

Publications of the Week

Participant Selection for Lung Cancer Screening by Risk Modelling: a Single-Arm, Prospective Study

First Author: Martin Tammemagi | Senior Author: Stephen Lam (*pictured*)
The Lancet Oncology | BC Cancer Agency and St. Paul's Hospital



The authors designed the Pan-Canadian Early Detection of Lung Cancer study to assess the efficacy of a risk prediction model to select candidates for lung cancer screening, with the aim of determining whether this approach could better detect patients with early, potentially curable, lung cancer. The results suggest that this approach should be considered for adoption in lung cancer screening programs.

[Abstract](#) | [Press Release](#)

RECQ-Like Helicases Sgs1 and BLM Regulate R-Loop-Associated Genome Instability

First Author: Emily Yun-Chia Chang | Senior Author: Peter Stirling (*pictured*)
The Journal of Cell Biology | Terry Fox Laboratories, Michael Smith Genome Sciences Centre, and UBC



Sgs1, the orthologue of human Bloom's syndrome helicase BLM, is a yeast DNA helicase functioning in DNA replication and repair. The authors showed that *SGS1* loss increased R-loop accumulation and sensitized cells to transcription–replication collisions. They describe a conserved role for Sgs1/BLM in R-loop suppression and support an increasingly broad view of DNA repair and replication fork stabilizing proteins as modulators of R-loop–mediated genome instability. [Abstract](#)

Engineered *In Vitro* Cell Line Mixtures and Robust Evaluation of Computational Methods for Clonal Decomposition and Longitudinal Dynamics in Cancer

First Author: Hossein Farahani | Senior Author: Sohrab Shah (*pictured*)
Scientific Reports | BC Cancer Agency and UBC

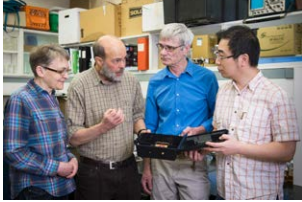


The authors generated a benchmark data set that simulates tumour longitudinal growth and heterogeneity by *in vitro* mixing of cancer cell lines with known proportions. They applied four different algorithms to their ground truth data set and assessed their performance in inferring clonal composition using different metrics. They also analyzed the performance of these algorithms on breast tumour

Awards

National Gold Medal Honours Gerhard Gries' Insect Expertise

SFU Faculty of Science



Gerhard Gries (*second from left*) has won the Entomological Society of Canada's 2017 Gold Medal for his outstanding contributions to entomology in Canada. His novel discoveries of insects' chemical attractants and cues, as well as sonic, visual, infrared and bacterial communication signals, all have practical applications for improving how we manage and repel bedbugs, mosquitoes, cockroaches, moths and other insect pests. [Read More](#)

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Local News

Vancouver Medical Researchers Make Heart-Pounding Breakthrough

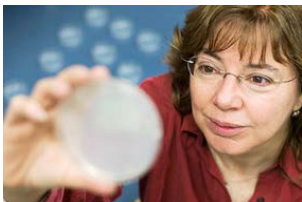
Global News



Medical researchers at St. Paul's Hospital have grown heart cells that can mimic abnormal heart rhythms. Dr. Zachary Laksman and his team say it's the first time these kind of cells have been created in a petri dish, and that they will allow them to figure out which drugs work best for people with heart arrhythmia. Researchers have taken samples from about 300 patients, and will do tests to determine what form of treatment works best for each patient. [Read More](#)

New Research Demonstrates Complexity Underlying the 'Simplest Form of Learning'

David Mowafaghian Centre for Brain Health



C. elegans are nematodes that are widely used in neuroscience research for the similarities between their cell biology and that of humans. Dr. Catharine Rankin (*pictured*) is using a Multi-Worm Tracker, a high-throughput device designed to measure a large number of distinct variables at once, to trigger the ASH neurons using a blue light-activated ion channel and to study how worms with and without the neuropeptide receptor PDFR-1 respond to a burst of blue light that simulates danger. [Read More](#)

SFU-Brazilian Researchers Connect to Tackle Insect Transmitted Diseases

SFU News

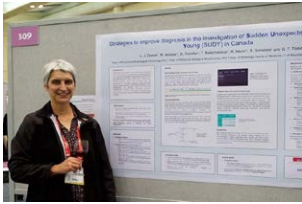
Researchers at SFU and at Brazil's Federal University of Rio de Janeiro are collaborating to determine why certain insects transmit diseases. SFU Biological Sciences Professor Carl Lowenberger (*left*) and Brazilian scientist Pedro Oliveira



(right) are among a rare few research scientists who study both *Aedes aegypti*, the insect that transmits Dengue and Zika, and *Rhodnius prolixus*, the kissing bug that transmits Chagas disease. [Read More](#)

New Genetic Research Sheds Light on Sudden Unexplained Death in the Young

SFU News



Informing a grieving family that their child has suddenly died of unexplainable causes is a painful task for all coroners. Yet that's the sad reality in an estimated 700 pediatric deaths each year in Canada. But recent SFU alumna Laura Dewar (pictured), a former B.C. coroner who graduated from SFU last December with a PhD in biomedical physiology and kinesiology, says her thesis research has revealed some promising clues about the cause of these deaths. [Read More](#)

B.C. Lung Screen Trial Recruiting 2,000 People for Cancer Screening Study

Terry Fox Research Institute



The B.C. Lung Screen Trial at Vancouver General Hospital (VGH) is currently recruiting 2,000 individuals from the Lower Mainland who are between 55 and 80 years of age, with at least a 30-pack-years smoking history to take part in a new lung cancer research project. The study is jointly funded by the VGH-UBC Hospital Foundation, the BC Cancer Foundation, and the Terry Fox Research Institute.

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InMed Announces Positive Pre-Clinical Data on an Ocular Hydrogel Formulation Using a Biosynthesized Cannabinoid

InMed Pharmaceuticals



InMed Pharmaceuticals and UBC have collaborated to create an ocular hydrogel-mediated cannabinoid nanoparticle delivery system, resulting in enhanced drug uptake via the cornea and lens. Typical ocular formulations, such as eye drops, are washed away almost immediately upon administration due to blinking. Total drug delivered using the hydrogel nanoparticle formulation was three-times higher than the control formulation. [Read More](#)

Sierra Oncology Appoints Dr. Andrew Allen to Its Board of Directors

Sierra Oncology

Sierra Oncology, Inc., a clinical stage drug development company focused on advancing next generation DNA damage response therapeutics for the treatment of patients with cancer, has announced the appointment of Dr. Andrew Allen to its



Board of Directors. Dr. Allen is a co-founder of Gritstone Oncology and serves as its President, Chief Executive Officer and a member of its Board of Directors.

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Interesting Articles

Many Junior Scientists Need to Take a Hard Look at Their Job Prospects

Nature



Permanent jobs in academia are scarce. Only three or four in every hundred PhD students in the United Kingdom will land a permanent staff position at a university, and it's only a little better in the United States. Simply put, most PhD students need to make plans for a life outside academic science, and more universities and PhD supervisors must make this clear. [Read More](#)

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Upcoming Events in Vancouver

November 5 - 7 **4th Canadian Cancer Research Conference**
8:00 AM Vancouver Convention Centre

November 7 **Biodiversity Lecture Series with Claire Kremen**
7:00 PM Ross Beaty Lecture Theatre

November 10 **Medical Genetics Research Day 2017**
11:00 AM Life Sciences Institute, UBC

November 12 **Communicating to Engage**
10:30 AM The Improv Centre

November 24 **Discussions Relevant to Inspiring New Knowledge and Science**
4:00 PM Mahony and Sons

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Science Jobs in Vancouver

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STEMCELL Technologies

Senior Manager, Primary Cells
STEMCELL Technologies

Lab Assistant

Renaissance BioScience

Lecturer and Coordinator

Faculty of Pharmaceutical Sciences, UBC

Postdoctoral Fellow

The Centre for Drug Research and Development

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ON-DEMAND WEBINAR

Ex Vivo Expansion of HSPCs & Modeling Leukemogenesis

Presented by **Dr. Suzan Imren**, Fred Hutchinson Cancer Research Center



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