *The Smc5/6 complex and replication stress*

11:15-11:40am **Catherine H. Freudenreich, PhD** (Department of Biology and Program in Genetics, Tufts University, Boston, USA)

Title: *Regulation of recombination at yeast nuclear pores controls repair and triplet repeat stability*

11:45-12:10pm **Jennifer Cobb, PhD** (Robson DNA Science Centre)

Title: *Smc5/6 complex maintains heterochromatin at telomeres*

12:15-1:30pm **Conference Lunch** in HSC Atrium, offering a selection of sandwiches, wraps, salads, soup, fruits and sweet bites

**Session 5: Session Chair - Karl Riabowol, PhD**

1:30-1:55pm **Peter Lansdorp, PhD** (University of Groningen, Netherlands)

Title: *Guanine quadruplex structures, stem cells and genome stability*

- 2:00-2:25pm **Karl Riabowol, PhD** (Robson DNA Science Centre)  
Title: *A New Model of Cell Senescence*
- 2:30-2:45pm **Igor Kovalchuk, PhD** (University of Lethbridge, Canada)  
Title (short talk): *Age-dependent changes in the expression of DNA repair genes and epigenetic regulators in Arabidopsis plants exposed to ionizing radiation*
- 2:45-3:00pm **Roy Golsteyn, PhD** (University of Lethbridge, Canada)  
Title (short talk): *Cancer cells that survive genotoxic treatments and checkpoint adaptation show major chromosomal rearrangements and generate micronuclei that are positive for gamma histone H2AX staining*
- 3:00-3:30pm **Coffee and Tea break** in the HSC atrium with assorted cheeses, biscuits, fresh vegetables, dips and summer fruit juices
- Session 6:** **Session Chair - Cortt Piett, BSc**
- 3:30-3:55pm **Grant Brown, PhD** (University of Toronto, Canada)  
Title: *Assembly of Slx4 Signaling Complexes During DNA Replication Stress*
- 4:00-4:15pm **Denise Bustard, BSc** (Robson DNA Science Centre)  
Title (Short Talk): *The interplay of SUMO, Slx5/Slx8 and SMC5/6 complex ensures DNA double strand break relocation to the yeast nuclear pore*
- 4:15-4:30pm **Edward Bartlett, PhD** (Robson DNA Science Centre)  
Title (short talk): *The role of DNA-dependent protein kinase catalytic subunit (DNA-PKcs) in mitosis*
- 4:30-4:55pm **Kirk McManus, PhD** (University of Manitoba, Canada)  
Title: *Employing Synthetic Lethal Approaches to Exploit Genome Instability in Colorectal Cancer*
- 5:00-5:25pm **Paola Neri, MD** (University of Calgary, Canada)  
Title: *Bortezomib mediated BRCAness in MM cells: novel therapeutic approach combining PARP1-2 and 26S proteasome inhibitors*
- 5:30pm Closing remarks