

Publications of the Week

Cryo-EM Structures Reveal Coordinated Domain Motions that Govern DNA Cleavage by Cas9

First Author: Xing Zhu | Senior Author: Sriram Subramaniam (pictured)
Nature Structural & Molecular Biology | UBC



The RNA-guided Cas9 endonuclease from *Streptococcus pyogenes* is a single-turnover enzyme that displays a stable product state after double-stranded-DNA cleavage. The authors present cryo-EM structures of the precatalytic, postcatalytic and product states of the active Cas9-sgRNA-DNA complex in the presence of Mg²⁺. [Abstract](#)

Transcriptional Regulation of Normal Human Mammary Cell Heterogeneity and Its Perturbation in Breast Cancer

First Author: Davide Pellacani (pictured) | Senior Author: Connie Eaves
The EMBO Journal | Terry Fox Laboratory and BC Cancer



The mammary gland in adult women consists of biologically distinct cell types that differ in their surface phenotypes. The authors summarize current knowledge about key transcriptional regulatory processes operative in these partially characterized subpopulations of normal human mammary cells and effects of disrupting these processes in experimentally produced human breast cancers. [Abstract](#)

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Awards

Michael Smith Foundation for Health Research Funds 58 Outstanding Health Researchers

Michael Smith Foundation for Health Research



The Michael Smith Foundation for Health Research has announced 58 outstanding BC researchers as the recipients of this year's Scholar and Research Trainee awards. The awards span a wide range of disciplines and specialties. Dr. Janel Kopp (pictured), an award winner from UBC, will be studying the effects of cellular origin on the development of pancreatic ductal adenocarcinoma. [Read More](#)

Encouraging Future Research Leaders: Trainee Awards

Vancouver Coastal Health Research Institute



Seven trainees, including Ryan Falck (pictured), have received Top Graduating Doctoral Student Awards and Rising Star Awards from the Vancouver Coastal Health (VCH) Research Institute. The awards recognize outstanding efforts in research excellence, service as role models, and other contributions to the VCH research community. [Read More](#)

UBC Pharmaceutical Sciences Assistant Professor Receives MSFHR Scholar Award

UBC Faculty of Pharmaceutical Sciences



Dr. Brent Page (pictured), an Assistant Professor in the Faculty of Pharmaceutical Sciences at UBC, has received a Michael Smith Foundation for Health Research (MSFHR) Scholar Award. The awards support exceptional early career researchers from a range of health research disciplines. Dr. Page's research focuses on developing small molecule inhibitors for disease-relevant targets, with a specific focus on anti-cancer drug discovery. [Read More](#)

BC Children's and BC Women's Investigators Awarded CIHR Funding

BC Children's Hospital Research Institute



The BC Children's and BC Women's community has received nine new research and bridge grants totalling more than \$5.8 million through the Canadian Institutes of Health Research Project Grant Spring 2019 competition. Dr. Laura Sly (pictured) was among the recipients, receiving funding for her project aimed at targeting PI3-kinase p110delta to treat Crohn's disease-associated intestinal fibrosis. [Read More](#)

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Local News

Protein Meant to Protect Cells May Also Serve as a Biomarker for Alzheimer Disease

Djavad Mowafaghian Centre for Brain Health



Can a protein that protects the brain from stroke damage indicate Alzheimer disease (AD)? New research from Dr. Weihong Song and colleagues recently found the first evidence of a direct interaction between macrophage migration inhibitory factor, a protein that is both inflammatory and neuroprotective, and amyloid-beta protein, the main component in plaque in the AD brain. These findings suggest the possibility of a biomarker for AD. [Read More](#)

Umbilical Cord Blood Being Collected from Premature Infants Offers Clues to Fragility

Vancouver Sun



Researchers at B.C. Women's Hospital have just been awarded about \$1 million in a grant from the federal government to further their research over the next five years on the banked cord blood of premature infants to learn more about their vulnerable immune systems. Premature infants are 100 times more susceptible to infections than babies born at term. [Read More](#)

Developing Alternatives to Using Antibiotics in Farming

Genome BC



Past practice of antibiotics use in agriculture has resulted in a rise in antimicrobial resistance. A \$6.9 million research project, funded by Genome Canada and Genome BC, aims to use genomic tools to develop alternatives to antibiotics using antimicrobial peptides (AMPs) — naturally occurring proteins produced by various animals and plant species. There is evidence that AMPs are an effective alternative to conventional antibiotics. [Read More](#)

Bruce Verchere Appointed Director of the Centre for Molecular Medicine and Therapeutics

Centre for Molecular Medicine and Therapeutics



Dr. Bruce Verchere (pictured) has been appointed as the Director of the Centre for Molecular Medicine and Therapeutics. Dr. Verchere is a highly accomplished researcher, and Professor in the Departments of Pathology and Laboratory Medicine and Surgery at UBC. He is a prominent member of both the UBC and BC Children's Hospital Research Institute communities. [Read More](#)

Tiny Molecules Add New Life to Pulp and Paper Products

Genome BC



With the decline in demand of newsprint and other traditional paper products, and the need to develop environmentally sustainable solutions for challenges in other industries, there is huge potential for the forestry industry to boost uses for by-products. Two novel projects, funded by Genome BC and BC Pulp & Paper Bio-Alliance, will make advances to adjust these problems by applying innovative genomics technologies. [Read More](#)

Innovate BC and Mitacs Power Tech Start-Up Innovation

Mitacs



Mitacs and Innovate BC have announced a partnership to support tech start-ups across British Columbia with strategic investments, a skilled workforce, and networking opportunities. The objective is to increase innovation and growth through the implementation of cutting-edge research and establishing strong connections between postsecondary institutions and BC's tech businesses. [Read More](#)

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Interesting Articles

Funding, Funding Everywhere and Not a Drop to Drink

Medium



After four years, the Trudeau government has to battle on its record — with its inevitable positives and negatives. One of the positives was the commissioning of a report on fundamental science, which was meant to signal that this government was serious about evidence and saw science and technology to be a path away from stagnation and towards a more prosperous future. [Read More](#)

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Upcoming Events in Vancouver

August 1 8:00 PM	Laying the Groundwork: Strategies for Aspiring Leaders Mobify Vancouver
August 4 1:00 PM	Squid Ancestors Are Way Cool Because... Beaty Biodiversity Museum
August 7 7:30 PM	Live Podcast: Public Health Superheroes Telus World of Science
August 8 10:30 AM	CIHR Project: "Insights from Peer Review" Roundtable Discussion UBC
August 13 12:00 PM	CBR Research Day UBC Life Sciences Centre

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STEMCELL Technologies

Product Manager, Immunology
STEMCELL Technologies

Scientist, Matrix Biology
STEMCELL Technologies

Scientific Inside Sales Representative
STEMCELL Technologies

Research Associate, Human Immunology
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Other Science Jobs in Vancouver

Director, Djavad Mowafaghian Centre for Brain Health
UBC Faculty of Medicine

Principal Scientist and Group Lead, Molecular Simulations
Zymeworks

Lecturer, Pharmacokinetics
UBC Faculty of Pharmaceutical Sciences

Associate Scientist, Protein Technologies
Amgen

Senior Manager, Quality Assurance
Phyton Biotech

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