



Hamilton Health Innovation Check-up: Meeting Minutes

August 2020

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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#

Next Monthly Check-up: September 28 | 9:00 – 10:00am | McMaster Innovation Park
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 [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 not published and are for reference purposes only. We do our best to ensure all information is accurately portrayed, and that no privileged/private information is inappropriately disclosed. Past meeting minutes can be accessed through a public Dropbox, using the following [link](#).

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


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

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

Hamilton Health Innovation: Calendar Highlights

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

September

- Sept 1: [Covid-19: Innovation to Accelerate Global Health and Vaccine Development](#) (MIT Solve)
- Sept 14: [Health Ventures Certificate Program](#) – Fall session (MGD Health ICE)
- Sept 14-16: [Ontario Virtual Life Sciences Export Business Mission to DIGITAL RESI](#) (Ontario Government)
- Sept 16: [Economic Issues in Long-Term Care](#) (Centre for Health Economics and Policy Analysis)
- Sept 16: [A Step Forward: Development of Effective Allogeneic CAR-T Strategies](#) (JLABS)
- Sept 16: [Angel Investment Meeting](#) (AngelOne)
- Sept 17: [Startup School](#) (The Forge)
- Sept 17: [Demo Day – Showcasing the Summer Startup Academy](#) (The Forge)
- Sept 17: [A Master Introduction to Developing Cell and Gene Therapies](#) (JLABS)
- Sept 21-24: [LiONS Lair Pitch Madness](#) (Innovation Factory)
- Sept 25: [Bereskin & Parr Legal Office Hours](#) (Innovation Factory)
-  Sept 28: [Hamilton Health Check-up](#) (Synapse Consortium)
 - Sept 28 – Oct 2: [Global Biotech Week](#) (GBW)
 - Sept 30: [Mohawk College Future Ready Leadership Signature Series](#) (Mohawk College)

October and Beyond

- [BDO Life Sciences VC Pitch Day 2020](#) (BDO)
- Oct 5-7: [The MedTech Conference](#) (AdvaMed)
- Oct 14-15: [FHIR Without Borders: Accelerating Change During a Global Pandemic](#) (Mohawk College)
- Oct 19: [Driving the Future of Digital Health 2020](#) (Digital Health Canada)
- Oct 19-20: [CIX Digital Summit](#) (CIX)
- Oct 20: [Public Health Education & Workforce Needs](#) (Centre for Health Economic and Policy Analysis)
-  Oct 26: [Hamilton Health Check-up](#) (Synapse Consortium)
 - Nov 12: [Mohawk College Future Ready Leadership Signature Series](#) (Mohawk College)
 - Dec 7-8: [Canada Regulatory MedTech Conference 2020](#) (Medtech Canada)
 - Jan 11: [Health Ventures Certificate Program](#) – Winter session (MGD Health ICE)

On Demand

- [COVID-19 Webinar Series \(multiple videos\)](#) (Digital Health Canada)
- [Current COVID-19 Research in Canada, featuring McMaster VPR Dr. Karen Mossman](#) (CENE)
- [The McMaster University Collaboratorium – Seminar Series](#)

Time allotted | 30 Minutes

Topic: **Guest Speaker Discussion**

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

Guest Speaker Discussion

Guest Speaker(s):

- [Monika Yazdanian](#)
Co-Founder and CEO, [ToeFx](#)
- [presentation slides used, and are available for download in Health Check-up [drobox folder](#)]

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

Discussion

Introduction

What I'm going to talk about is a little medical device that went to market. I've got a picture of the medical device in question – it is a two-part medical device whose function is to treat toenail fungus. This is a subject that not everyone likes to talk about a lot. But it is a very prevalent condition, which causes a lot of grief for a lot of people.

I joined as CEO of ToeFx in September 2019. I am a transplant to Hamilton – my adopted home and I love it here. ToeFx is based in the Venture Incubator at McMaster University in the Life Sciences Building.

As many of you may know, prior to starting ToeFX, I was the founding Director of [The Forge](#) business incubator at McMaster University in Hamilton and also worked as Director of Research and Development at the Sargent Photovoltaic Laboratory. I founded JL Logistics an e-commerce software platform. I hold a Ph.D. in chemical physics from Cornell University and a law degree from Western University. [ed note: Monika was named one of Hamilton's Top 40 under 40 in 2019]

One reason I think what prompted Alex to invite me here today was that for the last 6 months I've been off everyone's radar. And after this very long period of silence, I emerged from the depths and made a [LinkedIn post](#) – about how we had begun shipping our [ClearToe Serum product for onychomycosis](#), sold in single-use applicators, one component of our photo-dynamic treatment. This is the first component of the medical device that we have created at ToeFx. The second component will be coming into market in a couple of months.

Despite the fact that we were really busy and doing a lot of things (including standing up our new Shopify Store which will go live in a couple of weeks), it is important to occasionally emerge to talk about what you're doing.

Juggling the Go-To-Market Challenge

So what were we doing in a period of extended silence? We were all in COVID lockdown and trying to make the company work given the strictures imposed by COVID. But people have asked me how we got things launched so quickly – assuming everything goes well when our class 2 medical device will launch in October.

If I had to sum up the last year (both a challenge and fun), it's been about juggling many different balls and try and keep them up in the air at the right time – bringing a medical device to market is like juggling. The timing is the key – and we've been good at timing everything together. Because I came from the ecosystem (where I was

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supporting life sciences companies) I wanted to share this experience because this can be an opaque process for companies trying to do this for themselves for the first time.

The pieces that we had to juggle could be listed out A-to-G:

- A – Regulatory (i.e., Health Canada)
- B – Manufacturing standards (i.e., ISO-13485 certificate)
- C – Device performance standards (i.e., IEC 60601)
- D – Clinical Trial
- E – Design feedback from Clinical Trial for manufacturing and product packaging
- F – Supply chain
- G – IP, or there's nothing to license

When younger companies are trying to launch a medical device, they are immediately told it would take 19 years and cost \$40M – which is true to an extent, it does take time and cost a lot of money. But when they ask “why”, the reason given is a giant bucket called “regulatory”. But regulatory covers a lot of issues. For example, Health Canada and manufacturing standards which many people on this call are familiar with (in our case ISO-13485). There is device performance which is a separate thing altogether – which for us had to do with electronic testing and making sure our LED is to spec. There is the clinical trial where you show whether your product works. Then there is the very important feedback cycle (from the clinical trial) which is around the packaging of the product – something I never thought about until we got there, how do you actually deliver it to the patient. Then there is supply chain (which is a massive pain in the neck in an era of COVID).

What we mapped out, is all of the dependencies what we found was that:

- A needs B, C, D, and E
- D needed C
- B needed D, but also A
- E needed D
- F needed C and E
- G needs none, but forget it at your own risk

It was coordinating all of these different pieces is the challenge that we've been looking to overcome during the last year or so. A familiar journey for anyone who has taken it, but opaque for those who have not.

About ToeFx

Now I'm going to tell you a little more about the company. Myself and my cofounder, [Dr. Irit Van-Ham](#) have been working on this problem for a while – and she predates me on the R&D. The problem with toe fungus is that it is a problem that is not very visible. For most people who have it, it will be covered up. It won't kill you (unless it mixes up with another complication), but it is embarrassing, and is very difficult to treat. However, it is surprisingly prevalent, with 10-20% of the general population having an infection on their toes (or sometimes fingernails) that simply won't go away. The share goes up to 60% in the senior population.

Would like to talk a little bit about the team. There is me and Irit, who started working on the project in 2017. The idea for the product came when Irit's mother was admitted to the hospital. What was unfortunate by-product of this visit was that she got toenail fungus while in the hospital. On top of her other illness, this served to affect her self-esteem. Given that Irit holds a PhD in Pharmacology, she had expertise to work on the problem and has been responsible for leading on all company R&D, as well as product design. In addition, we're lucky to work with some [great advisors](#) who bring a range of expertise (e.g., people like [Bernard Lim](#)) as well as design engineering experts like [Dori Itzhaki](#).

Guest Speaker Discussion

What makes it interesting from a business perspective, is the prevalence. As well, people are highly motivated to get rid of these infections. Thus, we see a very large market in the global toenail fungus (dermatophytic onychomycosis) therapeutics. [North America \$1.3B in 2015, growing to \$1.8B by 2021]

I thought about putting up the competition slide, but I think that I'll just skip to the conclusion. There is no truly effective treatment for toenail fungus currently on the market. There is a pill which has some good results, but many patients are reluctant to take it because of the side effects to the liver (hepatotoxicity). There are topical treatments, with the most popular (Jublia) being one with a low cure rate (18%), requiring daily application over at least 12 months. Most family doctors will prescribe it since other products don't do much. There have been a lot of laser treatments that have been marketed in foot clinics – though Health Canada has issued a warning that this is not a cure for fungus, and reminded us of doing the regulatory right as it sent all the clinics into a panic about whether they should be offering this as a treatment.

ToeFX is a photo-dynamic end-to-end solution for treatment of toe fungus. It is a frustrating illness, which takes a long time to see results. How it works: you take a toe and paint it with the serum, let it seep in for a bit, and then put it under the light. The light generates radical oxygen species that preferentially bind and attack the fungus. Like all fungal treatments the effect is not immediate – we're finding that it takes 3-6 months to see progress, which is a function of the toenail growing slowly. As I said, it is a frustrating illness.

It has been very exciting to start shipping the treatment a few weeks ago. It is one thing to build a solution in a lab. However, it is another to package it and think through all the implications of bringing it to patients (e.g., shelf life, how to label it, make sure nothing leaks). You get in to a whole host of different questions than what you'd see in the lab. It's been an interesting to have the team address this

It has been extremely useful to gather information from the clinical trial that we're running with a doctor here in Hamilton. Obviously a clinical trial is something that you have to do, but you don't really appreciate how much you need the feedback that you gather from the trial – not only from the patients, but also from the clinicians so that you're comfortable bringing something to market. For example, our packaging came directly from our consultations with clinicians. Instead of having a giant bucket that you dip into to apply solution to a patient's toenail, we found that there was a strong preference for a single-dose applicator. When you open up the applicator there is a little brush inside, which you can use to apply serum to the affected area, and then you can throw it all away. This is something that you don't consider in the research lab; having a bucket of a solution doesn't align with the workflow and processes in a clinic. Instead, having something that you can open and then discard after seeing a single patient addresses a host of concerns raised by doctors around sterility, ease of workflow, etc. We were really delighted that the trial worked out and expect to be closing out the trial in the next few weeks.

We started our dialogue with Health Canada last summer to begin the process of figuring out where our product classification would land. Contrary to some others, I can report that our interaction with Health Canada has been very positive. They turned our Investigational Testing Authorization (ITA) application around in a month, and of course we were pleased with that. They were good about having an open dialogue about our classification.

I'll close out the presentation here as it's my last slide. So how did we do and how have we been impacted by COVID? Obviously, COVID didn't show up in our plan, but we've done ok. We were targeting getting our ITA approved in Q4 2019 (and we did!) and we've followed our own timeline with the patent office. We're also on time around undertaking the ISO 13548 audit. Where COVID did affect us was to slow us down our Clinical Trial, and our launch timeline into other markets. However, we're still looking to begin sales in October – with our rep out talking to clinicians rights now. When I look at our journey to date, we've taken an idea from a R&D stream to something we can sell. It has been an exciting journey. Thank you very much.

Guest Speaker Discussion

Question & Answers

Question: What is your distribution plan? Can you share the price and who pays?

Answer: From a distribution perspective, we're going online (our Shopify store opens up in a few weeks), so that's been ideal in light of COVID. We love empowering our patients use the product. It's about \$1200 for the light and \$97.50 for each applicator. In general, the clinic will buy the light and then charge \$80-170 for each session with a patient. We're sending a company representative to each clinic. There are a lot of trade shows that we'd hoped to present and launch at, but that has been difficult during the pandemic.

Question: Can you comment on how you managed to raise funds to get where you are?

Answer: Research funding came half from the company and half from a [VIP2 grant](#) provided by OCE. This got our R&D off the ground. We were also fortunate to get \$30k from the [Accelerator Centre](#) in Waterloo, with the rest being privately raised amongst the founders. That said, we want to have results in hand before we go out and raise any additional money.

Question: Where are you operating your research and manufacturing from?

Answer: We have our lab facility and office in the basement of the McMaster University. Gay Yuyitung from the McMaster Industry Liaison Office ([MILO](#)) has been extremely helpful to us. We are currently doing an ISO 13485 audit which we can't do out of my basement. And the facility provides us the space to make our serum. For meetings and large gatherings we're able to use The Forge space. I really like working out of Hamilton – especially with the clinical trial because it meant we had a friendly partner right down the road. In Toronto or another city it would have been more of a challenge to move so quickly. We have partnered with an orthopedic surgeon from McMaster who has been fantastic.

Time allotted | 15 Minutes

Topic: **Communicate**

Recent successes, upcoming events, innovation pipeline, new products, health innovation trends, etc.

Discussion	Presenter
<p>Hamilton Ontario-based Triumvira Immunologies Raises USD \$55 Million Series A Financing</p> <p>Triumvira Immunologies Inc. is a biopharmaceutical company located in Hamilton Ontario developing a novel platform for engineering T-cells to attack cancers has successfully completed a USD \$55 million Series A financing round. The financing was co-led by Leaps by Bayer, the impact investment unit of Bayer AG, and Northpond Ventures. Additional investors include Oceanpine Capital and Viva Biotech Holdings, and existing investors include Bloom Burton & Co. and the Centre for Commercialization of Cancer Immunotherapy (C3i).</p> <p>T-cells are a type of white blood cell that is critical in ridding the body from abnormal and cancerous cells in healthy individuals. In cancer patients, these T-cells frequently fail to either recognize or effectively engage cancer cells. Novel T-cell therapies have the potential to disrupt cancer care and potentially even provide cures. Triumvira is committed to developing novel T-cell therapies that are safer and more efficacious than current cell therapy cancer treatments, including chimeric antigen receptor (CAR) and engineered T-cell receptor (TCR) therapies. This financing will enable Triumvira to advance multiple autologous and allogeneic programs into the clinic for solid tumors and hematologic malignancies.</p> <p>Curing and preventing cancer is one of the main focus areas of Leaps by Bayer, as this disease still represents one of today’s most pressing health concerns, especially since there are limited curative or preventative therapies available.</p> <p>To read the full press release on Business Wire, click here</p>	<p>Guy Yuyitung (MILO)</p>
<p>COVID-19 vaccine to be tested in Hamilton (Hamilton Spectator, Aug 28)</p> <p>Hamiltonians could have the chance to volunteer in the new year to test a COVID-19 vaccine being trialled by McMaster University and the University of Cambridge.</p> <p>“This is a vaccine that is developed by Canadians and will be tested by Canadians and hopefully Canadians will get first dibs,” said Dr. Mark Loeb, infectious disease physician and professor at McMaster. “Right now, we’re not in that situation because there are relatively few vaccines that are being developed and tested in Canada.”</p> <p>The potential vaccine was developed using computer modelling and artificial intelligence by Jonathan Heeney, head of the Laboratory of Viral Zoonotics at Cambridge and founder of DIOSynVax, which is a spinoff company for the immunization.</p> <p>The Cambridge professor is Canadian and trained at the University of Guelph. For help testing the vaccine he looked back home, turning to Loeb, known for his work on influenza immunization and the Population Health Research Institute (PHRI), which is affiliated with McMaster and Hamilton Health Sciences and specializes in large international trials.</p> <p>In fact, Loeb and PHRI are currently finishing up a study of 5,200 people in 12 countries on whether the flu shot reduces cardiovascular events. That trial is one of the reasons Heeney reached out to Loeb near the beginning of the pandemic.</p>	<p>Alex Muggah (Synapse)</p>

Discussion	Presenter
<p>“To do a Phase 3 trial of a COVID vaccine you really need to be adept at doing large-scale, global, randomized, controlled trials,” said Loeb. “We have this infrastructure in place so it’s not a stretch going from this influenza vaccine trial to a large-scale COVID-19 trial.”</p> <p>Read the full article here</p>	
<p>Hamilton Health Sciences pioneers new heart valve treatment in Canada (Aug 30)</p> <p>Dave Whatmore has become the first Canadian patient to receive an experimental heart valve treatment at Hamilton Health Sciences as part of an international clinical trial.</p> <p>The improvement in his health was immediate. Within days, he was able to walk over to a neighbour’s house for a visit.</p> <p>“The tricuspid valve is often called the forgotten valve,” said Dr. Shamir Mehta, a cardiologist at HHS who is leading the Hamilton portion of the clinical trial. Whatmore’s problem was a leaky tricuspid valve, which regulates the flow of blood between the two chambers on the right side of the heart. A leaky tricuspid valve also means fluid begins to build up over time in the patient’s legs and abdomen, and it can cause liver congestion. Patients become weak and suffer tremendous fatigue.</p> <p>“But with this valve, we didn’t have any medications that could actually help,” he added. “That’s why it’s been such a frustrating problem for cardiologists to treat.”</p> <p>The new treatment involves a tiny clip that holds together parts of the three flaps that make up the tricuspid valve. Some patients need just one clip, some need two, and some need three, depending on the severity of the leak. The clips are delivered to the inside of the heart through a catheter that’s inserted through a tiny puncture of the femoral vein in the groin.</p> <p>To read the full article, click here</p>	<p>Alex Muggah (Synapse)</p>
<p>Bay Area Health Trust and Live Easy Inc. Enter the 'Aging in Place' Market (CISION, August 18)</p> <p>Bay Area Health Trust (bayareahealthtrust.com), a Hamilton, Ontario based company that operates life science businesses with the goal of returning value to its beneficiaries including Hamilton Health Sciences, announced it has entered into an agreement with Live Easy Inc., a sales and management consultation and operations company with thirty years of experience within the Canadian senior's living and aging in place market.</p> <p>The needs in the Canadian senior's care sector has led to innovations in products and services however they require strong business backing to make an impact within the system. The Live Easy Inc. ("LEI") and Bay Area Health Trust ("BAHT") relationship represents a new approach - a focused boutique business backed by health care bona fides, attracting both high quality manufacturers and service providers.</p> <p>"I am very pleased and look forward working with the Bay Area Health Trust team. This relationship will enhance each company's strengths and together build a successful platform. The immediate need for innovation in this space will be a monumental challenge for the Canadian Healthcare and housing sectors combined. Understanding how innovative products and services can be quickly commercialized for the benefit of our customers, users and advocates is where we believe our relationship will thrive" commented Jim Closs, President of Live Easy Inc.</p>	<p>John Hands (BAHT)</p>

Discussion	Presenter
<p>"The combination of BAHT resources with LEI's experience and connections will serve an attractive model to small innovative start-ups who wish to penetrate the Canadian market or scale beyond their current sales" said Peter Kalra, President and CEO of Bay Area Health Trust.</p> <p>NanoPhyll Inc. Receives \$125K in Grants From NSERC</p> <p>In response to the COVID-19 pandemic, the Natural Sciences and Engineering Research Council of Canada (NSERC) is leveraging the expertise of researchers in natural science and engineering and their partners across Canada to address this unprecedented crisis. Congratulations to The Forge alumnus, NanoPhyll Inc., on receiving three NSERC grants in July totaling \$125K for their COVID-19 related research. Nanophyll develops and manufactures smart nanocoating technologies that improve the physical properties of glass, metal, aluminum, concrete cementitious and ceramic materials.</p> <p>They have received the following grants from NSERC in July 2020:</p> <ul style="list-style-type: none"> • (\$50K) Alliance Grant titled "Development of Visible-Light Sensitive Self-disinfecting Virucidal Coating via Photodynamic Inactivation to Reduce the Transmission of COVID-19" with professor Gopal Achari of University of Calgary Engineering Faculty, and partner Performance BioFilaments Inc. • (\$50K) Alliance Grant titled "New strategies to Fabricate High-Performance Face Masks Filters Against COVID-19" with the University of Windsor Engineering Faculty, with researcher Reza Riahi and collaborator River Drive Manufacturing. • (25K) College Innovation Engage Grant titled "Optimization of antibacterial nano-composite coating treatment for textile surfaces" in collaboration with the Cegep of Sainte-Hyacinthe and Group CTT. 	<p>Innovation Factory</p>
<p>The Clinic @ Mac – A Health Sciences Innovation Centre at McMaster University</p> <p>The Clinic @ Mac's resources solve several innovation challenges. We're trying to support health innovation projects at McMaster. We're stage agnostic, helping those who are working on a business plan to engineers who have an existing prototype. In all cases, we hope to provide mentorship to promising entrepreneurs, bringing innovation coaches and resources to support these teams.</p> <p>We've run a pilot and have adopted a lot of good feedback. We are looking to add to the mentorship directory, if you're interested. Time commitment is an hour or two a month and potentially present a seminar. We have frequent meet-ups to encourage peer-to-peer interactions.</p> <p>We do have a physical place on campus at the health sciences library – we'll be moving in there shortly. We're working closely with the Forge to avoid duplication of services and to close gaps to provide resources that young companies need. All McMaster-based clinicians, researchers, students, or entrepreneurs who are interested in developing health innovations should reach out, including:</p> <ul style="list-style-type: none"> • Teams or individuals who have an idea for a health-related innovation • Teams or individuals who have a health-related innovation project and want to accelerate its progress • Individuals with an idea or project and a willingness to be teamed up with our network of emerging health entrepreneurs 	<p>Leigh Wilson (MGD Health ICE)</p>

Discussion	Presenter
<ul style="list-style-type: none"> Individuals with entrepreneurial talent who want to share their skills with others as part of a health innovation team established by The Clinic <p>Project or idea-based applicants must demonstrate an understanding of the value proposition of their innovation or idea via the application form. Completion of entrepreneurial training, such as Health Venture Program or Innovators in Scrubs, is considered an asset.</p> <p>To learn more, please reach out to Leigh Wilson at wilsle@mcmaster.ca</p>	
<p>AngelOne Meetings Starting up Again on September 16th</p> <p>With COVID, the Angel groups in Ontario have been concentrating at looking after the companies already in our portfolio. However, that is now behind us, and we've got our first meeting of the fall on September 16th. If you would like to attend and you are not a guest of a current Angel One Member, please e-mail admin@angelonenetwork.ca for more information.</p> <p>We're starting to look for new investment opportunities, and so if you know of any that would be of interest, please send names to David Wright at david.wright@angelonenetwork.ca</p>	David Wright (AngelOne)
<p>BioTalent Canada Seeking Input on New National Occupational Standards</p> <p>BioTalent Canada is currently developing standards with industry and is looking for input from experts in the industry.</p> <p>The foundational step in this process is the identification and drafting of competency profiles that will contribute to the creation of National Occupational Standards (NOS). A National Occupational Standard documents what skills, education and credentialing is required by industry to perform a specific role. Companies can then use these standards for more effective recruitment, professional development, succession planning, and other HR activities.</p> <p>Sessions are scheduled bi-weekly Wednesdays at 1PM Eastern time. If you are interested in participating in this project, please contact Adriana Saenz at asaenz@biotalent.ca</p>	Karen Linseman (iF)
<p>Nomination for 2021 LSO Awards Now Open (Oct 5th deadline)</p> <p>The LSO Awards recognize excellence in Ontario life sciences on behalf of both individuals and emerging companies. Awards will be presented at LSO's Annual Celebration of Success, in February 2021. Stay tuned for more details. The LSO Awards are an important part of the collective advocacy for the sector, through celebrating the individuals and companies behind its success.</p>	Andy Donovan (LSO)
<p>MGD-HICE Educational Webinars & DevTank Meetings</p> <p>Operating out of the Michael G. DeGroot School of Medicine at McMaster University, the Michael G. DeGroot Health Innovation, Commercialization & Entrepreneurship (MGD-HICE) aims to accelerate the exploration of health innovation opportunities and creation of socioeconomic impact.</p> <p>Check out the full suite of programming here</p>	Sarrah Lal (MGD-HICE)
<p>JLABs Events Going Virtual (various)</p> <ul style="list-style-type: none"> A Glimpse Into the Mind of the Investor (Sept 10) 	Amanda Raponi (JLABS)

Discussion	Presenter
<ul style="list-style-type: none"> ○ In partnership with Silicon Valley Bank, we're gathering a lineup of top-tier VCs from across the globe to spill their secrets to what they think is necessary for a successful Series A fundraising. Experience their feedback firsthand as 6 high-potential JLABS companies present their pitches. Following the pitches, a panel of VCs will share insights on what makes them want to continue discussions, what a successful fundraising strategy might look like, pitch tips, major mistakes entrepreneurs make and more. ● Precision Medicine and AI: Collaborating to Transform Biomedical Research and Development (Sept 22) <ul style="list-style-type: none"> ○ The need for AI in healthcare can be a critical component of developing precision therapies. From digital pathology to advanced studies designs and issues surrounding data privacy, what is the current state and future of AI in biomedicine? Join us for a virtual program as experts in the field give their perspectives on practical applications of AI and Machine Learning in healthcare and biomedical research and development. <p>To learn more about upcoming JLABS events, click here</p>	
<p>Health Ventures Certificate Program (Fall Session - Sept 14 Winter Session Jan 11)</p> <p>Explore health innovation projects on your time.</p> <p>The HVC is an asynchronous 12 week long program that allows you to fit lessons into your schedule. Content is delivered weekly and can be watched at any time. You can advance your own healthcare innovation idea or practice with sample projects. The program is open to clinicians, researchers, industry professionals and students of all levels.</p> <p>The program is divided into three segments each lasting 4 weeks: (1) define a relevant problem in healthcare; (2) learn how to design an impactful solution to the defined problem; and (3) explore how to activate and accelerate a project to bring the solution to market.</p> <p>To learn more, contact Sarrah Lal at lals2@mcmaster.ca</p>	<p>Leigh Wilson (MGD Health ICE)</p>
<p>Ontario Virtual Life Sciences Export Business Mission to DIGITAL RESI (Sept 14-15)</p> <p>Ontario remains committed to creating opportunities for our business community to help them remain strong and get back up and running during these unprecedented times. As a part of this commitment, the Government of Ontario is organizing a virtual life sciences trade mission to RESI to help reboot your export business.</p> <p>The Redefining Early Stage Investments (RESI) conference series, created by Boston-based Life Science Nation (LSN) to bring together startups with early stage investors and strategic channel partners, has moved from a one-day in person conference to a three-day digital conference.</p> <p>This event is part of a four-part conference series held around the United States. It will focus on business partnering and educational seminars. The investors attending DIGITAL RESI represent a huge pool of capital. RESI's Partnering system allows fundraising companies to find investors and strategic partners that are the best fit for their technology and stage of development. Investors will be drawn from a wide range of groups including: angel investors, venture philanthropy and endowments, venture capital and private equity, family offices, mid-size and big pharma. The Partnering system will stay online for one month following the event. DIGITAL RESI will be of value to early stage life science companies looking for investors and strategic partners.</p>	<p>Alex Muggah (Synapse)</p>

Discussion	Presenter
<p>LiONS Lair Pitch Madness (Sept 21-24)</p> <p>LiONS LAIR celebrates its 10th anniversary as Hamilton’s leading pitch competition that brings together innovation and entrepreneurship. This year’s competition will take place as a virtual, bracket-style tournament across four exciting days in September.</p> <p>The competition gives companies the opportunity to pitch to panel of our city’s top business experts – the “Lions” – for a chance to win big prizes, thanks to the support of our sponsors!</p> <p>Cheer on 16 innovators as they pitch and compete in head-to-head showdowns in this year’s virtual, bracket-style tournament. Register to attend, and for exclusive access to the pitch competition and to vote on your favourites.</p>	<p>Jennifer Gauvreau (Innovation Factory)</p>
<p>Health Leadership Academy’s new Pathfinder Program (Sept 26 – Nov 21)</p> <p>The Michael G. DeGroot Health Leadership Academy - a joint venture between the Michael G. DeGroot School of Business, Faculty of Health Sciences and Michael G. DeGroot School of Medicine at McMaster University – is launching the inaugural Pathfinder taking place Fall 2020 (Sept. 26 to Nov. 21).</p> <p>With the economy constantly evolving, there is no better time to begin a new leadership journey and chart a new course for yourself to become a leader that can adapt to a dynamic health landscape. Pathfinder offers a flexible, immersive, personalized leadership journey to gain skills suited to your individualized leadership needs. Work with an executive coach and apply what you learn within an engaged team of supportive peers in this eight-week program.</p> <p>Pathfinder is designed for:</p> <ul style="list-style-type: none"> • Health professionals, administrators and educators • Undergraduate students, graduate students, post-doctoral students, medical residents & young professionals exploring opportunities or who are new to a position of leadership • Health entrepreneurs and intrapreneurs looking to lead change in the health sector <p>The online program combines:</p> <ul style="list-style-type: none"> • 8 live flipped classroom sessions scheduled on Saturdays • Flexible learning between live sessions through activities, readings, and assessments completed where, when, and how you prefer to work • Team-based activities to practice and apply your learning within a supportive peer group • Personal one-on-one sessions with an executive coach • Small class sizes to build close connections between classmates and faculty <p>To learn more and apply, visit the Health Leadership Academy website for more details or contact us at hlainfo@mcmaster.ca</p>	<p>Amanda Calzolaio (Health Leadership Academy)</p>
<p>Mohawk College Future Ready Leadership Signature Series (Sept 30 & Nov 12)</p> <p>Does your team have the skills necessary to be future ready? With over 800 graduates across Ontario, Mohawk College Enterprise’s (MCE) engaging Future Ready Leadership program provides the framework for an empowered and future ready workforce.</p>	<p>Andrea Johnson (Mohawk College)</p>

Discussion	Presenter
<p>Future Ready Leadership Signature Series 1 Sept. 30 2020</p> <p>The Future Ready Leadership program is designed to help participants identify and develop their own leadership style. This program will enable a seamless transition into a leadership role or the opportunity to enhance skills for an existing one. For more information click here.</p> <p>Future Ready Leadership Signature Series 2 Nov. 12 2020</p> <p>The goal of this program is to enhance each participant’s current leadership skills and make them a more effective leader. Participants will be led by an experienced and highly skilled facilitators through discussions and individual/group activities. For more information click here.</p>	
<p>BDO Life Sciences VC Pitch Day 2020 (Oct 2)</p> <p>Calling all technology life sciences companies: we want to hear your amazing ideas.</p> <p>BDO is looking for the best tech life sciences companies across Canada. Our Life Sciences VC Pitch Day 2020 allows up-and-coming life sciences companies to pitch their ideas to some of Canada’s dedicated life sciences venture capitalists.</p> <p>This unique event gives your company the opportunity to raise money for your scale up. If you are looking for investment to facilitate your growth—whether for product development or market expansion—you should apply. Applicants from across the country are eligible to apply. Important Details:</p> <p>Applications open August 25, 2020, and close September 20, 2020</p> <p>What is the format for the event? This is a virtual event where you will have 10 minutes to pitch your idea followed by a 15 minute Q&A with valuable VCs, including Telus Ventures, HaloHealth, and more</p>	<p>Alex Muggah (Synapse)</p>
<p>FHIR Without Borders: Accelerating Change During a Global Pandemic (Oct 14 - 15)</p> <p>Established in 2014 by Mohawk MEDIC, Gevity, Smile CDR and Canada Health Infoway, FHIR North is the only Canadian conference focused on building awareness, knowledge and experience around HL7® FHIR healthcare interoperability standards in Canada. FHIR North is more than just a developer's conference: our sessions can help build understanding and knowledge for anyone in your organization that wants to understand how this standard can improve patient care and the clinical experience.</p> <p>Globally Focused: Explore how FHIR and interoperability can play a role in the response to a global pandemic and what it means for healthcare innovation.</p> <p>Coast to Coast: Join attendees from across the country to learn how FHIR is being used to build a more resilient and responsive healthcare system.</p> <p>Virtual: Attend more sessions and connect with more speakers thanks to our new virtual format which allows you to network 1:1 and face-to-face with fellow attendees.</p> <p>To learn more, or to register, visit the FHIR North site</p>	<p>Andrea Johnson (IDEAWORKS)</p>
	<p>Andy Donovan (LSO)</p>

Discussion	Presenter
<p>Biotech Canada Webinar Series – 13 Sessions Available to Watch</p> <p>BIOTECanada is pleased to draw on our community's expertise to bring practical business advice during this global crisis. Presentations are recorded and uploaded to BIOTECanada site for later viewing. Click here to view past sessions.</p> <p>To see upcoming events, check out Biotech Canada’s website here</p>	
<p>Ontario Website for PPE Suppliers to Post Products for Sale</p> <p>Review a list of companies that sell personal protective equipment (PPE) and other supplies to keep your employees and customers safe from COVID-19</p> <p>Apply to be added to the workplace PPE supplier directory</p>	<p>Joon Kim (NRC-IRAP)</p>
<p>Government Calls for Innovative Solutions</p> <ul style="list-style-type: none"> • Call for Suppliers (Federal): In support of the Government of Canada’s whole-of-government response to Coronavirus disease (COVID-19), they are asking suppliers about their ability to provide a variety of products and services. • Call for Suppliers (Ontario): request for information from companies able to supply emergency products to help fight Coronavirus • Federal Government Call to Action for Canadian Manufacturers to support businesses to rapidly scale up production or re-tool their manufacturing lines to develop products made in Canada that will help in the fight against COVID-19. Please refer to the product specifications and requirements for Canada’s medical supply needs. • Health Canada will facilitate earlier access to a vaccine, or therapeutic product for COVID-19 to expedite the review of COVID-19 related health product submissions and applications. • Government of Canada is speeding up the importation and sale of medical devices used to diagnose, treat or prevent COVID-19. Here is information about expediting access and authorization for diagnostic devices for use against coronavirus (COVID-19). • Government of Canada will launch specific challenges through the Innovative Solutions Canada (ISC) program and will rapidly select the best projects to accelerate development and testing of promising innovations that can have a direct impact on our health care response. Also use the ISC Testing Stream to become the first customer of these innovative products. • The National Research Council of Canada (NRC) will organize an NRC COVID-19 Challenge Program, composed of teams of government, academic and private sector partners to address a range of medium term PHAC and HC needs, including personal protective equipment, sanitization, diagnostic and testing, therapeutics, and disease tracking technology. The most promising solutions will be selected for procurement, working with Innovative Solutions Canada. • DISRUPT COVID-19, a Government of Canada virtual forum that will include representatives from the National Research Council (NRC), the Industrial Research Assistance Program (NRC IRAP), Health Canada, the Public Health Agency of Canada (PHAC) and Innovation and Science, Economic Development (ISED), is being organised as a pilot initiative with the goal of getting technologies on the ground helping patients and health care professionals as fast as possible. • Next Generation Manufacturing (NGen) will invest \$50 million in Supercluster funding to support companies as they rapidly respond to the COVID-19 pandemic by building a Canadian supply of essential equipment, products, and therapeutics. For more 	<p>Innovation Factory & Synapse Consortium</p>

Discussion	Presenter
<p>information on NGen’s COVID-19 Response Program, see the full bulletin, review the project guide, and share your capabilities in the form below.</p> <p>The Digital Technology Supercluster has launched the COVID-19 Program is focused on unlocking solutions to protect the health and safety of all Canadians and our economy through the development, deployment, and scaling of digital technologies.</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>Forge Hiring Incubator Manager (19 month contract)</p> <p>A 19.5 months contract and ideal start date would be mid September but we're flexible. The successful candidate is the main broker between the entrepreneurs and the programming and resources provided by The Forge.</p> <p>As such, the ideal candidate is an experienced professional with strong organization and communication skills to manage and support 10-15 start-up companies at a time, and credibility to interact knowledgeably with a network of service providers, investors, and business advisors / mentors.</p> <p>The Forge is the business incubator for McMaster University and the Hamilton region, supporting early-stage, technology-based, scalable startups.</p> <p>Since its launch in 2015, over 140 companies have gone through The Forge, raising over \$30 MM in funding. The Forge works hands-on with early-stage entrepreneurs to help them build successful startups offering three main programs and events: The Business Incubator, Startup School, and The Forge Student Startup Competition.</p>	<p>Mariya Leslie (The Forge)</p>
<p>Engaging Mohawk College's IDEAWORKS</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>Andrea Johnson (Mohawk College)</p>

Discussion	Presenter
<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>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>	Gay Yuyitung (MILO)
<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.</p> <p>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>	Gay Yuyitung (MILO)

Discussion	Presenter
<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.</p> <p>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.</p> <p>Portal is online through the Synapse website: http://synapseconsortium.com/partner/</p>	Andrea Lee (HHS)
<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>	Riley Moynes (Innovation Factory)

Our Synapse Consortium partners are at the forefront of addressing COVID-19 in the City of Hamilton, and across Ontario: doctors and nurses caring for patients, public health officials coordinating city-wide responses, conducting epidemiological research at Canada's leading research hospitals, and innovative companies developing products to provide needed supplies and services.

Throughout all of this, Synapse remains committed to our core goal of facilitating connections across the Hamilton health ecosystem, bringing public- and private-sector actors together to enable innovation and resolve pressing health challenges. While Synapse staff are not in the office, we're still providing support virtually – so please continue to reach out and find out how we can help!

If you want to get in touch, please contact [Alex Muggah](#), Director of the Synapse Consortium. Separately, we've assembled links to information that has been compiled by organizations across Ontario (and Canada) to assist you with navigating the COVID-19 pandemic.

Learn More About COVID-19: Online Resources

Synapse Consortium partners have put together a significant amount of information and updates on the status and activities related to containing and addressing COVID-19 for both businesses and citizens in the region:

Hospitals and Research Centres

- Hamilton Health Sciences: [COVID-19 Updates](#)
- St. Joseph's Healthcare: [Research Institute](#) and [Hospital](#) Update
- McMaster Institute for Infectious Disease Research: [News and Updates](#)
- McMaster University: [COVID-19 Update](#)
- Mohawk College: [COVID-19 Update](#)

Hamilton Community Partners

- Mohawk College [Collaboration Landing Page](#)
- McMaster University [Collaboration Landing Page](#)
- City of Hamilton: [City Response and Resources](#)
- Hamilton Public Health: [Learn more about COVID-19](#)
- Innovation Factory: [COVID-19 Info Centre](#)
- Hamilton Chamber of Commerce: [Resources for businesses](#)
- Hamilton Spectator: [What you Need to Know in Hamilton](#)
- Buy-Local (Hamilton): [Hometown Hub](#)

Government and Agencies

- Health Canada: [COVID-19 Information and Resources](#)
- OCE: [Collaboration Platform](#)
- Government of Ontario: [COVID-19 Information for Ontarians](#)
- Government of Canada: [Business Support](#)

For Companies Making COVID-19 Related Medical Products

- [Call for Suppliers](#) (Ontario)
- [Call for Suppliers](#) (Canada)
- Health Canada: [Expedited Review of Health Product Submissions and Applications for COVID-19](#)
- Health Canada: [Applications for medical devices under the Interim Order for COVID-19 use](#)
- Health Canada: [Expedited Access and Authorization to make COVID-19 personal protective equipment](#)
- Health Canada: [Diagnostic devices for use against coronavirus \(COVID-19\)](#)