

Hamilton Health Innovation Check-up: Meeting Minutes

May 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: June 26th 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

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](#)

June

- May 31: [Sales Bootcamp](#) (Innovation Factory & Haltech)
- May 31: [Startup Seminar: Perfecting Your Fundraising Deck](#) (RBCX)
- 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 20: [Connecting Women in Health in Hamilton](#) (OBIO in partnership with Innovation Factory)
- Jun 21-22: [Navigating Licensing, IP & BD Partnerships in Therapeutics](#) (OBIO)
-  Jun 26: [Hamilton Health Check-up](#) (Synapse Consortium)

July & Beyond

-  Jul 31: [Hamilton Health Check-up](#) (Synapse Consortium)
- Aug 17: [Life Science Ontario Golf Classic](#) (LSO)
- 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?



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">• Derek Sham, Founder & CEO Cosm Medical 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 to COSM Medical: AI & 3D Printing has Arrived for Gynecology</u></p> <p>Good morning everyone; my name is Derek Sham. I am the Founder and CEO of COSM Medical, and I am here to talk about COSM's mission toward personalized pelvic care. As a company, we are driving AI and 3D printing in the underserved field of gynecology. I launched COSM five years ago, and we currently have 18 full-time employees based primarily in Toronto but across Ontario.</p> <p>Through Innovation Factory and the Synapse Life Science Consortium, we completed a SOPHIE project with the CREATE (CentRE for dAta science and digiTal hEalth) team at Hamilton Health Sciences, and we have a clinical study with an urogynecology group at McMaster University currently. Overall, we're excited about the ecosystem of technology we are building to shift the state of women's pelvic health.</p> <p>However, you're likely wondering why a guy like me is trying to change the state of gynecologic care. I am an ex-engineer turned general manager of a urological diagnostic company based in Mississauga that sold for almost three-quarters of a billion dollars in 2016. The previous CSO of that company was Ing Goping, now an adviser and mentor at Innovation Factory.</p> <p>Aside from experience in the urological field, my grandma is the reason why I launched COSM Medical. As she aged, she experienced devastating pelvic floor disorders, and despite having access to some of the best doctors in the country, we could not get her the care she deserved. From her experience, I've made it a mission to provide a personalized approach to pelvic care.</p> <p><u>Pelvic Floor Disorders are Common</u></p> <p>My grandma is not alone. Pelvic conditions affect one in four adult women and half of all women within their lifetime. These conditions correlate with women's age and childbirth and lead to many other issues, such as urinary and fecal incontinence and pelvic organ prolapse, which can lead to debilitating immobility if untreated.</p> <p>One in five women in North America undergo pelvic floor surgery in their lifetime. Over 100,000 lawsuits in the U.S. alone are associated with pelvic organ prolapse mesh repairs. Additionally, women are three times more likely to wear diapers than men due to changes to their pelvic floor. Adult diapers last year surpassed baby diaper sales here in North America and represented 8% of all waste going into landfills.</p>

Guest Speaker Discussion

Previous Therapies: The Pessary

Pessaries are temporary prosthetics placed inside the vaginal cavity to support pelvic organs. The therapy for pelvic organ prolapse has not changed in the last 50 years. The current standard of care involves a physician performing a subjective size assessment of the vaginal cavity using their fingers to determine the appropriate pessary size for a patient. It is a trial-and-error process. If the patient feels uncomfortable or the pessary falls out, the physician recommends a different size until one fits. Published research shows that about one-third of women fail pessary fittings, half stop using pessaries within a year or two due to a decreased quality of life, and over half develop complications with long-term use, such as vaginal discharge, chronic pain, infections, and tissue abrasion.

Overall, clinicians lack a quality way to measure the vagina. Fitting pessaries are labor and training intensive. It creates a large inventory and is relatively unprofitable. In Ontario, the waitlist to see a urogynecologist for a pessary fitting is one to three years. The current state of care and access to women's health is terrible. The process is painful and frustrating for patients who lack the education and resources, and current devices lack performance.

Pessaries are one of the oldest medical devices and go back over 2000 years. The world's oldest known pessaries date back to 200 BC. During the Middle Ages and the Roman Ages, pessaries were pomegranates cut in half, soaked in wine, or linens coated in beeswax. In the 1800s, pessaries consisted of cork and brass. The introduction of medical-grade silicon in the 1970s resulted in silicon pessaries. In the 2000s, there was an increase in pessary innovation for over-the-counter stress urinary incontinence devices. However, the pessary design for pelvic organ prolapse has not changed since the '70s.

3D Printing in Healthcare

3D printing has revolutionized healthcare, and the industry is one of the largest users of 3D printing. 3D printing was invented in the '80s. Then in the '90s, the world saw the first 3D-printed healthcare models, dental implants, and custom prosthetics. Invisalign became an incorporated company in 1997. We began to see bioprinting of small animal organs in the 2000s. Invisalign is now the world's largest user of 3D printing across all industries, and they 3D print about a quarter million dental liners globally each week.

COSM Medical's Revenue Share Model

As a business, we are trying to bring the revenue share model that helped to create the \$5 billion customized orthotic industry, \$35 billion customized dental, and \$10 billion customized hearing industry into gynecology, where the provider and manufacturer share half the revenue of the devices.

Whether a doctor or patient designs the device themselves or we predict the AI from clinical assessments, it is like the custom orthotics model in a chiropractor or physical therapy office. Our diagnostic scanner is like a custom dental. To do Invisalign, a dentist buys a \$30,000 scanner, they split the \$6,000 Invisalign program, and each party makes about \$3,500.

Gynethotics: The World's First Digital Gynecology Platform

At COSM, we are developing Gynethotics, the world's first digital gynecology platform that combines 3D printing and AI to personalize care for women's pelvic health. We have secured four patents and completed three clinical trials using the platform. Today we have a clinical community spanning eight countries.

Guest Speaker Discussion

We have investors, including venture capitalists, physicians, and industry members. We have also won multiple pitch competitions along the way, such as the 2021 BASF Additive Manufacturing, RESI Digital, and TieQuest Toronto pitch competitions.

Gynethotics Pessaries: The World's First Commercial Patient-Specific Gynecological Device

With the support of the CREATE team at McMaster University, we are launching the world's first commercial patient-specific gynecological device. It is not the world's first pelvic patient-specific pelvic health device because custom penile implants already exist for men's health. Our first device takes current ring shapes and designs of pessaries, allowing doctors to select a shape and material type and personalize its dimensions.

We expect FDA and Health Canada regulatory approval of the device by the end of this year. We also have eight shapes for indications associated with pessaries and beyond. There are tons of expansive indications that we look at personalizing and offering novel designs within medical devices.

Digital Gynecology Software

We have also been working with the CREATE team on building out our digital gynecology software. Our clinical work portal allows providers to design and order Gynethotics, manage and track patient data, automate patient engagement and has EHR interoperability. The CREATE team is our major developer for our mobile application, which includes a patient education platform, a way to track symptoms and care management, and provides a secure and convenient way to engage patients and drive compliance.

We are trying to transform the trial and error pessary fitting process into the science of Gynethotics through a data feedback loop. By increasing physics success, enhancing patient compliance, and lowering complications, we can potentially save the healthcare system money. For clinicians, it is about improving their profitability and patient outcomes while allowing them to manage their patient pipeline more effectively. For patients, the focus is allowing women to age with dignity and grace.

Many Firsts: Research Presentations and Publications

COSM is the world's first company to mold a vaginal cavity digitally. We invented a way to mold and scan the vaginal cavity, creating novel biomarkers to potentially create custom vaginal therapeutic devices and expand towards better managing obstetric care and surgery.

We also published research on ways to analyze ultrasound images automatically. We presented data on our ability to predict pessary type, success type, and size from current clinical assessments, minimizing the trial and error necessary to drive pessary care. Last month, we published a paper on the world's first patient-specific pessary for pelvic prolapse. In our research, we demonstrated lower symptom scores and improved patient satisfaction.

Experienced and Passionate Team

We have three PhDs, two urogynecologists, and one physical therapist on our team. The future of urogynecology is bright, and we are a multidisciplinary team building an ecosystem of both people and technology to drive global impact. We are on a mission to improve 1 million lives by 2030. We are working on a massive multi-country multi-site Prospective Observational Pessary (POP) registry to train our AI.

Additionally, we have four ongoing clinical studies on Gynethotics focusing on multiple indications. We also have great investors, including venture capitalists in Silicon Valley, physicians in Canada, U.S., and Europe, and

Guest Speaker Discussion

international assets from Asia and Europe. Overall, we are an experienced team expanding our network to create a digital gynecology platform that improves millions of lives.

Questions & Answers

Question: What were some of the primary decision points that led you to work with the CREATE team at McMaster University?

Answer: Build, buy, or burrow. As a startup company, you have to make a decision: are you going to build the venture on your own, are you going to acquire a company, or borrow resources externally? When we were about to engage with the CREATE team, we had to decide between employing internal resources to build our product or borrowing external resources. We decided to borrow and partner with the CREATE team to design our cloud-based patient-specific software because they had software development experience, and we had to focus our efforts on AI and 3D printing. Additionally, receiving funding from the SOPHIE program to support our project with the CREATE team made the decision a lot easier.

Question: Can you interpolate the types of forces that hit your product in the vaginal wall from ultrasound measurements?

Answer: We can calculate force using ultrasound elastography. We developed a medical consumable as a bag with a catheter that we inflate with moderate water and measure pressure and volume. From these measurements, we can calculate force. Measuring forces within soft tissue is very complex, and the nature of what we do at COSM, predicting customized therapeutics, requires a mix of physiology and biomechanics.

Question: As you prepare for a Series A round of funding, build your team and start to think about expanding your space, what resources in the Hamilton ecosystem can help accelerate your efforts?

Answer: Grant opportunities and investor networking events would be helpful. The more money, the better. From a talent perspective, while we are a multidisciplinary team, there is a subset of expertise we do not have. We could benefit from having experts in the vaginal microbiome and other subspecialty clinicians on our team. I want to meet some groups in obstetrics to chat about additional applications of our technology. Approximately half of the clinical studies on Gynethotics are now principal investigator-initiated because the world recognizes this is an underserved field. Since we have a platform to manufacture quality custom devices, groups, and clinicians are coming to us to explore other applications of our technology. We are always looking to network within the clinical investor community.

Question: Is COSM's device used predominantly as a physical fix, or can the device possibly be used in therapeutic delivery?



Answer: Pessaries are currently classified as management devices, offering temporary physical solutions. However, we have multiple potential applications and or indications that drive it toward therapeutics and a set of patent claims that protect against it.

Question: What is one unexpected barrier you have experienced in the product development journey?

Answer: Striking a balance between hitting near-term milestones while creating a team that can execute these milestones and understands the big vision and strategy has been a challenge. Finding the balance between short-term and long-term goals and understanding the sacrifices between both is critical for early-stage companies that are resource constrained.

Time allotted | 15 Minutes

Topic: **Communicate**

Discussion	Presenter
<p>SOPHIE Successfully Launched 48 Programs to Date</p> <p>Innovation Factory is delighted to announce that with 48 projects successfully launched (and several more in the final stages of contracting), that the SOPHIE funding envelope has been fully allocated to innovative life science companies from across Ontario. All together, more than \$13 million will be spent on industry-driven product development, testing and trials at Canada’s leading academic and hospital institutions.</p>  <p>With the SOPHIE program, companies receive up to \$100,000 in funding to access Hamilton’s unique life science capabilities and research expertise to bring innovation to market and scale business. Innovation Factory brought together a coalition of academic and clinical partners that companies were able to leverage Hamilton’s leading-edge clinical and research infrastructure – supporting businesses at a critical phase of your commercialization journey.</p> <p>Innovation Factory is working with FedDev Ontario, the program funder, to explore extending the program for another term, to enable the next generation of life science companies to scale and grow in Canada.</p>	<p>Alek Tirpan (Innovation Factory)</p>
<p>Innovation Factory Partners with NRC-IRAP to Renew Successful HEALTHI Program Through 2025</p> <p>NRC-IRAP and Innovation Factory are pleased to share that the successful HEALTHI program has been renewed and expanded, with an additional 45 companies will be eligible to forge relationship with clinicians and experts, and learn more about how to stand up a collaborative project with a world-class research hospital.</p>  <p>Through HEALTHI, companies can leverage up to \$15,000 in grants to engage directly with the research administration groups at Hamilton Health Sciences and The Research Institute at St. Joe’s Hamilton.</p> <p>Over the last two years, HEALTHI has supported 28 companies, many of whom have used this experience to unlock additional funding to initiate a commercialization project with Hamilton Health Sciences or St. Joseph’s Healthcare, Hamilton.</p> <p>Innovation Factory is excited about the prospect of being able to continue to support innovative life science companies, working alongside our hospital partners and in collaboration with NRC-IRAP. Interested companies reach out to Alek Tirpan, to learn more about how they can apply to the HEALTHI program.</p>	<p>Alek Tirpan (Innovation Factory)</p>
<p>AtomVie to Construct Purpose Built 65,000sqft Facility in Hamilton</p> <p>AtomVie, a global leader in the manufacturing and distribution of radiopharmaceuticals is currently designing and constructing a purpose-built facility for commercial production in Hamilton.</p>	<p>Asmaa Al-Hashimi (Invest in Hamilton)</p>

Discussion	Presenter
<p>This 65,000 sq. ft. state-of-art-facility will be commissioned by 2024 and will have the capacity to produce over 50,000 units per year. The space will support AtomVie’s activities as a Contract Development and Manufacturing Organization (CDMO) and include QC & Micro laboratories, material storage, a decay room, packaging, and shipping area. Currently, over 10 international pharmaceutical companies are entrusting AtomVie for the clinical supply of their radiopharmaceuticals.</p> <p>“Hamilton’s world-class reputation in the life sciences sector continues to grow thanks to innovative companies like AtomVie,” says Hamilton Mayor Andrea Horwath. “This home-grown success is proving that Hamilton is the solution to meeting increasing global radiopharma demands. Congratulations to AtomVie for their new facility, and thank you for championing our city and demonstrating how Hamilton is a national leader in research and commercialization.”</p> <p>The city is proud to support this made-in-Hamilton CDMO which will further anchor the nuclear medicine subsector and foster job growth.</p>	
<p>Fusion Pharmaceuticals Announces Opening of 27,000 sqft Radiopharmaceutical Manufacturing Facility to Produce Targeted Alpha Therapies for Cancer</p> <p>Fusion Pharmaceuticals, a clinical-stage oncology company focused on developing next-generation radiopharmaceuticals as precision medicines, today announced the opening of its state-of-the-art radiopharmaceutical manufacturing facility. The 27,000 square foot good manufacturing practice (GMP) compliant facility, which is located adjacent to the Company's research and development labs, has clinical and commercial manufacturing scale capabilities designed to support the Company's growing pipeline of targeted alpha therapies (TATs).</p> <p>"Manufacturing and supply chain are critical components of radiopharmaceutical development and commercialization. Having spun out of a radiopharmaceutical manufacturer, this is a core competency for Fusion, and we believe we are well-positioned to scale production in support of our pipeline of TATs, which now includes five clinical-stage programs," said Fusion Chief Executive Officer John Valliant, Ph.D. "The location of the facility, adjacent to both our internal research organization and McMaster University, a world-class institution that specializes in medical isotope research and training, enables us to efficiently advance new TATs and hire experienced talent to execute on our clinical and future commercial plans."</p> <p>The new manufacturing facility, part of a 15-year lease agreement with Hamilton, Ontario-based McMaster University, was built by McMaster and equipped and validated by Fusion. At full capacity, it is expected to produce more than 100,000 doses of TATs per year.</p> <p>Fusion Pharmaceuticals is a spin out company of the Centre for Probe Development and Commercialization (CPDC) hosted at McMaster and founded by Dr. Valliant, who is also a McMaster chemistry professor.</p>	<p>Amanda Cray (Fusion Pharma)</p>
<p>Hamilton's Life Sciences Strategy wins at EDCO</p> <p>Congratulations to Economic Development's Business Investment and Sector Development team whose Life Sciences Strategy was a recent winner at the annual Economic Developers Council of Ontario Marketing Awards. The strategy is a great guiding document on building on the successes of our Life Sciences sector and helps crystalize Hamilton’s value proposition in this area.</p>	<p>Alex Muggah (Synapse)</p>

Discussion	Presenter
<p>A special note of congratulations to Economic Development's Asmaa Al-Hashimi who led on the strategy's development. The Economic Development team would also extend thanks to our partners, without whom this strategy would not have been possible: Synapse Life Science Consortium, McMaster University, Mohawk College, Hamilton Health Sciences, McMaster Innovation Park, and KPMG</p> <p>Click here to read the strategy, and learn more about Hamilton's commitment to growing the Life Sciences Sector</p>	
<p>HHS restores burn program, will create research centre</p> <p>Hamilton Health Sciences (HHS) is restoring its provincial burn program and establishing a new burn research centre. "HHS is committed to building a burn program of excellence," says Dr. Marc Jeschke, a globally recognized burn surgeon and researcher, and medical director of HHS provincial burn unit. "This is the beginning of a new era for care in Hamilton and an opportunity to conduct state-of-the-art research and science to improve the lives of patients."</p> <p>In summer 2022, Dr. Jeschke moved his lab and team from Toronto to Hamilton to help rebuild the burn program at HHS. The regional burn program is located at HHS' Hamilton General Hospital (HGH). Presently, the program can support patients with burns to 40% of total body surface. The team is working toward being able to care for patients with full body burns this fall.</p> <p>HGH is a lead trauma centre for a population of close to 3 million people, and the provincial burn program is an important component of trauma care. The burn unit provides expertise along the full continuum of burn care: initial resuscitation, intensive care, surgical care, outpatient care, and therapy.</p>	<p>Alex Muggah (Synapse)</p>
<p>Interim president appointed at St. Joe's Hamilton</p> <p>St. Joseph's Healthcare Hamilton welcomes interim president, John Aldis (pictured), as of May 19. Since joining St. Joe's in 2020 as senior vice president, Finance and Corporate Services, John has led the finance, risk management, supply chain, facility planning, and patient support services portfolios.</p> <p>Prior to working at St. Joseph's, Aldis was executive vice president at Mount Sinai Hospital in Toronto, vice president, information services and chief financial officer at North York General Hospital, and vice president, corporate and clinical services at Rouge Valley Health System.</p>	<p>Alex Muggah (Synapse)</p>
<p>Regulora, a Digital Therapeutic for Abdominal Pain Caused by IBS, Now Available in Canada through Hamilton's LaunchIT DTx</p> <p>Regulora is the first and only app cleared by the FDA in the U.S. for abdominal pain caused by IBS in adults, and Health Canada has authorized Launchit Ventures to provide Regulora in Canada. LaunchIT is excited to have this in market. See the attached press release for more details.</p> <p>The Regulora app was developed by metaMe Health, a U.S. company that develops Digital Therapeutics for the treatment of common chronic conditions. Regulora is an FDA-cleared Prescription Digital Therapeutic in the U.S., and Launchit DTx has sublicensed the technology for the Canadian market.</p>	<p>Jamie Harsevoort (LaunchIT Ventures)</p>

Discussion	Presenter
<p>metaMe Health’s Regulora is the first U.S. FDA-authorized Prescription Digital Therapeutic specifically for abdominal pain associated with IBS in adults. It provides self-administered Gut-Directed Hypnotherapy (GDH) through a convenient iOS and Android app that can be used at home along with other IBS treatments.</p>	
<p>IntertiaPD Stands Up Microfactory contract manufacturing services</p> <p>Hardware start-ups struggle to scale fast because hardware manufacturing can be cashflow intensive due to long lead-times, large batch sizes, and high production costs. IntertiaPD on a mission to transform contract manufacturing for hardware start-ups. Fast-track your start-up’s scale-up by reducing cashflow demands normally plagued by typical approaches to contract manufacturing.</p> <p>Inertia’s Microfactory contract manufacturing services combines a lean approach with new technologies which were previously out of reach to start-ups, until now. (What even is a microfactory?). By using small footprint, flexible, AI-powered, vision-equipped robotics and lean assembly methods.</p> <p>For more information contact Ray at: rminato@inertiapd.com</p>	<p>Ray Minato (Intertia PD)</p>
<p>Call for proposals: Evaluate Canadian Biotechnologies with Randomized Controlled Trials</p> <p>Accelerating Clinical Trials (ACT/AEC) Consortium has released a call for proposals, entitled <i>Evaluate Canadian Biotechnologies with Randomized Controlled Trials</i>.</p> <p>Successful applicants must be endorsed by one of the 28 ACT Networks. Due on July 7th 2023, the written proposal should include a trial summary, budget and justifications, as well as references, figures, and tables</p> <p>Questions should be directed to the ACT Team at act-aec@phri.ca.</p> <p>On January 19th, the Canadian Institutes for Health Research (CIHR) formally announced that the Accelerating Clinical Trials (ACT/AEC) Canada Consortium was the successful applicant for the federal grant for a 3-year term. The ACT/AEC Canada Consortium consists of hundreds of investigators, patient-partners, healthcare professionals, government, and the biotechnology industry, as well as highly qualified personnel (e.g., study coordinators, biostatisticians) at 28 research networks and 11 clinical trial units located across the country, to address operational bottlenecks to conducting clinical trials in Canada. The ACT/AEC Consortium spans from Nova Scotia to British Columbia and Nunavut.</p>	<p>Dr. PJ Devereaux (PHRI)</p>
<p>Canadian venture capital investment in Q1 2023 drops by 82 percent compared to last year</p> <p>In the first quarter of 2023, deals in Canada’s tech ecosystem plummeted. The latest data from Briefed.in shows Canada experienced a 82 percent decline in amount invested compared to the same time last year, and a 67 percent drop in number of deals.</p> <p>Compared to the last quarter (Q4 2022), this quarter also saw total investment fall by 61 percent and a 23 percent decrease in the number of deals compared. In recent months, tech companies have faced shaky markets thanks to factors ranging from war and geopolitical tensions in Europe, soaring inflation at 30-year highs, tightening central bank policy, and surging oil prices.</p>	<p>Alex Muggah (Synapse)</p>


Discussion	Presenter
<p>According to Briefed.in, total funding in the quarter topped out at \$876.2 million CAD over 55 deals. So far in 2023, Canada is 13 percent of the way to match the total deals done in 2022 and nine percent of the way to match in total investment. Notably, both of those years saw a record amount of venture capital injected into the Canadian ecosystem. In terms of deal count and amount invested, 2022 marked the second-highest year on record despite market conditions. The year prior was at all-time high with venture investments increasing 215 percent from 2020.</p>	
<p>Former Clinic@Mac residents garner recognition and expand health innovations</p> <p>Lianna Genovese, founder and CEO of ImaginAble Solutions Inc., and Matthew Rosato, founder and president of PROVA Innovations Ltd., both former residents of The Clinic, continue to make strides and receive recognition for their health innovations.</p> <p>Genovese was recently selected as one of five Canadian winners in the UK Canada AgeTech Innovation Exchange Healthy Aging Competition. Genovese’s invention, Guided Hands, is an international award-winning assistive device that enables anyone with limited fine motor skills to write, paint, draw, and access technology.</p> <p>Since completing Residency @ The Clinic, Rosato has been working hard to bring PROVA’s patented WithinStride line of smart insoles to market with clinical trials beginning late May.</p> <p>Last year, PROVA received HEALTHI funding from Synapse, was accepted into both Google and Microsoft Startups programs, and was selected by Creative Destruction Labs to join their Calgary prime stream cohort. Most recently, PROVA is partnering with Mohawk College’s mHealth and eHealth Development and Innovation Centre (MEDIC) under the Southern Ontario Pharmaceutical and Health Innovation Ecosystem (SOPHIE).</p> <p>Over the 2022-2023 academic year, The Clinic launched three new cohorts of Residency @ The Clinic supporting 50 health innovators, including a diverse demographic of undergraduate and graduate students, PhD candidates and fellows, and researchers.</p>	<p>Fiona Bergin (Clinic@Mac)</p>
<p>St. Joe's studying preventative dental services for high-risk patients (chch.com)</p> <p>St. Joseph’s health system is launching a new study to determine if it’s feasible to deliver preventative dental services to high-risk patients in its home care program. The study is in collaboration with CHX Technologies.</p> <p>The treatment involves applying Prevora, an antiseptic coating to all surfaces of the teeth, up to and including the gum line. The patient’s oral health will then be monitored for about six months.</p> <p>St. Joe’s and CHX Technologies are looking to enroll 30 patients with COPD or congestive heart failure.</p>	<p>Mackensy Bacon (Research Institute @ St. Joe’s)</p>
<p>EmergConnect is Transforming Access to Healthcare with the Support of Hamilton’s Life Science Ecosystem</p> <p>Imagine having an app where you could input your symptoms—in your own words—knowing that you can include all of the information you’re worried might be missed. Then moments later, you receive a real-time list of available care options and expected wait times for facilities near you.</p>	<p>Jennifer Gauvreau (Innovation Factory)</p>


Discussion	Presenter
<p>This is the vision of Ron Galaev, Founder and Chief Executive Officer of EmergConnect. The EmergConnect platform is a patient self-assessment, registration and wait-time prediction tool for emergency department, urgent care, virtual care and all other forms of same-day care services.</p> <p>EmergConnect turned to the Southern Ontario Pharmaceutical Innovation Ecosystem (SOPHIE) program to partner with The Research Institute of St. Joe's Hamilton to test its platform with patients and clinicians. Follow-up surveys administered to both groups also will generate additional data for regulatory approval of their solution.</p> <p>Read the full article here</p>	
<p>Life Science Talent Accelerator Opening up Training to Talent Across Canada</p> <p>The Life Sciences Talent Accelerator course introduces participants to the various roles, business practices, regulations and product development processes within Canada's Life Sciences industry. The training program is being now being made available to all talent across Canada.</p> <p>The course comprises of fourteen asynchronous modules, each developed and led by an industry expert. After completing the modules, participants are awarded digital badges recognizing their achievements.</p>	<p>Adnan Syed (Talent Accelerator)</p>
<p>New superbug-killing antibiotic discovered using AI (BBC)</p> <p>Scientists [including at McMaster University] have used artificial intelligence (AI) to discover a new antibiotic that can kill a deadly species of superbug. The AI helped narrow down thousands of potential chemicals to a handful that could be tested in the laboratory.</p> <p>The result was a potent, experimental antibiotic called abaucin, which will need further tests before being used. The researchers in Canada and the US say AI has the power to massively accelerate the discovery of new drugs.</p> <p>Read the full article here</p>	<p>Alex Muggah (Synapse)</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>

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<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>