

Publications of the Week

**Inflammation-Induced Metastatic Colonization of the Lung Is Facilitated by Hepatocyte Growth Factor-Secreting Monocyte-Derived Macrophages**

First Author: Ari Ari | Senior Author: Calvin Roskelley (pictured) | Molecular Cancer Research | Life Sciences Institute and UBC



A rate-limiting step for circulating tumour cells to colonize distant organ sites is their ability to locate a microenvironmental niche that supports their survival and growth. To determine if pulmonary inflammation promotes the conditioning of a "premetastatic" niche, the authors initiated models for inflammatory asthma, hypersensitivity pneumonitis, or bleomycin-induced sterile inflammation before introducing tumour cells with low metastatic potential into the circulation. **Abstract**

**Developmental Mechanisms of Sex Differences: From Cells to Organisms**

First Author: Judith Mark (pictured, left) | Senior Author: Elizabeth Rideout (right) | Development | UBC



Male-female differences in many developmental mechanisms lead to the formation of two morphologically and physiologically distinct sexes. The authors review sex differences in developmental mechanisms that operate at several levels of biological complexity — molecular, cellular, organ, and organismal — and discuss how these differences influence organ formation, function, and whole-body physiology. **Abstract**

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Awards

**Tabea Stephan Awarded UBC Cell and Developmental Biology One-Year Doctoral Fellowship**

BC Cancer



Congratulations to Tabea Stephan (pictured), a member of the Hoodless lab, for receiving a UBC Cell and Developmental Biology One-Year Doctoral Fellowship for her project entitled, "Epigenetic regulation of hepatocyte differentiation". The Hoodless lab explores regulatory mechanisms in organ development, in particular the liver and heart valves. **Read More**

**Pamela Hoodless Awarded Cancer Research Society Operating Grant**

BC Cancer



Congratulations to Dr. Pamela Hoodless (pictured) for receiving a Cancer Research Society Operating Grant for her project entitled, "Defining epigenetic alterations in liver cancer at single cell resolution". This research focuses on exploring how epigenetic networks are altered in hepatocellular carcinoma compared to normal liver and how these alterations drive transcriptional changes. **Read More**

**Kevin Hay Awarded Cell Therapy and Transplant Canada Hans Messner Award**

BC Cancer



Congratulations to Dr. Kevin Hay (pictured) for receiving a Cell Therapy and Transplant Canada Hans Messner Award for his project entitled, "Cell-free DNA: A new biomarker in CAR T cell therapy". The funds received from this award will support a correlative study to examine circulating tumour DNA to identify novel factors associated with toxicity, response, and duration of response after CD19 CAR T cell therapy. **Read More**

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Local News

**Research Roundup: October 21, 2021**

BC Children's Hospital Research Institute



Inborn errors of immunity (IEIs) are a group of over 430 genetic disorders that result in a wide range of clinical manifestations such as increased susceptibility to infectious illness, autoinflammatory disease, allergy, and/or autoimmune conditions. Drs. Catherine Biggs, Bhavi Modi, Kyla Hildebrand, Scott Cameron, Anne Junker, and Stuart Turvey and their collaborators conducted genetic testing on a cohort of 43 patients with monogenic IEIs. **Read More**

**Potential COVID-19 Treatment Delivered via Nebulizer Being Tested in Phase 1 Trial**

Life Sciences Institute (LSI)



APEIRON Biologics, a privately held biotechnology company founded by LSI Director Dr. Josef Penninger (pictured), has announced the start of a company-sponsored Phase 1 trial for inhalation of APN01. The double-blind, placebo-controlled, dose-escalation study plans to enroll about 40 healthy volunteers in Austria to assess the safety, tolerability, effects, and performance of the drug, developed by Dr. Penninger in response to the first SARS outbreak in 2003. **Read More**

**Novel Molecular Insights into Transporter Gene Important Step toward Therapies for Untreatable Form of Vision Loss**

Life Sciences Institute



Dr. Robert Molday, a Professor of Biochemistry and Molecular Biology at UBC and the Canada Research Chair in Vision & Macular Degeneration, has spent decades unraveling the genes, mutations, and molecular mechanisms behind Stargardt's disease, also known as STGD1, and other retinal conditions that are a leading cause of blindness around the world. **Read More**

**BC-CIE Research Advances Understanding of Dynamics within HIV Transmission Clusters**

BC Centre for Excellence in HIV/AIDS (BC-CIE)



Understanding the dynamics within HIV transmission clusters is critical information that can help prioritize public health resource allocation. In a newly published study written by BC-CIE researchers, led by PhD student Angela McLaughlin (pictured), researchers investigated the similarities and sensitivities of HIV transmission risk factors as identified by phylogenetic clustering, viral diversification rate, changes in viral diversification rate, and a combined approach. **Read More**

**Industry Vets Launch Tentarix with \$50M to Develop Antibody-Based Cancer-Killing Treatments**

Fierce Biotech



A stacked lineup of industry veterans from Eli Lilly, Versant, Amgen, and more is teaming up to advance the field of multifunctional biotherapeutics. The seasoned executive team is launching Tentarix Biotherapeutics with the help of \$50 million in series A fundraising. The financing will help the team develop programs for oncology and autoimmune diseases via its technology platform. The biotech will be based in both Vancouver and San Diego. **Read More**

**Developing Microchip Technology to Better Answer Questions about the Endothelial Glycocalyx**

The Centre for Blood Research



Recently, the Kizhakkedathu lab at the Centre for Blood Research (CBR) and their collaborators developed an improved method for studying glycocalyxes. This method can mimic the complex environments of an organism's vascular system by using microfluidic chip technology. Dr. Erika Siren (pictured, left) and Daniel Luo (right) shared their reflections about the study, future directions for this work, and the collaborative efforts of the CBR that made this research possible. **Read More**

**Life Sciences BC Announces Presenting Companies Pitching at Invest in BC Presented by Lumira Ventures**

Life Sciences BC



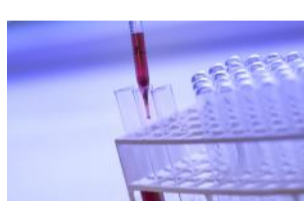
Life Sciences BC has announced the 31 companies presenting to the 6<sup>th</sup> annual Invest in BC presented by Lumira Ventures on November 3 and 4, 2021. This virtual conference showcases a broad range of investor-ready BC life sciences companies from the healthcare innovation ecosystem. The companies are seeking investors and strategic partners and have been selected following adjudication by an expert panel of investors. **Read More**

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Interesting Articles

**New Study Will Examine the Resiliency of Canada's Bio-Economy to Plan the Industry's Future**

BioTalent Canada



BioTalent Canada has announced the kickoff of a \$1.15 million research study titled "Building Resiliency and Sustainability for the Bio-Economy to Withstand Disruption". The project, funded by the Future Skills Centre, will wrap up in September 2022 and will leverage lessons learned from the pandemic to ensure long-term sustainability within Canada's bio-economy. **Read More**

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**Upcoming Events in Vancouver**

- October 29 11:00 AM **LSI & SBME Virtual Seminar — Dr. Jacky Goetz** Online
- November 2 8:00 AM **15<sup>th</sup> Annual Earl W. Davie Symposium** UBC Robson Square & Online
- November 3-4 9:00 AM **Invest in BC presented by Lumira Ventures** Online
- November 6 9:00 AM **Girls and STEAM** Online
- November 9 1:00 PM **BCDRN Meet the Researcher Series #7** Online

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**STEMCELL Jobs in Vancouver**

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- Research Technologist, Particle Analysis** STEMCELL Technologies
- Research Technologist, Cell Biology** STEMCELL Technologies

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**Other Science Jobs in Vancouver**

- Clinical Research Systems & Process Improvement Specialist** Vancouver Coastal Health Research Institute
- Biomanufacturing Manager** Precision NanoSystems
- Research Associate, In Vivo Pharmacology** Xenon Pharmaceuticals
- Research Assistant/Technician 3, Cell Biologist** BC Cancer Research Institute
- Research Scientist, Infectious Disease** AbCellera

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