

Publications of the Week

**Multi-Objective Optimization Reveals Time- and Dose-Dependent Inflammatory Cytokine-Mediated Regulation of Human Stem Cell Derived T Cell Development**

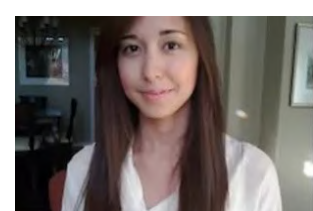
First Author: John Edgar | Senior Author: Peter Zandstra (pictured) | Regenerative Medicine | Michael Smith Laboratories and UBC



Using a defined engineered thymic niche system, the authors undertook a multi-stage statistical learning-based optimization campaign and identified interleukin-3 and tumor necrosis factor  $\alpha$  as stage- and dose-specific enhancers of cell proliferation and T-lineage differentiation. They used this information to construct an efficient three-stage process for generating conventional TCR $\alpha$ <sup>+</sup>CD8<sup>+</sup> T cells expressing a diverse T cell receptor repertoire from blood stem cells. **Abstract**

**The Selective Dopamine D<sub>1</sub> Receptor Agonist SKF81297 Modulates NMDA Receptor Currents Independently of D<sub>1</sub> Receptors**

First Author: Maya Nesbit (pictured) | Senior Author: Katharina Held | Neuropharmacology | Djavad Mowafaghian Centre for Brain Health



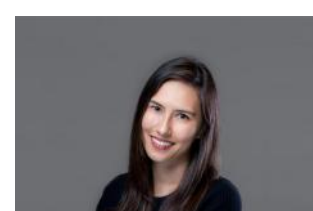
Dopamine D<sub>2</sub> receptor (D<sub>2</sub>R) agonists are frequently used to study the role of D<sub>2</sub>Rs in neurotransmission and behaviour. The authors report that the widely used D<sub>2</sub>R agonist SKF81297 potentiates N-methyl-D-aspartate receptor (NMDAR) currents in a dose-dependent manner, independently of D<sub>2</sub>R activation, in medial prefrontal cortex slices, cortical neuron cultures, and NMDAR-expressing recombinant HEK293 cells. **Abstract**

[View All Publications](#)

Awards

**January 2022 Award Winners**

Science in Vancouver



Dr. Kasmintan (Intan) Schrader (pictured), Assistant Professor in the Department of Medical Genetics at the UBC Faculty of Medicine, is a newly appointed Tier 2 Canada Research Chair in Clinical Cancer Genetics and Genomics. See which other Vancouver researchers won grants, awards, fellowships, and scholarships in January. **Read More**

**Dr. Miriam Spering Announced as New Director of Graduate Program in Neuroscience**

Djavad Mowafaghian Centre for Brain Health



The Djavad Mowafaghian Centre for Brain Health has announced that Dr. Miriam Spering (pictured) is the new Director of the Graduate Program in Neuroscience! Dr. Spering is a neuroscientist whose research focuses on how we process visual information and interact with our environment through motor actions. She leads the Oculomotor Laboratory at UBC. **Read More**

**Outstanding Early-Career Researchers Will Receive \$1.8 Million after Winning 2022 Terry Fox New Investigator Award**

Terry Fox Research Institute



Four promising, early-career scientists in Montreal, Toronto, and Vancouver will each receive \$450,000 over the next three years to support groundbreaking cancer research through the 2022 Terry Fox New Investigator Award program. Dr. Ly Vu (pictured) at BC Cancer received the award for her project on the role of noncoding RNAs in myeloid leukemia. **Read More**

**Faculty of Medicine Members Named to Vancouver Magazine's 2022 Power 50 List**

UBC Faculty of Medicine



A number of UBC Faculty of Medicine members have been named to Vancouver Magazine's 2022 Power 50 List. Dr. Pieter Cullis (pictured), a Professor in the Faculty of Medicine's Department of Biochemistry and Molecular Biology, was recognized for his pioneering work on mRNA vaccines and his role in the biotech sector. **Read More**

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Local News

**New Mouse Model Developed for Research into COVID-19**

Life Sciences Institute (LSI)



Whether it's about the mechanisms of a disease or the development of effective and safe vaccines, drugs, and therapies, adequate disease models also play an important role in research into COVID-19. In search of better tools, a research group led by LSI Director Dr. Josef Penninger (pictured) and Dr. Sylvia Knapp at the Medical University of Vienna has developed a new COVID-19 mouse model presented in a study recently published in the journal *eLife*. **Read More**

**LSI Provides Crucial DNA Processing for New Canadian Initiative Accelerating Sustainable Biomining**

Life Sciences Institute



Demand is increasing rapidly for the minerals and metals that are the foundation for renewable energy. "In the current century, it's harder and harder to get at big mineral deposits easily — the ones that are easy to reach have already been accessed, and some strategic metals are widespread but in relatively low abundance," says Dr. Steven Hallam (pictured). The Mining Microbiome Analysis Platform will enable Canadian and international mining companies to implement sustainable mining practices on a global scale. **Read More**

**Bringing Together a Global Team to Mend the Gap**

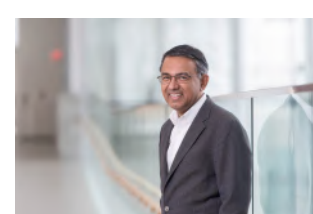
Research2Reality



When a person suffers a traumatic spinal cord injury, a gap forms that blocks the flow of information between the brain and the rest of the body below the site of injury. It's a life-altering condition that can come with paralysis, loss of bladder and sexual function, and physical limitations that make it difficult to live independently. Mend the Gap is a group that aims to treat spinal cord injuries, and spans academic institutions, non-profit, and charitable organizations across five countries. **Read More**

**BC Biotech Gandevea Raises US\$40M to Advance Drug Discovery**

Business in Vancouver



Gandevea Therapeutics has announced the close of a US\$40 million Series A round aimed at advancing drug discovery. The company, led by UBC Faculty of Medicine Professor Dr. Sriram Subramaniam (pictured), specializes in cryogenic electron microscopy technology. This technology helps determine the three-dimensional shape of proteins. **Read More**

**Mapping Out the Most Complex Terrain: The Mind**

Research2Reality



Biomedical engineer Dr. Manu Madhav (pictured) wants to know how animals and humans navigate their surroundings. "We look at biological navigation, so we look at how animals and humans navigate and how they create representations or maps in their brain, how they fuse information from their surroundings in order to create these maps, and how they use these maps in order to navigate their environment," he says. **Read More**

**Researchers Discover 130,000 New Viruses, Giving Us a New Way to Watch for Emerging Pathogens**

CBC Quirks & Quarks



A team including Canadian computational biologist Dr. Artem Babaian (pictured) discovered 130,000 new RNA viruses by searching previously unexamined global databases of genetic material. RNA viruses include the ones that cause COVID, Ebola, measles, mumps, polio, influenza, and the common cold. This work means we know of about nine times as many RNA viruses as we did before, and the team hopes this demonstrates a new way to detect potentially dangerous viruses in the future. **Read More**

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**Upcoming Events in Vancouver**

- February 10 7:00 PM **Women in Science** Online
- February 11 9:00 AM **SciCATS Workshop Series Part 2: Communicating Your Science through Podcasting Interviews** UBC & Online
- February 11 10:00 AM **Women in Biotech Panel Discussion** Online
- February 16-17 9:00 AM **Access to Innovation 2022** Online
- February 16 3:00 PM **MSL Seminar Series: February – Invited Speaker, Dr. Robert E. Campbell** Online

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- Scientist, Immunology** STEMCELL Technologies
- Program Coordinator** STEMCELL Technologies
- Product Manager** STEMCELL Technologies

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**Other Science Jobs in Vancouver**

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- Senior Associate / Associate, Project Management** Acuitas Therapeutics
- Research Assistant** Canada's Michael Smith Genome Sciences Centre
- Business Operations Associate** Boreal Genomics
- Head of Functional Biology, Immunology/Oncology** AbCellera

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