

Hamilton Health Innovation Check-up: Meeting Minutes

August 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/uZQodOyppzoiQnRwfvVuEJtEMUpKPUZPzg>

Next Monthly Check-up: September 25th 9:00 – 10:00am | McMaster Innovation Park (via Zoom)
Please sign up to our [mailing list](#) to receive meeting minutes and other important updates.

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

Minutes for our monthly check-up meetings 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 [online](#).

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: info@SynapseConsortium.com

Hamilton Health Innovation: Calendar Highlights

Check out Synapse's [online calendar](#)

September

- Sept 7: [Life Sciences London Community Meeting](#) (Life Science London)
- Sept 7-8: [Healthcare Cybersecurity Forum](#) (HIMMS)
- Sept 14: [Fast Track Health: Solutions Showcase](#) (Communitech)
- Sept 19: [Networking & Gratitude](#) (The Clinic@Mac & School of Biomedical Innovation)
- Sept 20: [Healcare Rounds: AI in Healthcare, Innovation and Collaboration](#) (McMaster Health ICE)
-  Sept 25: [Hamilton Health Check-up](#) (Synapse Consortium)
- Sept 27: [LiONS LAIR](#) (Innovation Factory)
- Sept 25-29: [LSO Roadtrip around the Province](#) (LSO)
- Sept 27: [LSO Roadtrip around the Province: Hamilton](#) (LSO & McMaster Innovation Park)
- Sept 28: [Prototyping and Product Development Resources](#) (Mohawk College & Innovation Factory)
- Sept 28: [Bloom Burton Awards Gala](#) (Bloom Burton)

October & Beyond

- Oct 2: [Next Great Big Idea – Canada's life sciences innovation summit](#) (NGBI)
- Oct 4: [Accessing Masters Talent in Healthcare AI and Data Science](#) (U of T and Innovation Factory)
- Oct 4-6: [BioFuture Conference 2023](#) (BioFuture)
- 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)
- Oct 16 - Nov 20: [Fall Health Innovation Bootcamp](#) (Clinic @ McMaster)
- Oct 18: [Queen's Park Day](#) (LSO)
- Oct 26: [Digital Health Conference](#) (DocerApp)
-  Oct 30: [Hamilton Health Check-up](#) (Synapse Consortium)
- Nov 2: [Annual Ideas to Action Forum](#) (LSO & Shift Health)
- Nov 4: [Health Research Conference](#) (WeSpark)
- Nov 8-9: [CTO 2023 Conference](#) (Clinical Trials Ontario)
- Nov 13-16: [MEDICA Healthtech Conference 2023](#) (MEDICAlliance)
- Jan 8-10: [Biotech Showcase 2024](#) (EBD Group)
- Feb: [Investment Summit 2024](#) (OBIO)
- Mar 11-15: [HIMSS Global Health Conference & Exhibition](#) (HIMSS)
- Apr 15: [Early-Stage Life Sciences Companies and Investors Networking Event in Toronto](#) (Mintz)
- Apr 16-17: [Bloom Burton Healthcare Investor Conference](#) (Bloom Burton & Co.)

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

Looking to engage the Hamilton Health Ecosystem?



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
<p>Guest Speaker(s):</p> <ul style="list-style-type: none">• Jayiesh Singh, CEO and Founder, Able Innovations Inc. [Slides used during the presentation can be accessed here]
<p>Discussion <i>[the following is a synopsis of the discussion, and has been lightly edited for length and clarity]</i></p> <p><u>Introduction: My Journey to Able Innovations</u></p> <p>Hello everyone, my name is Jay and I'm the founder and CEO of Able Innovations. My career didn't originally start in the medtech sector, it started in the solar industry at one of Canada's leading technology companies back in 2010. Throughout my career, which has spanned numerous products and numerous industries, I've really focused on trying to build impactful technologies.</p> <p>My thesis has been how to work with robotics and technologies to create a positive impact. My mom worked in long term care, so in parallel to building new technologies I've had some exposure to that sector. This has given me some unique perspectives to some of the challenges frontline staff, as well as residents and patients, face on a daily basis. This set me down a path of researching solutions in that sector. Specifically, the problems that resonated with me were around the physical movement of patients.</p> <p>How people are moved isn't a good process for anyone. I saw my mom suffer numerous injuries lifting and moving residents working in long term care. I also spoke to families and they hated how their loved ones were moved.</p> <p>This motivated my eureka moment; I came to the realization that this is an automation problem. Patient transfers are a highly labor-intensive task that happens with a very high frequency. The insight of being able to automate this process through technology, combined with my background in robotics, provides me with the opportunity to fix this. I do not claim to be a medical device expert, rather my strengths lies in being able to develop complex and reliable technologies, at an efficient cost point.</p> <p><u>Looking Back: Able Innovation's Founders</u></p> <p>A little bit about my co-founder Phil. Our careers have paralleled each other, and we first started working together in 2010. We co-founded Able Innovations, with Phil taking the lead on the technical side of the business, while I've gravitated towards the business side. One of Phil's strengths is around managing patents and patent portfolios, having worked on over 15 patents being successfully granted.</p> <p>Before my partner Phil and I started Able Innovations we founded a successful supply chain consultancy, which allowed us to spend five years in Asia setting up manufacturing and supply chains. To be successful, we had to execute around design, manufacturing and customer success. Through this experience, I learned about the scale-up process. That endeavor was decently successful, and by the end we were generating close to a million in annual recurring revenue. We started Able Innovations using revenue generated from this first company, as well applying all of the learnings from starting that venture.</p>

Guest Speaker Discussion

Identifying The Patient Transfer Problem

At Able Innovations, we're developing robotics that automate the highly labor-intensive task of patient transfers. This allows staff to gain more independence, reduce the burden, as well as allows for more dignified experience by the patient.

Today, half of nurses are battling strain related chronic injuries. A big contributing factor the high level of physical activities that create strain. The most labor-intensive task is that of patient transfers. Specifically, lateral transfers from a lying down to a lying down state. Each transfer can require between two to eight staff, often requiring backbreaking effort. This is a major contributing factor to many nurses getting injured, which results in them leaving the profession and significant clinical inefficiencies. For example, a nurse on an evening shift trying to get a CT scan of a bariatric individual, there may simply not be enough staff to conduct a transfer. Even with the right numbers, transferring a patient onto a CT scanner can take upwards of 20 minutes. This also results in a very poor patient experience.

Current trends indicate that the situation is not going to get better. There are increased staffing shortages expected coupled with an aging population and increased demand for healthcare services, especially those patients facing acute conditions. Hospitals need to do more with less, with more nurses leaving the profession than joining and costs are going up.

Solving the Patient Transfer Problem

To solve this we've developed the [ALTA Platform](#), which allows one care provider to effortlessly conduct these highly labor intensive and involved lateral patient transfers. This results in increased safety for care givers, as well as a more dignified patient experience.

The device size is configurable, but in its current iteration it's the same size as a standard hospital stretcher. The care provider lines up our device next to the hospital bed, and the device takes over. The ALTA Platform is simple and automated. It has a compact and variable platform that extends out to the transfer surface and senses the stiffness of the surface. The ALTA device can detect if it is a bed with a soft mattress or hard mattress, or if the surface is a CT couch. The device then begins to roll a conveyor belt underneath the patient. This results in a more comfortable experience, avoiding skin being pulled or pushed, with the patient shuttled right onto our device. In contrast, the same procedure today might involve four to eight staff, where all members need to have perfect synchronicity to move the patient over. If even one is off on their timing, you can end up with significant injuries to the patient or the frontline staff.

Building In Features: Safety and Data Analytics

Each aspect of the ALTA Platform is completely roboticized and powered. It can move up and down and tilt. The four wheels are fully powered, which means that for frontline staff pushing the ALTA Platform is completely effortless. Even micro adjustments, which often take the most strain, like moving our device an inch to the side, are fully automated. We have an easy-to-use and operate touch screen that enables staff interactions with the device. We have incorporated safety sensors, such as if the brakes aren't locked, that will prevent staff from conducting an unsafe transfer. It's possible for somebody to start operating this in five minutes because of the built in safety systems, and staff really appreciate and feel comforted by them.

Another feature is the data and analytics that flow from the use of our technology. While patient transfer is the key intervention, data analytics opens up a world of possibilities, such as providing information back to end users. At present the ALTA Platform has a 5G modem onboard to enable connection and collection of information (e.g.,

Guest Speaker Discussion

weight of the individual being transferred, the time they're transferred), and through login information we can identify the staff member using the device. This allows a facility to track key workflows around patient movement and transportation, revealing where inefficiencies arise and how to address them.

Able is at the early stages of realizing the value of the data we are creating and collecting, which we expect to be highly valuable in the future. For example, we have a project ongoing with University of Waterloo and Rogers that will enable fully autonomous self driving in our device. In the future, we want to plug in our technology into scheduling systems to better understand when a procedure room will be vacant and the next patient in queue is ready to be transferred. Our device will automatically find its way to the patient for them to be transported and transferred over.

A Successful Commercial Launch

Able Innovations had its first commercial launch and our [first procurement](#) in April of this year (by the Élisabeth Bruyère Hospital), where we had a great reception. The media coverage of our launch resulted in us being inundated with encouraging messages, from healthcare operators and also families, which was really gratifying. Within the first two weeks, many individuals reached out to us directly saying they wished to donate this piece to a hospital. In one case, in the memory of a loved one because they did not like the way they were transferred and moved. This caught the attention of the hospital foundation, which had no idea we existed until after this public interest arrived following the procurement of our device. This exemplified the human impact and desire of patients to have a more dignified experience.

As a growing company we have asked ourselves: “How do we execute in a focused and executable manner?”

To this end, we've developed the Change Leaders Program in which we'll enroll six facilities that will be supported with extensive around the clock training. Every facility will be assigned an Able Innovation employee to ensure staff are being well trained. We'll work with them through the implementation process because we believe the real work starts after a new technology is delivered. The sale is not the end of a relationship, it's the beginning. These six facilities will also receive access to novel technology features that we're innovating on, and for a limited time they'll receive preferred commercial terms.

Transforming Patient Handling

Today, we have our beachhead ALTA Platform, but looking forward we are seeing interest in our device in diagnostic imaging, complex continuing care, and OR suites. This includes [Mayo Clinic where we were recently asked to bring our device](#) and the lead robotic surgeon is really interested in our technology.

This year, we're focused on sales and commercialization, though we have a few initiatives on the go in parallel. This includes bariatric motion assist to help with weight capacity, which allows the device to move under its own power. We are also exploring self-cleaning, which will create further value for end users who are looking at infection prevention and control (IPAC) conformance.

In the coming years we will focus on additional features such as: telescoping, which allows our platform to collapse when it's not in use, preserving space in hospitals; enabling navigation, whereby a device can plug into scheduling systems and find its way to which patient needs to be transferred; and, bed-to-wheelchair transfers in all types of settings. The bed-to-wheelchair transfer was the motivating factor behind starting the company, based on the realization that many individuals are unable to age-in-place or remain in their home or preferred location due to the challenge of getting in and out of bed. Solving the bed-to-wheelchair transfer problem will transform how and where individuals age.

Guest Speaker Discussion

Staff Retention Driving Hospital Interest in ALTA Platform

Hospitals are interested in us, with staff retention being top of mind right now. Hospitals are seeing high rates of injuries and turnover, and facilities are looking for ways to retain their staff. In addition to injury reduction, Able provides enhanced clinical efficiency in certain scenarios. For example, the CT suite at a busy inpatient hospital may see about somebody come in on a stretcher every hour. The lone CT technician who's there must get the patient from the stretcher onto the CT couch. Oftentimes, this will require leaving to recruit somebody else from an adjacent CT suite. This leads to two CT scan machines down for 15-20 minutes while the transfer is being done. That's downtime our system cannot afford. It also represent opportunities for additional revenue for the hospital.

With the ALTA platform every time a patient comes in they're transferred within two to three minutes, reducing downtime and use of staff resources. Facilities can improve throughput and, more importantly, the patient experience is far superior. Patients are acutely aware of the strain their transfers can put on caregivers, which further negatively impacts their journey. Patients have described the transfer process using ALTA as being more secure and reducing a sense of dependence on others.

This impact has led to immense interest from leading facilities. Bruyère has procured our technology. Able is now [a CAN Health Network member](#) and have projects with the University Health Network. We have been collaborating with the US Veterans Health Administration for about a year and will begin a bariatric project with them in the near future. [OBIO has been a fantastic partner](#) of ours that's allowed us to get our technology into facilities, and there are many more conversations that we're having. We're excited to grow our partner base and more recently we became a [member of the Mayo Clinic Innovation Exchange](#) based on the interest in the applications of our technology and its potential.

Market Potential & Competitive Landscape

The patient lateral transfer market is estimated to be \$4 billion a year with demand expected to grow due to current and future events (such as COVID-19) that have revealed the cracks in the way hospitals are resourced. These cracks are going to be further exacerbated by the aging population and the human health resources crisis. Technologies like ours are seeing ~10% compounded growth. As we look at additional modalities such as bed-to-wheelchair, we expect our market size to multiply significantly.

In terms the competitive landscape, about 99% of transfers are done by manual transfers or assistive lifts and slings. This status quo requires significant manpower and places physical strain on staff. Further, the standard of care is hard, if not impossible, to follow consistently which can lead to staff experiencing injury. We see some innovation in the field, such as a hover mat that reduces the amount of friction when moving a patient. However, this needs to be inserted under patients, and still requires multiple staff.

Others have tried using conveyor belt technologies to go underneath patients, similar to ALTA, which on the surface might seem similar but underneath it's entirely different. Previously, Bruyère had procured a device called the Mobilizer. These devices were extremely difficult to use and required technician-level understanding to operate since every actuation had to be controlled by the user. A nurse on their 11th, 12th, or 13th hour of a shift just simply doesn't want to use it. The Mobilizer was unreliable and there was no support; Able Innovations completely reimaged how lateral transfer technology can be delivered.

In particular, we focused on making our technology much more advanced from a control system perspective. An analogy I often use is that there were mp3 players before iPods, but the reason iPods changed the game was because it transformed the user experience. That's really what Able Innovation set out to do, we keep the operator at the forefront of our minds in our technology design.

Guest Speaker Discussion

A Strong and Growing Able Innovations Team

Able was founded in 2018 and by 2019 we had hired our first staff member. We are currently 21 employees and right now are heavily investing in our IP portfolio. We have foundational patent already granted, with a further 16 patents in progress as well as a few trademarks. We have cleared certifications, including FDA, Health Canada, and we abide by PSA and safety requirements.

In terms of the remainder of the team and advisory board, we're excited to call on Dr. Gaurav Pur who is the Chief of ER at Southlake Hospital and Dr. Andrew Vellathottam who has a 3,000-patient clinic focused on occupational health. They are key advisors, as well as investors in us. We have strong financial controls and have brought in advisors with connections to new partners, such as US Veterans Affairs. This helps to complement our highly diverse and engaged team. Many of us have experience in robotics in med tech, and all are mission aligned with what we're trying to do at Able Innovations.

Leveraging Hamilton Ecosystem and Closing Asks

With that, I'd really like to thank the Hamilton ecosystem. I've been engaging with the Hamilton ecosystem since I joined. It's no secret that the facilities the ecosystem has are highly innovative. We've been interacting with the likes of St. Joseph's Healthcare and the Hamilton Health Sciences networks. We're really excited about what the future holds for us.

What we're focused on today is raising a seed extension round as a result of the great amount of commercial interest we're seeing. We're also looking at executing on the Change Leaders Program.

My asks for this group are: (a) introductions to key stakeholders and facilities, or if you are a key stakeholder yourself; (b) introductions to relevant investors; (c) connections to sales and distribution personnel.

What we've learned is there's a lot of potential for our technology and I'm looking to learn more from a distribution perspective.

Questions & Answers

Question: What was the single biggest motivator that convinced Élisabeth Bruyère Hospital to become a collaborator and eventually procure the ALTA platform?

Answer: It took a high-risk move on our part. When we began our collaboration with Élisabeth Bruyère there were three or four hospitals that were interested in our product. We were a small company and if we were to collaborate with that many hospitals it would impact execution – we didn't have enough resources. We decide to put all our resources into one relationship, because that's what it would take to succeed. For six months we had three or four staff at the facility continuously. It allowed us to show our commitment as well as developing an understanding of the fundamental problems the hospital was facing. For example, we learned the hospital spent a significant amount of capital on their "buddy system". The buddy system supports staff with a physical ailment resulting from the work they've done. A nurse with a chronic backache might be allowed to administer medicine, but not lift or move patients. To lift or move patients the hospital was hiring agency staff.

The single biggest motivator was to invest everything in this one sale. We genuinely tried to address the hospitals' problems. This got us aligned with the partner, creating value and learnings from working with them. This relationship meant they would give us feedback on design and process (i.e., placement of soft materials). We would then come back in a few weeks with design changes that met their needs. The healthcare staff found that

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refreshing because they're used to seeing technology partners attempt to shove technology on them and expect it to be used. Our champions at that facility was another key factor that allowed us to get this contract.

Question: The technology is great, and I believe the operational applications and value you've demonstrated would be intuitive to hospital. However, what is your elevator pitch to a CFO or the financial group?

Answer: We always do a lot of groundwork before we get into a conversation with the CFO. Our pitch centers on our commitment to not sell an ALTA platform unless we can show a return on investment of 50 to 100% in the first year or two. There's two parts to the pitch, cost reduction and revenue generation. Cost reduction, as was the case at Élisabeth Bruyère, for facilities facing increased costs related to staffing injuries which lead to added incremental costs (i.e., bringing in new staff and paying overtime). Impacting this incremental budget represents savings we can provide because it's not budget that can be reimbursed. From an efficiency standpoint, saving two minutes of operating room time at \$300 a minute provides a no-brainer value proposition. Understanding these financial implications has helped us achieve approval from the C-suites.

Question: What kind of investors and investments are you looking for? What are you looking to use the investments for, and where are you in your funding?

Answer: We're looking at growing our operational side. We are looking to hire people in sales and distribution and a success team. We want to hire staff that will allow for the implementation of our technology, to provide a very high touch experience for our customers. There are also a lot of opportunities on the R&D side as well.

We have a healthy funnel of facilities that are interested in adopting our technology. Right now we're looking at raising \$3 million, of which half of that is signed in term sheets already. I am seeing to leverage our momentum with the money raised during the summer. This will leave us in a healthy position for a Series A raise, and potentially a better investment market, in early- to mid-next year.

Question: I was intrigued by your comments about the Ottawa market, and how you got some press on your product, which led to people coming to you asking how they can fund this. Well, imagine if you had a patient that was willing to pay you up front to put a bed in the hospital.

Answer: To be frank that's something I'm trying to better understand and wrap my head around because this was a situation that I had not thought of. I did not know that procurement could leverage a Hospital Foundation, and so it was encouraging when it did. It took us six months to get budget approval, and only took 4 weeks for the Hospital Foundation to raise the necessary capital. As a result, we are exploring other ways to engage with other hospital foundations, and trying to understand what parts of our value proposition really motivates them. Given that most are looking for ways to improve the lives of patients, the ALTA platform is a technology where it is easy to convey that value.

However, the right way to build a sustainable relationship is through clinical championship within the hospital. Once a hospital is ready, they may choose to bring in their foundation as a means to offset the cost of procurement and facilitate our entry into the hospital. We are taking the approach of targeting key stakeholders, and then their foundations, focusing on asking what potential value they see in deploying our product. That said, I would love to connect with more hospital foundations, and would welcome any connections that those of you in the audience might have.

Time allotted | 15 Minutes

Topic: **Communicate**

Discussion	Presenter
<p>\$750,000 awarded to three innovative McMaster startups</p> <p>Three McMaster startup companies –A.I. VALI Inc., Esphera SynBio and HARVEST – have each received \$256,000 in the third round of McMaster Seed Fund investments.</p> <p>Medical device startup A.I. VALI Inc. – cofounded by McMaster professor of medicine and gastroenterologist, David Armstrong – has developed AIDREA™, an AI platform that uses interactive machine learning to document and analyze endoscopy videos in real-time.</p> <p>Co-founded by associate professor of medicine, Brian Lichty, biotech startup Esphera SynBio has developed a novel therapeutic technology designed to treat infectious diseases and cancer. Esphera’s platform technology generates exosomes that deliver defined payloads to targeted cells in the body. The technology can target several kinds of cells, including tumour cells and immune cells, and deliver a variety of therapeutic payloads, including enzymes and RNAs. It is designed to enhance existing immunotherapy and vaccine technologies and aid in gene therapy, enzyme replacement therapy and cancer immunotherapy.</p> <p>Co-founded by mechanical engineering professor, James Cotton, and research lab manager at the McMaster Institute for Energy Studies, Jeffrey Girard, HARVEST aims to support decarbonization of the restaurant industry with their fuel-less, carbon-free hot water heating system.</p> <p>Andy Knights, McMaster’s acting vice-president, research, says the Seed Fund has been a pivotal source of support for McMaster research-based startups since its inception in 2021.</p> <p>“The McMaster Seed Fund has invested over \$2.7 million in eight companies to date, driving the transformation of University research into products and services that have made a positive impact on society. We are proud to support the latest Seed Fund recipients as they transfer their innovative technologies to businesses, clinicians and researchers in the Hamilton region and beyond,” he says.</p> <p>Read the full article here</p>	<p>Leigh Wilson (MILO)</p>
<p>Ontario Ministry of Health invests \$5 million to support Hamilton collaboration to transform the future of medical imaging</p> <p>Mohawk College and McMaster have announced the opening of a new facility for educational training, imaging research and magnetic resonance imaging (MRI) that promises to cut wait times and improve patient experience.</p> <p>The Centre for Integrated and Advanced Medical Imaging (CIAMI), provides a space where education, clinical care, and research intersect through collaborative and unique models of care and approaches to training that have not been done before in Ontario. In addition to education and research components, the centre partners with affiliated academic hospital systems, Hamilton Health Sciences and St. Joseph’s Healthcare Hamilton.</p>	<p>Alex Muggah (Synapse)</p>

Discussion	Presenter
<p>CIAMI provides a revolutionary approach to cutting wait times and could double the speed of service for patients needing MRI scans.</p> <p>The Ontario Ministry of Health has provided \$5 million in funding over three years to support the creation, development, and testing of the CIAMI model, including funding to operate an MRI for clinical use.</p> <p>Read the full article here</p>	
<p>CABHI invests \$5 million in 19 companies, including Hamilton-based ImaginAble</p> <p>The Centre for Aging + Brain Health Innovation (CABHI) announced that it has funded 19 Canadian agotech companies to receive up to \$400,000 each to support their early-stage innovations aimed at improving the quality of life for older adults, people living with dementia, and caregivers. Funding was made through CABHI’s Mentorship, Capital, and Continuation (MC2) Capital Program in partnership with National Bank, which supports early-stage companies in growing and scaling agotech solutions.</p> <p>ImaginAble Solutions, Hamilton, Ontario. An award-winning assistive device that enables people living with limited hand mobility to write, paint, draw and access technology. In August 2023, the founder Lianna Genovese was added to the Forbes’ 30 Under 30 Local list.</p> <p>Some of the other companies have strong connections into Hamilton ecosystem including: Cosm Medical (Toronto), FluidAI (Kitchener), Focus Technologies (Toronto), LUCID (Toronto), and Mesosil (Toronto)</p>	<p>Shannon Graszat (Innovation Factory)</p>
<p>Hamilton’s VoxNeuro raises \$4.5M to scale brain performance software in US clinics (Betakit)</p> <p>VoxNeuro, which develops software that measures brain performance, has raised \$4.5 million CAD (\$3.4 million USD) in all-equity funding as it looks to expand across the United States (US). According to VoxNeuro, the financing was led by the undisclosed family office that contributed to its previous \$4-million round in October. That office is now its largest shareholder, the company noted.</p> <p>The funding round also saw participation from its strategic investor g.tec, which develops high-performance brain-computer interfaces and neurotechnologies, as well as Klick Health, Centre for Aging + Brain Health Innovation by Baycrest, McMaster University, Bay Area Health Trust, and a number of angel investors.</p> <p>Launched out of McMaster University in 2017, VoxNeuro’s cognitive-health assessment management platform, called CHAMP, uses brain biomarkers to provide clinicians with a quantitative assessment of patients’ key cognitive functions. These could include factors like attention and concentration, information processing, and working memory. They are scored against a normative database to generate a report.</p> <p>Read the full article here</p>	<p>James Connolley (VoxNeuro)</p>
<p>OBIO offering up to \$20,000 in grants to women-led health science companies (Betakit)</p> <p>Ontario Bioscience Innovation Organization (OBIO) kicked off a call for applications for its Women in Health Initiative meant to train women to further ensure their participation and</p>	<p>Jack Lee (OBIO)</p>

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<p>success in the health sciences sector. The OBIO is offering women-led companies in the health sciences space up to \$20,000 CAD in grant funding through the Women in Health Initiative.</p> <p>Each selected company will receive the grant, in addition to access to advisory, workshops, mentorship, and networking opportunities. Following the six-month program, participants of OBIO's Women in Health Initiative will be invited to pitch for an equity investment.</p> <p>Read the full article here. Learn more about the Women in Health Initiative and apply here. The deadline to apply is on September 10.</p>	
<p>SOPHIE participant Altis Labs Launches \$5.7M Digital Twins for Clinical Trials with Global Biopharmaceuticals & Leading Research Institutions</p> <p>Altis Labs, a computational imaging company accelerating clinical trials with AI, announced that it is leading an international coalition focused on the development and implementation of digital twins in clinical trials. This initiative seeks to transform clinical trial design by speeding up timelines and reducing failure rates associated with bringing novel, efficacious cancer treatments to patients in need. This \$5.7 million project leverages support from DIGITAL, Canada's Global Innovation Cluster for digital technologies.</p> <p>Read the full article here</p>	<p>Alex Muggah (Synapse)</p>
<p>Epineuron Announces Enrollment of its First Patient in REGAIN</p> <p>Epineuron, a clinical-stage nerve care company, announced it has successfully enrolled the first patient in the company's pivotal trial, REGAIN. The multicenter, randomized, sham-controlled, double-blinded study is evaluating the safety and effectiveness of PeriPulse, an investigational technology designated an FDA Breakthrough Device for the treatment of injured peripheral nerves. The study aims to enroll up to 110 patients across Canada and the United States of America, making it the largest medical device study for nerve regeneration.</p> <p>Read the full press release here</p>	<p>Sergio Aguirre (Epineuron)</p>
<p>It's coming.... McMaster Innovation Park and OmniaBio are making great progress building up its new facility in Hamilton Ontario.</p> <p>OmniaBio is expected to be Canada's largest contract development and manufacturing organization (CDMO) for the manufacture of cell and gene therapies. OmniaBio will provide pivotal/Phase III and commercial-scale manufacturing of gene-modified cells and viral vectors that is an expansion of the clinical-stage capabilities already offered by CCRM, a leader in developing and commercializing regenerative medicine-based technologies, and cell and gene therapies.</p> <p>Enjoy this behind-the-scenes highlight in our #WatchusGrow series. Watch our live feed for updates in real-time using this link</p> <p>Check out the post here</p>	<p>Jonathan Hunt (MIP)</p>
<p>Innovation Factory Looking for people with projects that Boost Health Tech Innovation (Bay Observer)</p>	<p>Jennifer Gauvreau (Innovation Factory)</p>

Discussion	Presenter
<p>Innovation Factory has been helping creators bring their health care products and processes to commercial fruition for over two years. Innovation Factory, located at the McMaster Innovation Park helps connect medical start-ups and more established entities with the research arms of Hamilton’s Hospitals to help them move their products and processes towards full commercialization.</p> <p>Innovation Factory is now accepting applications for its third cohort of the program titled Hamilton Ecosystem to Accelerate and Leverage Trials of Health Innovation (better known as HEALTHI) program. Supported in part by funding from the National Research Council of Canada Industrial Research Assistance Program, HEALTHI accelerates commercialization efforts by enabling life science and health tech businesses to partner with leading research hospitals. The third round of funding is expected to support 45 projects over 2 years, equaling approximately \$675K in total funding for small to medium-sized enterprises.</p> <p>Read the full article here</p>	
<p>Ontario Supporting Made-In-Ontario Life Sciences Innovations, including Hamilton-based Fero International</p> <p>The Ontario government is investing \$3 million to help six life sciences companies develop and bring to market made-in-Ontario medical innovations and health-care solutions. These companies are the first recipients to receive support from the province’s Life Sciences Innovation Fund (LSIF), a new, early-stage fund that helps companies advance made-in-Ontario solutions and increase Ontario’s competitiveness.</p> <p>Six life sciences companies will each receive \$500,000 to accelerate the development of made-in-Ontario health-care solutions and bring these innovative solutions to market in Ontario and around the world.</p> <p>Fero International Inc., located in Hamilton, designs and builds modular infrastructure to provide scalable, rapidly deployable, and cost-effective solutions for health-care, remote communities and disaster relief.</p>	<p>Michael Jones (OCI)</p>
<p>New investment by Fusion Pharmaceutical in Hamilton to create 50 new jobs (Hamilton Spectator)</p> <p>Fusion Pharmaceuticals Inc., a Steeltown-based biotech company, expanded its footprint with the opening of its new radiopharmaceutical manufacturing facility inside McMaster Innovation Park. The Longwood Road South facility, which spans approximately 27,000 square feet, will help “support the company’s growing pipeline of targeted alpha therapies (TATs),” according to a press release.</p> <p>Fusion Pharmaceuticals, which was founded in 2015 by Mac chemistry professor John Valliant, develops cancer therapy products, including a delivery system that seeks out and infiltrates cancer cells to deliver doses of radiation to a precise location.</p> <p>The new facility, located next door to the company’s research and development labs, will create approximately 50 jobs in the city, said Amanda Cray, senior director of investor relations and</p>	<p>Alex Muggah (Synapse)</p>

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<p>corporate communications at Fusion, in an email. Set to be fully operational by 2024, the plant is expected to produce more than 100,000 doses of TATs per year, according to the company.</p>	
<p>Women Leaders in Digital Health (Call for Nominations due October 6)</p> <p>Launched in 2017 by Digital Health Canada, the annual Women Leaders in Digital Health Award recognizes women at any stage of their career progressions and is inclusive of all women of influence no matter where they might be in the health IT field. Each year, up to ten new Women Leaders in Digital Health are selected for recognition by an adjudication committee of industry peers.</p> <p>The award is open to all women working in the Canadian digital health community at all stages of their career from Emerging Professionals (first 7 years in profession) to Leaders (within their department or organization) to Executives (representing Director level and up).</p>	<p>Alex Muggah (Synapse)</p>
<p>Life Sciences Talent Access Service from Toronto Metropolitan University’s Talent Accelerator</p> <p>Life Sciences Talent Access Service - This is a talent bank with currently 30+ talent available right now to be interviewed and hired from across Canada. Sign up to see their resumes, pitch to industry, and an interview sample.</p> <p>2. Life Sciences Industry-readiness Training - have all completed our Life Sciences Industry Readiness Training developed with industry representatives (See trailer of the training here)</p> <p>Am interested in connecting with Life sciences-related organizations that are looking to hire value-add talent. Please reach out for a one-on-one presentations to see how seamlessly companies can interview and hire really good talent.</p> <p>Reach out to Adnan Syed to learn more, or check out the Talent Accelerator here</p>	<p>Adnan Syed (Talent Accelerators, TMU)</p>
<p>OpEd: Canadian life sciences on life support? We must stem the innovation brain drain (Globe and Mail)</p> <p>Our health research and commercialization systems are in trouble – they need our attention now. We have a world-leading legacy in the life sciences. Canadians invented insulin, the pacemaker and the first Ebola vaccine. We discovered the genes that cause ALS and cystic fibrosis. Canadians are also pioneers in the field of regenerative medicine through the discovery of stem cells and how to use them to treat disease and illness.</p> <p>Yet, despite our country’s ability to make groundbreaking discoveries, something happens along the way that is keeping us from realizing the full value of our research efforts. Many Canadian innovations never make it out of the lab. If they do, they end up south of the border.</p> <p>As a result of poor commercialization of intellectual property, we lose not only direct economic and health benefits but indirect benefits too – specifically, attracting and retaining a skilled talent base with the passion, know-how and commitment to produce made-in-Canada health products that will ensure our country’s health security and prosperity.</p>	<p>Maura Campbell (OBIO)</p>


Discussion	Presenter
<p>This is not to say that Canadian discoveries never get commercialized – they do, but most often in the United States. Canadian researchers trained in Canada continue to make cutting-edge discoveries – but in the U.S. And Canadian patent holders do create life-science startups, but inevitably they must follow the money, and so they too go to the U.S.</p> <p>We need to create a “sticky” environment that will power our academic labs and biotech companies to compete and succeed on the world stage. This requires a national effort by governments, research institutions, life-science companies, Canadian investors and mission-driven research entities.</p> <p>Read the full opinion piece here or on OBIO’s website here. Written by Maura Campbell (President and CEO of the Ontario Bioscience Innovation Organization) and Cate Murray (President and CEO of the Stem Cell Network).</p>	
<p>Early-stage VC funding and mega-deals carry Canada to second-largest Q2 on record (Betakit)</p> <p>s Canadian tech companies and investors continue to contend with tough economic conditions, the sector just posted its second-largest second quarter (Q2) on record for venture capital (VC) funding, according to the Canadian Venture Capital and Private Equity Association (CVCA). During Q2, CVCA reports that \$2.8 billion CAD was put into Canadian tech startups across 170 deals. By dollars invested, this total represents a 140 percent jump quarter-over-quarter and a 45 percent increase year-over-year.</p> <p>Despite this 45 percent quarterly jump in total Canadian VC investment, the number of deals in Q2 only increased three percent quarter-over-year. This indicates that this additional financing was spread across a more select group of companies, and reflects the fact that despite these positive high-level results, many Canadian tech startups are still struggling to raise capital.</p> <p>Read the full article here</p>	<p>Alex Muggah (Synapse)</p>
<p>Submit your Success Story to Life Sciences Ontario</p> <p>Life Sciences Ontario has announced they are open to receiving submissions for the annual Success Stories, now in its 5th year. This initiative aims to share inspiring narratives and spotlight the significant contributions made by organizations in the life sciences sector.</p> <p>Take a few moments to share your experiences and insights here. Your participation plays a vital role in demonstrating the positive impact of the life sciences sector. These stories will be presented to government officials during our Queen’s Park Day and various meetings throughout the year; this offers a unique opportunity to showcase the sector’s achievements directly to policymakers and influencers. For your reference, you can read our previous 2022 Success Stories and 2021 Success Stories</p>	<p>Andy Donovan (LSO)</p>
<p>Pitchbook Report : Medtech VC Funding regains some strength</p> <p>VC funding for medical tech skyrocketed to \$19.7 billion in 2021 before plummeting, and funding this year could remain moderately below 2022's levels.</p> <p>According to Q2 2023 Medtech Report, deal count and value in the sector have increased since the first quarter, with a larger array of medtech categories seeing \$100 million-plus VC deals— including surgical robotics and neurostimulation.</p> <p>VCs are also intrigued by new technologies related to precision medicine, sleep disorder treatments and mixed-reality surgical navigation. And with improved hospital margins and</p>	<p>Alex Muggah (Synapse)</p>


Discussion	Presenter
<p>robust patient interest in elective surgeries, the prognosis is good for investors to return to the space.</p>	
<p>Canada’s fast-track program for skilled foreign workers slowed as tech tumbled (The Logic)</p> <p>Tech companies have begun to tap the brakes on a fast-track program to bring in foreign workers to fill in-demand roles, amid layoffs and hiring pauses across the sector. Startups and multinationals alike slowed their recruitment under the Global Talent Stream (GTS), although visual-effects and IT consulting firms continued to enlist new staff. Here’s what you need to know.</p> <p>Employers can use the GTS to fill positions-of-need in fields like digital-media design, engineering and programming, or to bring in experienced specialists. Ottawa promises to process work permits for foreign candidates for those roles in two weeks. Firms using the program must typically commit to hiring or training Canadians and permanent residents. The federal government launched the GTS in June 2017 under the Temporary Foreign Worker program, after tech firms complained they were losing in-demand talent due to long immigration wait times.</p> <p>Between January and March, employers received approval to fill 1,564 positions via the GTS, according to <i>The Logic’s</i> ongoing analysis of data from Employment and Social Development Canada. That’s down 2.8 per cent from the same quarter in 2022, the first contraction in two years following significant growth during the late-pandemic tech funding and hiring booms.</p> <p>Read the full Logic article here</p>	<p>Alex Muggah (Synapse)</p>
<p>MaRS Vital Signs 2023</p> <p>In the wake of pandemic lockdowns, interest in Digital Health technologies surged as health systems and provision of care became disconnected from patients and caregivers. Though robust interest has been sustained, there has been a shift away from behavioural and mental health and telehealth toward a focus on AI and data analytics. Canadian companies appear to face challenges scaling their ventures in a globally competitive market. This could be attributed to limited investment capital, an operational challenge with poor adoption by our healthcare system and scaling challenges, or likely a combination of the above.</p> <p>Read the full report, and key statistics here</p>	<p>Amol Deshpande (MaRS)</p>

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
<p>Want to Connect with your Ecosystem: Check out the Synapse Health Ecosystem Directory</p> <p>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</p>	<p>Alex Muggah (Synapse)</p> 
<p><u>Engaging Mohawk College's IDEAWORKS</u></p> <p>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:</p> <p>Tips for Innovation Factory Referrals to IDEAWORKS</p> <ul style="list-style-type: none"> • 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 areas of expertise 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. <p>What about start-ups?</p> <ul style="list-style-type: none"> • 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. <p>Contact Andrea Johnson for more information: andrea.johnson4@mohawkcollege.ca</p>	<p>Andrea Johnson (Mohawk College)</p>
<p>The CONNECTION - McMaster University Online Partnerships Portal!</p> <p>The Connection 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</p>	<p>Gay Yuyitung (MILO)</p>

Discussion	Presenter
<p>Collaborating with McMaster Institute for Infectious Disease Research (New Intake Form)</p> <p>In addition to our ongoing COVID-19 research initiatives at McMaster, the Michael G. DeGroot 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 anti-viral 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:</p> <ul style="list-style-type: none"> • 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. <p>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.</p> <p>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 reach out to us through the online form. Each project will be evaluated to determine if McMaster has the capabilities and capacity to perform the required testing.</p>	<p>Gay Yuyitung (MILO)</p>
<p>Hamilton-based technologies available for licensing</p> <p>Each year researchers at McMaster, Hamilton Health Sciences, and St. Joseph’s Healthcare Hamilton 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 MILO 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.</p> <p>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</p>	<p>Glen Crossley (MILO)</p>
<p>Hamilton Innovation Partnership Portal</p> <p>Synapse has created the Hamilton Innovation Partnership Portal (HIPP) 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/</p>	<p>Alex Muggah (Synapse)</p> 
<p>Submit Community Events on the Innovation Factory Calendar</p> <p>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.</p>	<p>Annie Horton (Innovation Factory)</p>