

Publications of the Week
Conformational Landscape of the Yeast SAGA Complex as Revealed by Cryo-EM

 First Author: Diana Vasyliuk (pictured, third from left) | Senior Author: Calvin Yip (fourth from right)
 Scientific Reports | Life Sciences Institute and UBC


Spt-Ada-Gcn5-Acetyltransferase (SAGA) is a conserved multi-subunit complex that activates RNA polymerase II-mediated transcription by acetylating and deubiquitinating nucleosomal histones and by recruiting TATA box binding protein to DNA. The authors determined a cryo-electron microscopy (EM) reconstruction of yeast SAGA at 3.1 Å resolution and examined its conformational landscape with the neural network-based algorithm cryoDRGN. [Profile](#) | [Abstract](#)

SOX9 Reprograms Endothelial Cells by Altering the Chromatin Landscape

 First Author: Bettina Fuglerud | Senior Author: Pamela Hoodless (pictured)
 Nucleic Acids Research | Terry Fox Laboratory, BC Cancer, and UBC


The transcription factor SOX9 is activated at the onset of endothelial-to-mesenchymal transition (EndMT) during embryonic development and in pathological conditions. Its roles in regulating these processes, however, are not clear. Using human umbilical vein endothelial cells as an EndMT model, the authors show that SOX9 expression alone is sufficient to activate mesenchymal genes and steer endothelial cells towards a mesenchymal fate. [Abstract](#)

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Awards
Robin Turner and James Piret Receive 2022 William F. Meggers Award

Spectroscopy



Drs. Robin Turner (pictured) and James Piret are the winners of the 2022 William F. Meggers Award for their paper, "Augmented Two-Dimensional Correlation Spectroscopy for the Joint Analysis of Correlated Changes in Spectroscopic and Disparate Sources." The paper presents an augmented form of two-dimensional correlation spectroscopy that integrates in a single format data from spectroscopic and multiple non-spectroscopic sources for analysis. [Read More](#)

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Local News
UBC Researchers Discover 'Weak Spot' across Major COVID-19 Variants

UBC Faculty of Medicine



Researchers in Dr. Sriram Subramaniam's (pictured) group at UBC have discovered a key vulnerability across all major variants of the SARS-CoV-2 virus, including the recently emerged BA.1 and BA.2 Omicron subvariants. The weakness can be targeted by neutralizing antibodies, potentially paving the way for treatments that would be universally effective across variants. [Read More](#)

Downloading the Latest App Straight Into Your Body

Research2Reality



"We like to think of cells as fundamentally programmable units of life, so much like you would program a computer writing computer code, we write DNA code and upload that into cells," says Dr. Nika Shakiba (pictured), Assistant Professor at the UBC School of Biomedical Engineering. As a biomedical engineer, Dr. Shakiba is always looking for ways to translate knowledge into real-world applications, and her team is motivated to program cells for regenerative medicine. [Read More](#)

Personalis in Partnership with BC Cancer to Assess Clinical and Economic Benefits of ctDNA for Colorectal and Pancreatic Cancers

BC Cancer Research



Personalis has announced a collaboration with BC Cancer to deploy a personalized liquid biopsy-based research use only assay for a study of patients with colorectal and pancreatic cancers. "Circulating tumour (ct) DNA surveillance may allow earlier detection of cancer recurrence or progression, and therefore earlier intervention, which may improve patient survival," said Dr. Jonathan Loree (pictured), Medical Oncologist at BC Cancer and Assistant Professor at UBC. [Read More](#)

A Silver Solution That's Worth Its Weight in Gold

Research2Reality



The antimicrobial properties of silver have been used in medicine for thousands of years. Silver ions punch holes in bacteria and once inside they bind to DNA, putting critical functions at risk. But creating a silver-based coating to keep bacteria off medical devices has proven to be a formidable challenge. That's why Dr. Jayachandran Kizhakkedathu (pictured) and a team at UBC and Vancouver Coastal Health Research Institute screened a library of dozens of chemical components to find a more promising solution. [Read More](#)

Using Sound and Bubbles to Make Bandages Stickier and Longer Lasting

UBC Faculty of Medicine



UBC researchers are part of an international collaboration that has discovered how to control the stickiness of adhesive bandages using ultrasound waves and bubbles. "We were surprised to find that by simply playing around with ultrasonic intensity, we can control very precisely the stickiness of adhesive bandages on many tissues," says Dr. Zhenwei Ma (pictured), a Killam postdoctoral fellow at UBC. [Read More](#)

Believe in the Impossible: The Future of... Human Gut Health

CIFAR



Dr. Carolina Tropini (pictured), a fellow in CIFAR's Humans & the Microbiome program, gives insights in studying the human microbiota, and the potential it holds in precision medicine. An Assistant Professor at UBC and a former CIFAR Azrieli Global Scholar (2019-2021), Dr. Tropini is among those who are using cutting-edge experimental techniques to study the microbiota in order to determine the mechanisms of transmission of bacteria between hosts in health and disease. [Read More](#)

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August 25 12:30 PM	NMIN HQP Research Presentations Online
September 7 12:00 PM	WHRI's World Sexual Health Day 2022 Online
September 9 11:00 AM	Metabolic MRI at Ultra-High Fields — From Systems Architecture to Application Djavid Mowafaghian Centre for Brain Health & Online
September 15 – 18 8:30 AM	ISCoS Annual Scientific Meeting Vancouver Convention Centre
September 15 4:30 PM	Biodiversity Conservation in the Age of Extinction Vancouver Convention Centre

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