

## Rapid Selection and Identification of Functional CD8<sup>+</sup> T Cell Epitopes from Large Peptide-Coding Libraries

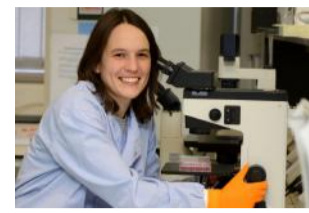
First Author: Govinda Sharma (*pictured*) | Senior Author: Robert Holt  
Nature Communications | Michael Smith Genome Sciences Centre, UBC and SFU



Cytotoxic CD8<sup>+</sup> T cells recognize and eliminate infected or malignant cells that present peptide epitopes derived from intracellularly processed antigens on their surface. The authors report a method for deep and unbiased T cell epitope profiling, using *in vitro* co-culture of CD8<sup>+</sup> T cells together with target cells transduced with high-complexity, epitope-encoding minigene libraries. [Profile](#) | [Abstract](#)

## Airway Epithelial Cell Isolation Techniques Affect DNA Methylation Profiles with Consequences for Analysis of Asthma Related Perturbations to DNA Methylation

First Author: Rachel Clifford (*pictured*) | Senior Author: Michael Kober  
Scientific Reports | Centre for Molecular Medicine and Therapeutics, Centre for Heart Lung Innovation, and UBC



Airway epithelial cells (AECs) were isolated from patients by two different isolation techniques, from individuals with asthma and those without asthma. In pronase isolated AECs, 15 DNA regions were differentially methylated between asthmatics and non-asthmatics. In bronchial brush isolated AECs, 849 differentially methylated DNA regions were identified with no overlap to pronase regions. [Abstract](#)

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### Awards

## Two UBC Science Students Receive Canada's Largest STEM Scholarship

UBC Science



First-year UBC Science students Helen Zhang and Lauren Moody have been named 2019 Schulich Leader Scholars. They were among 1,400 nominees across Canada competing for 50 scholarships, valued at up to \$100,000 each. Each year, every high school in Canada can submit one Schulich Leader Nominee based on academic excellence in STEM, entrepreneurial leadership and financial need. [Read More](#)

## Dr. Brumer's 'GlycoCage Technology' Funded by MSFHR's Innovation to Commercialization Program

Michael Smith Laboratories



Dr. Harry Brumer (*pictured*), Professor at the Michael Smith Laboratories and the UBC Department of Chemistry, has received funding from the Michael Smith Foundation for Health Research's (MSFHR) Innovation to Commercialization Program for the project, "A GlycoCaged Drug Delivery System to Improve the Treatment of Inflammatory Bowel Disease". [Read More](#)

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### Local News

## New DNA "Clock" Could Help Measure Development in Young Children

BC Children's Hospital Research Institute



A team led by investigators at BC Children's Hospital and UBC has developed a molecular "clock" that could reshape how pediatricians measure and monitor childhood growth and potentially allow for an earlier diagnosis of life-altering development disorders. They found that the addition of chemical tags to DNA over time can potentially be used to screen for developmental differences and health problems in children. [Read More](#)

## Exercise "Rewires" the Brain, May Improve Motor Function and Mood in Parkinson's Disease

Djavad Mowafaghian Centre for Brain Health



New research led by Dr. Jon Stoessl, a Professor and Head of the Division of Neurology and Director of the Djavad Mowafaghian Centre for Brain Health, has found that exercise increases dopamine release and synaptic plasticity, changing the way the brain is wired in people with Parkinson's disease, and potentially slowing the degenerative effects of the disorder. [Read More](#)

## BriaCell Doses First Patient in Phase I/IIa Study Evaluating Bria-IMT™ in Combination with INCMGA00012 and Epacadostat in Patients with Advanced Breast Cancer

BriaCell



BriaCell Therapeutics Corp. has announced that it has initiated dosing in a Phase I/IIa clinical study of its lead product candidate, Bria-IMT™, in combination with Incyte's INCMGA00012 and epacadostat in patients with advanced breast cancer whose disease has progressed following standard of care therapies. No effective treatment options for this patient population currently exists, making advanced breast cancer an unmet medical need. [Read More](#)

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### Interesting Articles

## Canadian Election Leaves Scientists Hanging — No Matter Who Wins

Nature News



Canada's two main political parties are running neck and neck in the lead-up to the country's general election. It's unclear which party will come out on top, and that uncertainty extends to how science will fare in the next government. With the exception of climate change — one of the top issues for voters in recent polls — science has been largely absent from the election campaign. [Read More](#)

## Canada's Decision to Make Public More Clinical Trial Data Puts Pressure on FDA

National Public Radio



Last March, Canada's Department of Health changed the way it handles the huge amount of data that companies submit when seeking approval for a new drug, biological treatment, or medical device — or a new use for an existing one. For the first time, Health Canada is making large chunks of this information publicly available after it approves or rejects applications. [Read More](#)

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### Upcoming Events in Vancouver

October 24 4:00 PM	<b>D.R.I.N.K.S. (Discussions Relevant to Inspiring New Knowledge and Science)</b> Mahony and Sons, Stamps Landing
October 24 4:30 PM	<b>2019 Don Rix Distinguished Keynote Address: "We Are Not Alone: The Human Microbiome in Health and Disease"</b> Vancouver Convention Centre West
October 24 - 25 12:00 PM	<b>Cascadia Corridor Research Symposium</b> The Fairmont Hotel, Victoria
October 29 7:00 PM	<b>Nerd Nite North Vancouver: "The Halloween Space Show"</b> Eagles Club
October 29 7:30 PM	<b>Café Scientifique with Leonard Foster</b> Yaggers Downtown

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Michael Smith Laboratories
- Research Associate, *In Vivo* Pharmacology**  
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