

Publications of the Week

Heparan Sulfate Organizes Neuronal Synapses through Neurexin Partnerships

First Author: Peng Zhang | Senior Author: Ann Marie Craig *(pictured)*
Cell | Djavad Mowafaghian Centre for Brain Health and UBC



Synapses are fundamental units of communication in the brain. The prototypical synapse-organizing complex neurexin-neurologin mediates synapse development and function and is central to a shared genetic risk pathway in autism and schizophrenia. Neurexin's role in synapse development is thought to be mediated purely by its protein domains, but the authors reveal a requirement for a rare glycan modification. [Abstract](#)

Revealing the Mechanism for Covalent Inhibition of Glycoside Hydrolases by Carbasugars at an Atomic Level

First Author: Weiwu Ren | Senior Author: Andrew Bennet *(pictured)*
Nature Communications | SFU



Mechanism-based glycoside hydrolase inhibitors are carbohydrate analogs that mimic the natural substrate's structure. The authors report the synthesis of cyclohexene-based α -galactopyranoside mimics and the kinetic and structural characterization of their inhibitory activity toward an α -galactosidase from *Thermotoga maritima*. [Abstract](#)

Locomotor Recovery Following Contusive Spinal Cord Injury Does Not Require Oligodendrocyte Remyelination

First Author: Greg Duncan | Senior Author: Wolfram Tetzlaff *(pictured)*
Nature Communications | ICORD and UBC



Remyelination occurs after spinal cord injury (SCI), but its functional relevance is unclear. The authors assessed the necessity of myelin regulatory factor in remyelination after contusive SCI by deleting the gene from platelet-derived growth factor receptor alpha positive oligodendrocyte progenitor cells in mice prior to SCI. [Abstract](#)

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Awards

Kristina Kshatriya Receives Peter Rennie Memorial Award

Michael Smith Laboratories



Kristina Kshatriya *(pictured)* has been awarded the Peter Rennie Memorial Award from the UBC Faculty of Forestry. The Peter Rennie Memorial Awards are awarded to graduate students researching the environmental aspects of forest soils and trees. Kristina's research focuses on the identification of genes involved in the biosynthesis of α -thujone, a monoterpene that is associated with herbivore deterrence in western redcedar. [Read More](#)

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Local News

UBC Researchers Unlock Secrets of Plant Development

UBC News



UBC's Dr. Geoffrey Wasteneys has discovered an internal messaging system that plants use to manage the growth and division of their cells. These growth-management processes are critical for all organisms, because without them, cells can proliferate out of control—as they do in cancers and bacterial infections. Understanding how it all works could enable innovations in agriculture, forestry and conservation as climate change takes hold. [Read More](#)

Tackling the World's Deadliest Diseases One Antibody at a Time

BC Regenerative Medicine Network



Can one company simultaneously work on solving the problems of Ebola, influenza, neurodegeneration, cancer, tuberculosis, and enterotoxigenic *E. coli*? If you are AbCellera, a Vancouver-based biotech on the hunt for novel antibodies that can be used to fight these diseases, the answer is yes. CEO Carl Hansen *(pictured)* has built the world's leading platform for the discovery of monoclonal antibodies and the profiling of natural immune responses. [Read More](#)

Crossing the Blood-Brain Barrier: Bioasis Technologies Leads the Way with Their xB3 Technology Platform

Biotechnology Focus



Vancouver-founded Bioasis Technologies is focusing on a single goal: revolutionizing science by transporting therapeutic payloads across the blood-brain barrier and into the brain. They have developed, and are in the process of commercializing, their proprietary brain delivery technology, the xB3 platform, to make life-saving drugs brain-penetrant and deliver those therapies at a therapeutically relevant dose. [Read More](#)

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Interesting Articles

Regulatory Approval of Biosimilars in Canada

Biotechnology Focus



In Canada, biosimilars are regulated as new drugs under the Food and Drugs Act and the Food and Drug Regulations. The evaluation of each biosimilar is determined case by case, tailored to each product. Although the regulatory pathway for both biologics and biosimilars is the same, the difference lies in the specific data required for each submission. [Read More](#)

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Upcoming Events in Vancouver

- September 11 8:30 AM **Vancouver Nanomedicine Day**
Vancouver Alpen Club
- September 18 6:30 PM **Et Al III: The Ultimate Bar Science Night**
Rio Theatre
- September 19 4:30 PM **Serving Up Science: Plant Genomics and the Future of Food**
Vancouver Convention Centre
- September 20 7:00 PM **Brews, Builds 'N' Bytes Night**
Storm Crow Alehouse
- September 21 7:00 PM **Beastly Habits: The Exploitation of Animals for Fashion in the 20th Century**
Beaty Biodiversity Museum

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- Co-op Student, Target Validation**
The Centre for Drug Research and Development

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