

Hamilton Health Innovation Check-up: Meeting Minutes

April 2023

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STANDING AGENDA TOPICS:

- **Guest Speaker Discussion**: insights around the experience and expertise of an invited speaker, focusing on a subject that may be of interest to the broader community
- **Communicate**: share recent successes, upcoming events, innovation pipeline and new products, health innovation trends, etc.
- Collaborate & Accelerate: welcome new members to community, partnership opportunities, discover programming and resources available to the community, discuss market gaps and challenges, learn about potential funding opportunities, new RFPs issued, etc.

Facilitator & Note Taker Virtual Location

Alex Muggah, Director, Synapse Consortium Join Zoom Meeting: https://zoom.us/j/405351918

Dial in: +1-647-558-0588,,405351918#

Register here:

https://us02web.zoom.us/meeting/register/uZQodOyppzoiQnRwfvVuEJ

tEMUpKPUZPzg

Next Monthly Check-up: February 27^{th} 9:00 – 10:00am | McMaster Innovation Park (via Zoom) Please sign up to our <u>mailing list</u> to receive meeting minutes and other important updates.

Finding collaborative partners for health companies and researchers can be difficult. Synapse has created the <u>Hamilton Health Ecosystem Directory</u> and the <u>Health Innovation Partnership Portal</u> (HIPP) to facilitate finding new partners within Canada's leading health research and educational ecosystem located in in Hamilton, Ontario.

Minutes for our monthly check-up meetings are not published and are for reference purposes only. We do our best to ensure all information is accurately portrayed, and that no privileged/private information is inappropriately disclosed. Past meeting minutes can be access through a public Dropbox, using the following link.

For additional information on any subject, to contact a presenter directly, or should you have an adjustment to make to the notes made here, please contact: Alex.Muggah@SynapseConsortium.com. Updates will be reflected in a revised version of the monthly minutes.

As a result of the COVID-19, all in-person conferences and meetings have been cancelled. We are trying to track down events that will be held virtually and will try to keep our calendar up to date.

If you have an event that you would like listed here, please contact us at: info@synapseconsortium.com

Hamilton Health Innovation: Calendar Highlights

Check out Synapse's online calendar

May

- May 3-4: Impact Health (MaRS)
- May 4: The Big DiF Open House & Client Showcase (Innovation Factory)
- May 4: Al in Health Symposium (McMaster School of Biomedical Innovation & Entrepreneurship)
- May 9: HHS Research Day: Building Bridges Symposium (Hamilton Health Sciences)
- May 11: Mayor's Breakfast (Hamilton Chamber of Commerce)
- May 11: Official Opening, Manufacturing Forum and Industry Open House (MMRI)
- May 17: Life Sciences Ontario Awards Presentation (LSO)
- May 24: Healthcare Summit: Preparing for the Needs of the Future (Economic Club of Canada)
- May 28-30: e-Health Conference & Tradeshow 2023 (Digital Health Canada, Canada Health Infoway)
- May 29: Hamilton Health Check-up (Synapse Consortium)
 - May 29: Women in Project Management Bootcamp: Project Delivery in Life Sciences (OBIO)

June & Beyond

- Jun 1: Invetures (Technology Alberta)
- Jun 5-8: BIO International Convention (Biotechnology Innovation Organization)
- Jun 14: CareerConnect Tutorial (Mohawk College)
- Jun 13-15: Canada SynBio Conference (Ontario Genomics)
- Jun 26: <u>Hamilton Health Check-up</u> (Synapse Consortium)
 - Oct 9-11: Medtech Conference (AdvaMed)
 - Oct 12: Canada Healthcare Innovation Summit (Bamberg Health)
 - Oct 12-13: 5th Annual Innovations in Science of Cannabis Conference (CMCR)
 - Nov 13-16: MEDICA Healthtech Conference 2023 (MEDICAlliance)

Looking to engage the Hamilton Health Ecosystem?



In partnership with Innovation Factory and Synapse Consortium partners, leverage up to \$100,000 to work directly with an academic or hospital partner in the Hamilton ecosystem. Funding will support collaborative projects for Ontario-based life science firms requiring

clinical/research expertise, evidence, or data to commercialize their innovation. Learn more about SOPHIE here



Leverage up to \$15,000 in funding to work directly with the Research Administration groups at Hamilton Health Sciences or The Research Institute at St. Joe's Hamilton to create the pre-trial protocols and documents required to undertake a commercialization project or

clinical trial in one of Canada's leading research hospitals. Learn more about HEALTHI here



Time allotted | 30 Minutes

Topic: Guest Speaker Discussion

Insights around the experience and expertise of an invited speaker, focusing on a subject that may be of interest to the broader community

Guest Speaker Discussion

Guest Speaker(s):

 <u>Sergio Aguirre</u>, founder & CEO <u>Epineuron</u>

Discussion

[the following is a synopsis of the discussion, and has been lightly edited for length and clarity]

An Introduction to Epineuron

Good morning everyone, my name is Sergio Aguirre and I am the Founder and CEO of Epineuron Technologies. We are a medical device company developing novel technology to address peripheral nerve injuries. Our goal is to maximize recovery for patients who have suffered a nerve injury.

Approximately 2 million people across North America suffer a peripheral nerve injury yearly. These injuries can result from workplace or car accidents where a nerve cuts or stretches. Then everything downstream of the injury site begins to degenerate.

When you cut a nerve, it must reconnect and regrow to the downstream tissue, but this is a challenging process. Surgery is the standard of care in which a surgeon sutures the nerve back together. Yet, this intervention does not return limb function, leaving patients with a lifetime of severe and debilitating consequences. Moreover, there are not any drugs or devices to help patients. Even with physical therapy, the recovery process is unpredictable and slow. Patients suffer from long-lasting pain and are unable to use their extremities post-injury.

Addressing Nerve Regeneration

Peripheral nerves have the unique ability to regenerate at slow rates. Our device delivers a one-hour dose of electrical stimulation immediately after surgery to speed up nerve regeneration or reprogram the nerve in a manner that places it in an elevated regenerative state. Stimulation induces the expression of regenerative genes that produce nerve-building blocks that assemble and allow the nerve to regrow at the injury site. The process leads to better reconnection of muscle and skin downstream the injury site, which leads to better functional outcomes for patients.

Neuroscientist Dr. Tessa Gordon pioneered this research at the University of Alberta. After discovering the phenomenon in animal studies, they worked with a clinical team at the university to test the novel therapeutic stimulation in different surgeries. Their team published four seminal papers using this therapy across various nerve injuries. These injuries included: cut nerves, compressed nerves, and tumor removal surgeries. All patients treated in the clinical trials demonstrated a significant degree of recovery. Compared to patients who only received surgery, patients who received stimulation therapy post-surgery experienced over 40% greater sensory recovery. Patients also attained these positive outcomes earlier, which is important as it allowed patients to begin physical therapy earlier, which amplified the long-term benefits of the novel therapeutic intervention.



Guest Speaker Discussion

<u>Transforming Research Equipment into a Medical Device - PeriPulse</u>

A challenge for the research group occurred when they attempted to translate the laboratory work they conducted using research equipment on rats into humans. Although the research results were great, the equipment was impractical in emergency and operating rooms. My partner and I worked with Dr. Gordon to change the equipment design and remove some hardware. We packaged the previous equipment, which was about the size of a car battery, into a small wearable device that is the size of a business card. We also worked on reengineering the electrode. After interviewing surgeons across Canada and the U.S., our challenge became designing an electrode that different specialists can use in various procedures.

Our electrode design allows clinicians to introduce and sufficiently anchor the device near the nerve so patients consistently receive therapy throughout the one-hour window. We also designed the electrode so clinicians can remove it in the recovery room and patients do not have to endure a secondary surgical procedure.

Broad Applications

Our workflow is quite simple, and the key to our technology is that it does not require surgeons to change their existing procedures. Each surgeon has a unique way of conducting nerve injury repair, and we did not want to add to their workload.

We use our system at the end of the surgical procedure. Before the surgeon closes the incision, they introduce the electrode at the injury site. Using a standard over-the-needle catheter to create an access point, a surgeon feeds the electrode through and anchors it near the injured nerve so that they can activate it and deliver stimulation therapy effectively. The surgeon then sutures the incision, bandages the patient, and sends them to the recovery room. This intraoperative setup takes 2 to 3 minutes, and our electrode is small at about a millimeter in diameter. Postoperative stimulation therapy begins in the operating room and finishes in the recovery room. After one hour, a nurse withdraws the electrode like an IV line, removing the requirement of a surgeon to conduct additional work.

Overall, we designed an efficient workflow so surgeons can implement our therapy across different procedures throughout the body.

Market Opportunity and Competition

In the U.S. alone, there are over 1 million nerve injury repair surgeries yearly, translating to a \$1.7 million market. Since no current approved products are available to address peripheral nerve injuries, surgeons must use off-label conventional nerve simulators to offer potential benefits to patients. These technologies are challenging to implement as they do not have appropriately designed electrodes for stimulation therapy. Epineuron developed the first-of-its-kind product tailored to peripheral nerve regeneration. The key to our technology's success is its unique nerve electrode that clinicians can implement in the OR and allow patients to receive therapy postoperatively. Our product can fit into any surgical workflow, while other stimulators are limited to intraoperative use and increase the surgical time.

Path to Market

The FDA designated us as a breakthrough device, and we were the first Canadian company to receive this designation when we launched the program in 2018. We are a Class II De Novo technology with a vetted pivotal protocol. This classification means our technology is not a high-risk implantable device like a pacemaker but is targeting a therapeutic area that does not have pre-existing products.



Guest Speaker Discussion

We are developing novel clinical evidence to support a new indication for use in the U.S. We completed our first-in-human study in two Hamilton hospitals, St. Joe's, and Hamilton General. This study was fantastic, and we learned a lot that drove our strategies for future products. We are in the process of securing a strong patent position and IP development. We moved aggressively early on, securing 5 U.S. patents already, and we have 15 on the way. Based on the success of the human pilot study and patent portfolio, we closed a \$10 million Series A funding round in 2021 to ramp up our FDA pivotal trial within Hamilton. We also recently became ISO 1345 certified, meaning we can now develop, design, and manufacture our medical devices in-house.

Epineuron's SOPHIE Project

The SOPHIE project was a strategic opportunity to enhance our novel hardware and solve user needs to deliver stimulation therapy more effectively. We put together a comprehensive project driving towards three vital elements of our long-term strategy. First, we are continuing to invest in clinical data. Through the SOPHIE program funding, we are conducting another clinical trial, implementing our technology in a different injury model to expand the indication of use. Secondly, we conducted human factor studies as we finalized the product's design. Leveraging the Hamilton ecosystem, we tested our product in large live animals in a simulated operating room environment. Lastly, we have invested in continuing basic science research to elucidate regenerative mechanisms and therapy.

We were also the winners of the Synapse Life Science Competition in 2019. Through the competition, we met Ing Goping, an advisor at Innovation Factory who is now a Board Member at Epineuron. At that time, we were trying to raise capital, and Ing spent three months helping us get ready to meet investors. He connected us with Chris Shaw and Frank Baylis at Baylis Medical, and the rest is history. Frank Baylis also joined the Board at Epineuron to lead seed round financing and later significantly invested in the company. It was an exciting time, and it all came from winning the Synapse Life Science Competition.

Questions & Answers

Question: What was Epineuron's journey to pursuing FDA breakthrough device designation?

Answer: Initially, we were preparing to engage with the FDA traditionally by filing for a pre-submission meeting. This meeting intends to get the FDA to review the technology and lays a path to enter the market and gain FDA approval. We wanted to provide a sense of the clinical studies we designed to get our technology approved for a particular indication. We then learned that a new FDA program was launching to streamline the pre-existing expedited device pathway.

The program seemed to have a lot of upsides, but many people and companies in the space were unsure of its intent. We ultimately decided to run with this program because we believed we could sell the idea that we have a breakthrough device. This decision paid off as, later on, investors were interested in being a part of a company and technology that was the first of its kind.

Question: What are the most common nerve injuries that Epineuron's solution is best suited for?

Answer: Ideally, clinicians will use the technology for traumatic nerve injuries. For instance, workplace injuries that occur at construction sites. Another common injury includes compressive neuropathy, like carpal tunnel. Individuals who suffer from severe carpal tunnel experience muscle atrophy in the hand, and clinicians can use our technology as part of the course of therapy for these patients.



Guest Speaker Discussion

Question: What stage in development is Epineuron at? Is the technology only implemented at research hospitals for clinical studies, or can it be used in other settings?

Answer: Since we are currently focusing on conducting clinical studies, we can only work with hospitals with established clinical operations and research groups because surgeons need much support to participate in such trials. With its two large research hospitals, being a part of the Hamilton ecosystem is advantageous to us.

Question: How would you describe Epineuron's approach to conducting clinical studies?

Answer: When developing clinical data, it is important to consider what data would make the most sense to the audience and the research group. It is important to consider the clinical models that are most effective in recruiting within your timeframe. You can run a great study, but it may take two or three years to recruit patients, and that is a complicated clinical model to fundraise for. You also want to use a clinical model where the outcomes are effective and compelling to your audience. You have to strike a balance and trade-off between time and complexity and how convincing your data will be.

Once you determine an effective clinical model, you must approach the appropriate regulatory bodies. Since we are conducting trials in Canada and the U.S., we engaged with Health Canada and the FDA. They review all your protocols and information. Following this review, you'll decide on the financial model you want to build, determine how long it will take, and think about how your company will operate. You'll take this decisional information to your fundraisers, who will also ask many questions about your clinical trials.

Question: Is the device designed for both adult and pediatric applications?

Answer: Currently, we are pursuing adult use only. In the future, we must expand clinical studies to include pediatric populations.

Question: Have you received feedback from the FDA concerning minimal clinical outcomes for approval?

Answer: The FDA breakthrough device designation is not an approval. The designation indicates that the technology is part of an expedited review pathway within the FDA. Companies in this pathway receive feedback faster, and the FDA prioritizes their engagements.

Regarding feedback from the FDA, we found that the FDA always wanted more information. We had to present our story well and ensure they understood the proposed clinically-validated outcomes. We also had to push back on the outcomes the FDA wanted to add because of added costs and implementation risks. You have to be very thoughtful in what you are willing to do for the FDA and not be afraid to push back if you can strongly justify it.

Question: What are some things your Innovation Factory Executive-in-Residence suggested Epineuron reflect on before speaking to investors?

Answer: Ing has a tremendous amount of professional experience coming from private equity. He brought his experience and thought processes to our startup, which was intimidating initially. He had us reflect on the details of the type of business we wanted to build and the trade-offs to our strategy. For example, we discussed the difference between constructing a business and building a venture. The difference comes from if you are building in-house resources, relying on consultants, or employing a mix of both.

The level of detail Ing [Epineuron's IF Executive-in-Residence] pushed us to was frustrating initially because, as a CEO, I focused on closing deals. However, the reality is that investors like to get into these details.



Time allotted | 15 Minutes

Topic: Communicate

| Discussion | Presenter |
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| Minister Ng Celebrates Canadian Innovation in the Network | Gary Ryan (CANHealth |
| Earlier in March, SE Health hosted Minister Ng and Network partners to celebrate the work CAN Health is doing to support Canadian companies and advance homegrown innovation across the country. | Network) |
| During this event, Hamilton Health Sciences (HHS) was pleased to announce that following a successful CAN Health commercialization project, HHS procured SterileCare's KiteLock 47 [™] , an advanced Canadian solution working to reduce venous catheter infections in patients. In just 6 months using SterileCare's solution, HHS achieved a 60% reduction in venous catheter infections in select units at the Juravinski Hospital and Cancer Centre. | |
| It was fantastic to celebrate this Canadian success story in person and hear directly from Network partners on how transformational and critical bringing Canadian innovation to the frontline is. SterileCare is also working with Fraser Health in British Columbia on a CAN Health project focused on reducing infections among patients in the ICU, and we are looking forward to sharing the results soon. | |
| To read more about HHS and SterileCare's project, read here | |
| Hamilton has the ingredients to be world-class (CEO Hamilton Chamber of Commerce, Op-Ed) To tackle the challenges of today, we must take decisive action and urgently prioritize investment in our critical infrastructure including housing, talent, and transportation, writes chamber of commerce president Greg Dunnett | Greg Dunnett (Hamilton Chamber of Commerce) |
| So how will we finally break through to become the world-class city that we aspire to be? First, our leadership needs to embrace an audacious mindset and act with conviction to foster an environment that creates economic and social prosperity for all. | |
| To tackle the challenges of today, we must take decisive action and urgently prioritize investment in our critical infrastructure including housing, talent, and transportation. This will set the foundation for Hamilton's future growth and allow us to capitalize on the promise of tomorrow | |
| Successful implementation of these priorities will be a catalyst for growth and create a substantial increase to Hamilton's tax base. This will allow for proactive investment in the systems and programs required to improve the quality of life of all Hamiltonians. | |
| Today, the crucial needs of Hamilton's citizens and businesses are inextricably linked, allowing us to develop solutions that generate synergy, and propel us forward to produce a true competitive advantage for Hamilton | |



| Discussion | Presenter |
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| It demands collaboration from all stakeholders, our private and public sectors, and the Hamilton Chamber of Commerce is committed to utilizing our voice and convening power to represent Hamilton and its business community in building a brighter future. We will tirelessly advocate for solutions that elevate Hamilton to Canada's foremost community for innovation, investment, and quality of life. | |
| Let's get to work, Hamilton. | |
| Read the full piece at the Hamilton Spectator here | |
| <u>Canadian-made solution reduces catheter infections</u> | Ted Scott (HHS) |
| The Coordinated Accessible National (CAN) Health Network is pleased to announce that following a commercialization project, Hamilton Health Sciences (HHS) has procured KiteLock 4%, an advanced solution developed by Canadian company, SterileCare, to reduce vascular catheter infections in patients. | |
| SterileCare's KiteLock 4% Catheter Lock Solution is the newest and most advanced product to help keep catheters clear from complications. The solution eliminates biofilm in catheters and is the only clinically proven non-antibiotic locking solution that can prevent infections and is approved for safe use with children. During the six-month commercialization project funded by the CAN Health Network, HHS achieved a 60% reduction in vascular catheter infections in select units at the Juravinski Hospital and Cancer Centre. | |
| "In our current healthcare landscape, it's more important than ever to find new and innovative ways to benefit our patients," says Dr. Ted Scott, chief innovation officer, Hamilton Health Sciences. "This is why collaborating with organizations like the CAN Health Network is vital in developing partnerships with companies like SterileCare to make impactful change." | |
| Ontario's Life Sciences Council | Andy Donovan (LSO) |
| To support the next phase of <u>Taking Life Sciences to the Next Level</u> , Ontario's life sciences strategy, the province established a Life Sciences Council. | , , |
| This new council will explore ways to support the creation of good-paying jobs, accelerate commercialization and encourage the adoption of Ontario-made innovations to improve health care and grow the economy. Building on previous sector consultations, the council and its five subcommittees will provide insight to help address sector challenges and find opportunities to increase competitiveness. | |
| Read the LSO announcement <u>here</u> | |
| Minister Ng announces new venture capital investments for life sciences sector | Alex Muggah (Synapse) |
| The Government of Canada is committed to creating a vibrant and sustainable venture capital (VC) industry in the Canadian life sciences sector. The result will be improved access to capital for innovative early-stage companies that are developing the solutions of the future while creating good jobs for Canadians from coast to coast. | (Synapse) |
| Today, the Honourable Mary Ng, Minister of International Trade, Export Promotion, Small Business and Economic Development, announced that \$50 million will be invested in six venture | |



| Discussion | Presenter |
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| capital funds focused on the Life Sciences sector under the renewed Venture Capital Catalyst | |
| nitiative (VCCI). The six VC fund managers are: | |
| AllosteRx Advanced Therapies | |
| Amplitude Ventures | |
| CTI Life Sciences Fund | |
| Genesys Capital | |
| Pender Ventures | |
| Sectoral Asset Management | |
| These investments ensure that more capital will be made available to businesses in the life sciences sector so they can continue transforming new ideas into market-ready products and services, unlock economic opportunities for Canadians and create high-quality middle-class jobs. | |
| As part of a combined \$450 million investment into venture capital, and together with nvestments from the private sector, the renewed VCCI is expected to inject over \$1.4 billion into Canada's innovation capital market. | |
| New appointments at McMaster to boost research innovation and impact | Alex Muggah |
| | (Synapse) |
| Two inaugural appointments in positions designed to maximize the impact and influence of McMaster's research enterprise were approved today by the University's Board of Governors. | |
| Leyla Soleymani, associate professor of engineering physics, and Sukhvinder Obhi, professor of osychology, neuroscience and behaviour, have been appointed Associate Vice-President, Research (Commercialization & Entrepreneurship) and Associate Vice-President, Research (Society & Impact), respectively. | |
| Karen Mossman, vice-president, research, says the new positions speak to the university's commitment to ensuring the impact of our research is maximized to advance societal health and well-being. | |
| Soleymani, who holds the Canada Research Chair in Miniaturized Medical Devices and has created a startup company, says she's excited that the university has dedicated a position specifically to entrepreneurship and commercialization. | |
| McMaster ranked one of the world's top 50 universities for life sciences and medicine | Brighter |
| McMaster has once again been recognized as one of the world's top 50 universities for the study of life sciences and medicine, according to the 2023 QS World University Rankings by Subject. | World (McMaster) |
| Ranking 48th in the world and fourth in Canada for life sciences and medicine, McMaster also saw significant growth in the areas of engineering and technology, natural sciences and social sciences and management. | |
| Three specific areas of study at McMaster rank among the top 100 globally, with nursing ranked 24th in the world and fourth in Canada. | |



| Discussion | Presenter |
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| Immersive Lab Space and VR Room to Launch In Hamilton | Alex Muggah (Synapse) |
| Virtualware, a leading VR solution provider, has partnered with the Faculty of Engineering at McMaster University to launch an immersive lab space and VR room at McMaster Innovation Park (MIP). Virtualware specializes in developing digital business models for industrial applications and is headquartered in Spain with a North American office in Hamilton. | |
| Through the 4-year partnership, Virtualware and McMaster Engineering will scale Virtualware's VR enterprise platform VIROO, unveiling a 100m2 custom-built immersive room enabling students, faculty, and businesses to explore the use of VR tools and technologies in the region. By blending physical and virtual workspaces, the award-winning platform will promote the adoption of VR in research and academia and will help educators and researchers guide students in wholesome learning experiences, preparing them with skills for the future workforce. Up to 6 people can interact in the same physical room, collaborating with remote users in the VR space in real time. | |
| Ontario Genomics announces launch of BioCreate cohort 2 (funding opportunity) | Elizabeth Grey |
| Ontario Genomics' BioCreate program (Cohort 2) is open to small- and medium-sized enterprises (SMEs) in southern Ontario seeking to commercialize genomics and engineering biology enabled products and/or technologies in the health, food and agriculture, and cleantech sectors at a Technology Readiness Level (TRL) of 4+. | (Ontario Genomics) |
| BioCreate provides funding, access to mentorship and business support to help companies bring new products and technologies to market. | |
| The multi-phase BioCreate program includes direct, non-repayable funding of \$150,000 that will be matched by an additional \$100,000 (minimum) from participating companies to a total project size of \$250,000 or more. Funded companies will have access to 18 months of intensive business mentorship and access to critical infrastructure provided by Ontario Genomics' strategic sectoral and regional partnerships. | |
| The deadline to submit an intake form to be considered for Cohort 2 is June 30, 2023. Additional details related to BioCreate and the application process can be here . University of Waterloo's Velocity Incubator secures \$7.5M to open health Innovation Arena | Adrien Cote |
| The Ontario government is investing \$7.5 million to help build a state-of-the-art Innovation Arena at the University of Waterloo. The new \$35 million facility will be a hub for innovation in Ontario's life sciences sector in Kitchener and Waterloo, supporting the development of new health technology and the commercialization of intellectual property and encouraging investment and job creation. | (Velocity) |
| "The Innovation Arena will play a crucial role in expanding the impact and scope of the University of Waterloo's flagship incubator Velocity. Waterloo continues to take a leading role in connecting research breakthroughs in nanotech, AI and quantum information to innovative health solutions. The Innovation Arena will enable the collaboration and connections among researchers, talent and healthcare practitioners while supporting innovators and entrepreneurs from start to scale," said Dr. Vivek Goel (pictured), president and vice-chancellor, University of Waterloo. | |



| Discussion | Presenter |
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| The University of Waterloo and the City of Kitchener are partnering to build the new 90,000 square-foot Innovation Arena. The facility will include a health-tech incubator and a small business centre with a shared wet lab for local entrepreneurs and start-ups. The Innovation Arena will be become a focal point in Southwestern Ontario for innovation partnerships, collaboration among businesses, industry and researchers. | |
| Hamilton Health Sciences Foundation Gala supports researchers today as they pave the way for a healthier tomorrow for all | Pearl Veenema (HHSF) |
| HHS Foundation wishes to thank those who attended the 21st Hamilton Health Sciences Foundation Gala, Turn the Beat Around! From the glitz to the glam to the incredible performances, the event was surely one to remember. Most importantly, the community celebrated the significant contributions of leading-edge researchers at Hamilton Health Sciences who are shaping the future of health care both locally and internationally. Congratulations to grant recipients Dr. Peter Gross, Dr. Guillaume Paré, Dr. Jason Roberts and Dr. Mark Tarnopolsky. | |
| Life Sciences London has new website, in partnership with the support of London Economic Development Corporation (LEDC). London's many strengths in Life Sciences are based on a foundation of highly regarded Academic and Clinical Research at Western University's Schulich School of Medicine and Dentistry, Robarts Research Institute, and Lawson Health Research Institutes in partnership with London's teaching hospitals, St. Joseph's Health Care and London Health Sciences Centre. London's private sector strengths in Life Sciences include clinical trials (CRO's), manufacturing, distribution, packaging, services and testing laboratories, and an emerging digital health cluster. Life Sciences London also hosts a Monthly Virtual Ecosystem Meeting, which is open to | Jutin Leushner (BioNext @ Western) |
| participation by anyone in the London or external life sciences ecosystem. Should you have any questions or would like to share any updates and events, please use the contact Larry MacKinnon (limackinnon@ledc.com) or Justin Leushner | |
| (justin@lifescienceslondon.ca) McMaster researchers trial potential hemophilia treatment | Alex Muggah (Synapse) |
| A global study involving McMaster University researchers has trialled a potential new treatment that could be a game-changer for people living with hemophilia A, a life-threatening genetic blood disorder. | |
| Co-principal investigator Davide Matino said once-weekly injections of efanesoctocog alfa can prevent bleeding and promote near-normal activity by the clotting agent factor VIII, crucial for stopping the prolonged bleeding caused by hemophilia A. People who took efanesoctocog alfa also enjoyed improved joint function, better overall health and less pain. | |
| Matino said efanesoctocog alpha works by separating factor VIII from its associated protein carrier, known as the von Willebrand Factor, thereby overriding its 'half-life'. This means people with hemophilia A only need once-weekly instead of thrice-weekly injections. | |



| Discussion | Presenter |
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| Community Coordination and Collaboration Hub (C3 Hub) Funding Opportunity | Elizabeth Grey |
| | (Ontario Genomics) |
| Ontario Genomics and Genome Canada invite you to an introductory information session on | Genomics) |
| June 1 about a new funding opportunity, the Community Coordination and Collaboration Hub (C3 Hub). The C3 Hub will be a single Pan-Canadian team responsible for connecting regional | |
| surveillance projects and ensuring that data from monitoring antimicrobial resistance (AMR) and | |
| emerging pathogens (EPs) are used to inform public policy decisions. | |
| | |
| Participants interested in attending the info session must first register using the C3 Hub | |
| <u>Individual Participation Registration form</u> to receive the Zoom link via email. The deadline for | |
| individual registration is May 30, 2023. | |
| Innovation Factory launches OwnershIP: Own your innovation. Protect your IP | Ryan Moran |
| | (Innovation Factory) |
| OwnershIP by Innovation Factory, in association with IP Assist, is an intellectual property | ractory) |
| program designed to help startups & growing companies navigate the IP landscape. This unique | |
| program focuses on educating founders and provides actionable guidance through critical considerations and key stages of IP development. | |
| considerations and key stages of it development. | |
| With OwnershIP, companies can develop a personalized IP strategy for their business, learn to | |
| leverage IP to procure investment, and understand how IP commercialization can help them | |
| succeed in global markets. | |
| Exporting to the U.S Webinars Series May 2023 | Rafel Vargas |
| | (MEDJCT) |
| The three-hour NEBS (New Exporters to the Border States) and NETSUS (New Exporters of | |
| Technologies and Services to the U.S.) webinars are a practical, hands-on introduction to the | |
| basics of exporting to the United States. Presentations from industry experts will provide Ontario manufacturers and service firms with up-to-date information. | |
| Official of manufacturers and service minis with up to date information. | |
| To learn more about these three webinars, or to sign up directly for one or all three, click on the | |
| following links. | |
| | |
| New Exporters to Border States (NEBS) May 10th,2023 | |
| New Exporters of Technologies and Services to the U.S. (NETSUS) May17th, 2023 | |
| Do's and Don'ts when crossing the U.S. border May 24th,2023 | |
| MMRI Official Opening, Manufacturing Forum and Industrial Open House (May 11) | Stephen |
| winni Official Opening, Manufacturing Forum and Mustrial Open House (May 11) | Veldhuis |
| We are looking forward to welcoming you to the McMaster Manufacturing Research Institute's | (MMRI) |
| (MMRI) new 21,000 sq ft facility located at the McMaster Innovation Park on Thursday, May | |
| 11 th . | |
| | |
| We will be holding an Official Opening event followed by our annual Manufacturing Forum and | |
| Industry Open House. This is an excellent opportunity to see our new facilities and learn about | |
| emerging trends in manufacturing. | |
| | |



| Discussion | Presenter |
|--|-----------------------------|
| The keynote speaker this year is Dr. Tony Schmitz from the University of Tennessee. He will be presenting on applying machine learning, a core AI technology, to improve machining operations. | |
| Learn more about the event here | |
| Investment Readiness Program (6 week hybrid course, begins May 5) | David Wright (Innovation |
| Do you plan to raise money? Expect to sell your company one day? Going through the due | Factory) |
| diligence process can be daunting, whether it is your first investment round or you are preparing | |
| to sell your entire company. Investment Readiness breaks down the process by introducing 18 | |
| questions investors want answers to. Preparing for these will strengthen your pitch and help you better understand your valuation drivers. | |
| In this exclusive program, David W. Wright will share with you his best kept secrets on how to | |
| conduct yourself in the capital markets to maximize your potential outcome. Investment | |
| Readiness provides you with the tools and structured accountability you need to be confident in | |
| front of investors (templates, checklists, and more), as well as a community network of peers | |
| who are also working to become investment ready. David has 30 years' experience as an equity | |
| research analyst, investment banker and advisor, working with thousands of technology | |
| companies and providing well informed investment advice. | |



Time allotted | 15 Minutes

Topic: Collaborate & Accelerate

Partnership opportunities, programming and resources available to the community, market gaps and challenges, learn about potential funding opportunities, discuss new RFPs issued, etc.

| Discussion | Presenter |
|---|---------------------------|
| Want to Connect with your Ecosystem: Check out the Synapse Health Ecosystem Directory | Alex Muggah (Synapse) |
| Synapse has created a Director of +200 private- and public-sector organizations in the Hamilton (and regional) health innovation ecosystem which work alongside the Synapse Consortium to support of the commercialization of health innovation. Learn more about what others are up to, and identify potential collaborative partners at: www.synapseconsortium.com/directory | |
| Engaging Mohawk College's IDEAWORKS | Andrea Johnson (Mohawk |
| IDEAWORKS projects in general (of which, MEDIC is one area) which was provided and may help with identifying if Mohawk College can support our companies with projects. This might be a refresher for some or all of us, but highlighting nonetheless: Tips for Innovation Factory Referrals to IDEAWORKS | College) |
| Our four innovation centres (MEDIC for Digital Health, AMIC for 3D printing, EPIC for energy efficiency related projects and MTIC for Medical Technologies related challenges) are active during this time- but note that due to existing commitments, are often looking at projects one month to three months in the future. | |
| Other <u>areas of expertise</u> are on a case by case basis, especially this year, with a number of our faculty committed to teaching and revamping courses The ideal applied research partner is one that is in the scaling stage; they have some revenue and can meet a lot of the funding agencies criteria for funding or want to | |
| self-fund a research project. Typically what we look for is 2+2; two years in business with two employees We recommend working with us on projects that aren't mission critical but can help the company explore an innovative idea. | |
| What about start-ups? If they require a few tips or advice, we can normally chat with them (or if there is a critical mass -like five or six companies in a space-, we can do a webinar type | |
| discussion). They can see about the availability of capstone projects, where students generally work on projects for a four month period, for free, in order to get course credit. It may help with MVPs. | |
| Contact Andrea Johnson for more information: andrea.johnson4@mohawkcollege.ca | |
| The CONNECTION - McMaster University Online Partnerships Portal! | Gay Yuyitung (MILO) |
| <u>The Connection</u> is a new program offered by McMaster's Office of Community Engagement (OCE) designed to facilitate online, mutually beneficial partnerships between campus and | |
| local Hamilton community organizations. As communities look for ways to adapt and rebuild | |
| in response to COVID-19 The Connection will make the process of addressing Hamilton | |
| community and University identified needs easier by providing online tools and resources. | |
| It's a way for everyone who sees themselves as part of a collective community-campus effort | |
| to connect and respond to COVID-19 locally | |



| Discussion | Presenter |
|--|---|
| Collaborating with McMaster Institute for Infectious Disease Research (New Intake Form) | Gay Yuyitung (MILO) |
| In addition to our ongoing COVID-19 research initiatives at McMaster, the Michael G. DeGroote Institute for Infectious Disease Research is mobilizing its strong research community to assist Canadian researchers and businesses in their attempts to find solutions to the international crisis. The IIDR teams have the capacity to assist with the testing of antiviral compounds and products, as well as the testing of products or devices aimed at sterilization. This includes new methods for sterilizing personal protective equipment. They are able to offer services in the following areas: | (WILO) |
| BSL2 cell culture infection with representative human coronaviruses; Testing of methods or products that are designed to inactivate the virus; Biochemical/enzyme studies with anti-viral agents. | |
| Cell culture and small animal models of SARS-CoV-2 infection can be performed in McMaster's secure biosafety level 3 facility. Availability for BSL3 testing is very limited, and projects requiring this type of work will be screened and prioritized by an internal committee. | |
| If you have a product or innovation that you are interested in pursuing further and feel that we could be of assistance to you, please <u>reach out to us through the online form</u> . Each project will be evaluated to determine if McMaster has the capabilities and capacity to perform the required testing. | |
| Hamilton-based technologies available for licensing | Glen Crossley (MILO) |
| Each year researchers at McMaster, <u>Hamilton Health Sciences</u> , and <u>St. Joseph's Healthcare Hamilton</u> make new discoveries that lead to new products, services, or process improvements to help companies expand their pipeline or increase their productivity. The business development team at <u>MILO</u> is here to help you tap into and access these discoveries as efficiently as possible. MILO's objective is to support effective transfer of these technologies to companies for social and economic benefit and enable the continued growth of research excellence at the institutions. | |
| Please contact Glen Crossley, Associate Director, Business Development and IP or search the list to see some of the technologies currently available for licensing or further R&D | |
| Hamilton Innovation Partnership Portal | Alex Muggah (Synapse) |
| Synapse has created the <u>Hamilton Innovation Partnership Portal (HIPP)</u> to make the process simpler and more streamlined to find new partners within Canada's leading health research and educational ecosystem. It is a way for companies to interact with the Hamilton community. A streamlined approach, to have Synapse represent everyone. We've set up an intake form for companies to direct request to the portal. Portal is online through the Synapse website: http://synapseconsortium.com/partner/ | |
| Submit Community Events on the Innovation Factory Calendar Our calendar is home to Innovation Factory workshops and networking events as well as events from the community which help support our local entrepreneurs and businesses. If you have an event which may a fit, please submit it and we will review it within five business days. | Annie Horton (Innovation Factory) |

