

Hamilton Health Innovation Check-up: Meeting Minutes

February 2022

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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: March 28th 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 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](#)

March

- Mar 16: [Bio+ech Connect+](#) (BIOTECanada)
- Mar 17: [LSO Annual General Meeting](#) (LSO)
- Mar 23: [ExportON! How to Validate New Products and Service Offerings](#) (Ontario MEDJTC)
- Mar 22-24: [Canada SynBio Conference](#) (Ontario Genomics)
- Mar 23: [Synapse Life Science Pitch Competition](#) (Innovation Factory)
- Mar 28: [Hamilton Health Check-up](#) (Synapse Consortium)

April & Beyond

- Apr 6: [The Search for Solutions to the Delivery Challenges of Nucleic Acid-Based Therapies](#) (JLABS)
- Apr 25: [Hamilton Health Check-up](#) (Synapse Consortium)
- May 9-13: [Career Expo: Starting Your Career Journey](#) (Life Sciences Career Development Society)
- May 10-12: [EFFERVESCENCE 2022](#) (Effervescence MTL)
- May 18: [2022 Celebration of Success Awards Presentation](#) (LSO)
- May 31- Jun 2: [Canada SynBio Conference 2022](#) (Ontario Genomics)
- Jun 13-16: [BIO International Convention](#) (BIO)
- Jun 1-2: [E-Health Conference and Tradeshow 2022](#) (Health Infoway, CIHI & Digital Health Canada)
- Jun 13-16: [BIO International Convention](#) (BIO International)
- Jun 20-23: [Collision 2022 Conference](#) (Collision)
- Jun 22: Access IO with Lakeridge Health and Ontario Shores Healthcare (Access IO)
- Aug: [Startup Survivor Pitch Competition](#) (The Forge)
- Nov 10-11: [Clinical Trials Conference 2022](#) (Clinical Trials Ontario)
- Dec 10: [I'm Every Woman: A Concert of Greatest Hits](#) (Hamilton Health Sciences Foundation)

Looking to engage the Hamilton Health Ecosystem?



innovation. Learn more about SOPHIE [here](#)

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



clinical trial in one of Canada's leading research hospitals. Learn more about HEALTHI [here](#)

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

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):

- [Maria Antonakos](#)
Co-Founder and COO, [Allarta Life Sciences Inc.](#)
- Harald Stover
Co-Founder and CEO, Allarta Life Sciences Inc.

[presentation slides used, and are available upon request]

Discussion

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

Introduction

Good morning and hello everyone – thank you for the opportunity to be here this morning. I am Maria, and am the co-founder of [Allarta](#) – along with Harald Stover – and I’ll be giving a quick overview and background on how I got here.

My background is in philanthropy, fundraising for charitable organizations. I spent nine years as the Director of Advancement at the Perimeter Institute in Waterloo. During that time, I got to watch conversations around tech transfer, and what it means for Canadian innovation. In particular where we have great publicly funded research out of universities like McMaster and elsewhere – supporting this IP to be translated it into commercial products.

Prior to that I trained as an opera singer – so I bring some unique qualifications to talking about life sciences. However, I have a passion for Canadian innovation and building diverse and resilient teams. I’m so grateful to see so many of the Allarta startup family on the call today. I would like to make a special acknowledgement to the ecosystem of McMaster and Hamilton. Having worked all over North America and Europe – I feel as if the energy and the focus and collegial approach that this community has is second to none. I also appreciate the Synapse team for what they are doing.

I’ll turn it over to Harald, who is the CEO and Co-Founder of Allarta.

Overview of Allarta

If Maria is the brains of Allarta, then I’m the scientist! I’m a professor at [McMaster in the Department of Chemistry & Chemical Biology](#) and the co-founder of Allarta.

I’d like to echo Maria’s words – what we do is based on the giants that came before us. [100 years ago](#) two Canadian doctors (Frederick Banting and Charles Best) found insulin as a treatment for diabetes, while two other Canadians (Ernest McCulloch and James Till) developed stem cells. Other people and institutions, including those who encourage and push us at the University, deserve a lot of credit. And finally of course, the Ontario tax-payers who foot the bill for what we’re doing.

Guest Speaker Discussion

What we do, is based on 30 years of research in my academic group – though the roots go much further back into history. One of the disorders that we are trying to address is diabetes. The research to develop cures for things like diabetes takes a global village, and a range of technologies.

Regenerative Therapies Reimagined

Let me give you a sense of where we came from and what we're hoping to achieve. We see Allarta as a company that develops new opportunities in regenerative therapies. In particular, creating cell based protein replacement therapies for a number of chronic disorders involving impaired production of a protein.

Some of the impacted areas that we are focused on include metabolic diseases (i.e., diabetes being one), as well as lysosomal disorders, rare blood disorders (i.e., hemophilia), and neurodegenerative diseases. All these disorders have a common issue. The patient is missing one particular enzyme or common hormone (e.g., insulin, blood clotting factor) that is impacting their health. Cell-based therapies are based on the ability to train cells to express particular enzymes, or hormones.

If we can learn to transplant these cells into the patient (i.e., stomach, under the skin) then these cells could express therapeutics for a long period of time. This is a promise of curative therapy since the cells will take over in the regulation of the missing enzyme or hormone. There can be long-term applications for chronic disorders, as well as short-term indications for inflammatory disorders (including COVID-19)

Barriers Facing the Promise of Allogeneic Cell Based Therapy

The promise of cell-based allogeneic therapies (between human cells, though not your own), has been into running problems since it's inception. One of the key barriers is the efficacy of the human immune system at detecting transplanted materials. There are many mechanisms for this defence, from host macrophages attacking transplanted cells either directly, or producing antibodies.

To date the field of stem cell therapies has been led by cell developers. If you've followed the news, you may have come across [stories](#) of patients who have received transplanted stem-cell derived beta cells that are on the verge of curing him (done by company called Vertex). However, the current technology is still seeking a viable delivery system – there is still a fundamental need for immune suppressant drugs which come with significant risks. Transplanted allogeneic cells are rapidly rejected unless a patient endures the risks of life-long systemic immune suppression.

What the field is looking for, and has not yet found, is a device that can physically imuno-isolate these transplanted cells, protecting them from rejection. This problem is playing out in many companies developing cell-based therapies (i.e., Sigilon in Boston, Lilly, Viacyte, etc.). What the field needs is a merger of efficacious cells and immune protective approaches. A device is one avenue to do that.

Transformative Molecular Design Materials

Allarta seeks to solve this problem with its immune evasive materials that are based on synthetic polymers that were developed in my lab at McMaster University – the [Stöver Research Group](#) – and imported into Allarta about three years ago.

These materials address a number of the critical factors that this approach needs. The ultimate goal is a collection of therapeutic cells that are not loose in the body (i.e., injected), but are contained within a chemically crosslinked shell which provides long-term protection of the cells.

Guest Speaker Discussion

However, the protective capsule must also be permeable, allowing for nutrients (i.e., oxygen, glucose) to come in and therapeutic agents to be released. At the same time, the shell time must prevent different components of the immune system from adversely affecting the cells. You can think of our technology as a divers shark cage – protecting the diver (cells) from the sharks (immune system).

The critical part is not just optimizing one, but multiple aspects of biochemistry. You must have a bio-interface that avoids a foreign body response (FBR). You need immune-privileged hydrogels, allow real time metabolic exchange to access nutrients, and the shell must be geometry agnostic.

System Integration Approach

Building on 25+ years of foundational research, we use a systems integration approach to combine these features into a single package. This has led us to a solution that has (1) tissue compatible interface; (2) cell support & metabolic exchange; (3) cell containment & retrievability); and (4) form-agnostic assembly.

This is an approach that the field has learned the hard way. Many have tried solutions that are based on individual aspects, but are missing one or two key components (i.e., engineering plastic devices, devices with oxygen supplies, pouches within pouches, painted-on coatings, random alginate modifications, highly gene edited cells, etc.). And as a result, cells using these delivery mechanisms suffer from hypoxia and fibrosis of the transplant.

Allarta has invented a safe, scalable, robust and flexible cloaking system at the cellular level. Allarta's platform unlocks the power of cell therapies across multiple indications. You can see here an example [ed. slide graphic] of our hydrogels that was implanted into an immune-compromised rodent. And after 6 weeks, you see very few immune cells on the surface meaning that this is an immuno-evasive material. Cells on the inside were not rejected.

Allarta's Therapeutic Platform

Let me share a few examples what Allarta's therapeutic products can look like. In this first case, we have a donor islet in a capsule, and individual beta cells in a capsule. We have shown that the cells function as you would like (even inside the capsule) and that the capsules don't interfere metabolic exchange (i.e., insulin diffuses out rapidly).

Key pre-clinical data shows transplantation of donor islets (in capsules) into mice. When we transplanted empty capsules into immunocompetent diabetic mice, the blood-sugar level remained high. When we transplanted islet encapsulated capsules into the mice, the blood-sugar level is corrected. We are now at 285+ days, and our experiments are still continuing. Additional data shows that our capsules perform as desired (i.e., blood glucose response), and we have learned to encapsulate human-donor islets in this package. These are pilot experiments, but we are planning to go forward to longer term studies (including with large animals, with the help of [SOPHIE program](#) funding from Innovation Factory and Synapse).

Looking Forward

In the future, the payload will come from stem cells. And we are preparing for that by testing that our capsules can positively contain stem cells. This is important, as there are residual questions about genomics instability of highly modified (CRISPR modified) human stem cells. We can show that can trigger suicide genes and reducing the size of these clusters quite rapidly.

Guest Speaker Discussion

Our lead indication addresses Type 1 diabetes (in particular, Brittle Diabetics). For this indication, we don't need to rely on stem cells. We can use human-donor derived islets that are available, with a transplant process that is well established using the Edmonton protocol. Our plan is to inject encapsulated donor islets into the peritoneal cavity of Type1 diabetic patients. We will be doing this with an islet transplant centre, a proof-of-concept demonstration that our capsules work in humans.

Following that, there are many other indications where therapeutic cells are being produced, but where there is no current delivery vehicle for turning them into actual therapies (i.e., lysosomal disorders, neurodegenerative disorders, cardiac & inflammatory indications, rare blood disorders, oncology solid tumors, etc.).

Our simple timeline has us on path to get to clinic as early as 2023. Key inflection points over the next two years include large animal data readouts and IND submission. We are going into larger animals readouts in the next month. We are in the early stages with potential clinical trial partners. Of course, we will have to scale up and go through CRO and GMP-synthesis of our biomaterials. Then we look forward to talking with FDA and Health Canada. If all goes well, we should be able to begin single arm phase I/II trials by 2024.

Allarta's Team

There are 15 extraordinary scientists who are currently working and involved in Allarta at this time. Many of them come from the Hamilton/McMaster ecosystem.

We are supported by many people, and our Board includes representatives from McMaster (which did the first seed investment in our company) as well as two equity investors. We have a strong scientific advisory board that covers the different expertise required to scale up protection. Would also like to express our thanks to those on this call, and the broader community at McMaster and across Hamilton.

Business Considerations

Reflecting on those who are on the call today who are not scientists or chemists, but who are interested in platform development and technology.

Thinking about this from the business side – we have looked at several different indications which we believe our platform approach will be able to support. From the strategic perspective, we focused on diabetes because it was something that we could get early readouts on.

With preclinical mouse data and large animal data expected, Allarta is more de-risked than peer companies were prior to large funding rounds and pharma partnerships / acquisitions. To date, we have raised \$2.6M, and thanks to McMaster for initiating a seed investment along with our founding equity investors. We're hoping to open up a Series A in the next quarter.

However, what is impressive is that Allarta has done with \$2.6M what Sigilon and Semma did with hundreds of millions in investment. Our vision is that for the ecosystem, and from a platform approach, that there are many indications that we can be working on. If we lead with diabetes, we can make a difference in the lives of patients while also proving out the materials for other indications.

From a business perspective, we have seen a several other deals in this space which have railed hundreds of millions of dollars (i.e., Lilly, ViaCyte, TreeFrog, Vertex, Sigilon, etc.) We see Hamilton as the vanguard of Canadian biotech centres, some day being able to deliver this type of value to shareholders, the public and others.

Guest Speaker Discussion

Question & Answers

Question: In addition to using islet cells, have you thought of using other regenerative cells from the patient themselves (i.e., spleen) to bypass the immune response?

Answer: The cell source is really diverse intake funnel. People are looking at a number of different types (i.e., retinal) as starting material. We are not cell-biologists, so we haven't taken on the effort of trying to differentiate cells into beta cells. From a corporate perspective, we are preferring to stay with human-donor cells as they are fully de-risked by the FDA, fully mature as there is no question they will work. We are also looking at different types of stem-cell derived beta cells (or neo-islets), and wouldn't exclude spleen-derived cells.

Question: In terms of developing this therapy, is this single dose or multiple dose to correct Type 1 diabetes?

Answer: In classic type 1 diabetes treatment, you inject insulin up to six (6) times a day. We are aiming for at least one (1) year durability, potentially longer. Human islets are long-lasting cells that have shown to function for up to five (5) years based on the Edmonton protocol. So one year is our threshold.

Question: How did you overcome the challenge of creating an encapsulation system that still allowed delivery of therapeutic response?

Answer: Let me try to summarize 20 years of research and thinking. One key aspect is that the polymers are highly hydrated (they like water and highly swollen). The immune cells that are always patrolling our tissues – when they come across our capsules they “see” viscous water but no particular chemical motif that looks foreign (i.e., bacterium, allogeneic material). The hope is that they have no reason to stick around and wander off. You can drill a little deeper in the field of immuno-evasive compositions (i.e., charge balance, beta materials). It's not so dissimilar from non-binding materials we observe in our own bodies – we're copying nature in some ways!

Question: In terms of later clinical trials, do you need assistance or help with operationalizing the trial (i.e., regulations, attracting patients).

Answer: We have connections with a large CRO, which is giving advice. But happy to explore opportunities

Question: As you look around the corner (i.e., large animal studies, Series A), what are pain points or hurdles that you see in the next 12-18 months where you need to bring others outside of your network to help you activate the resources you need?

Answer: From a data/scientific perspective, we are continuing our work in large/small animals with support of Timothy Ryan from the McMaster large animal group – one of many factors without whom we would find it difficult to continue. We will continue to improve our formulations, and preparing for clinical trials (i.e., islet transplantation).



On the business side, we started Allarta in September of 2019, and 6 months later COVID hit. Allarta is not as well known as other companies in the community, since we've had our nose down getting the data. Our 9-month rodent data is on par with any other company that have progressed to the clinic in this space and raised significant seed/series funding or had an IPO. We're a well-kept secret, so anything about getting the news out will be appreciated – so following our LinkedIn page, magnifying news, would be positive for us.

The other thing is that we'll be hiring. So technicians and other key people will be helpful to us. We're still a young company with global aspirations, but we're a Hamilton-based company. We'll continue to leverage ecosystem (i.e., Innovation Factory, H2i, MaRS, CDL), and will leveraged these resources and encourage others to as well.

Time allotted | 15 Minutes

Topic: **Communicate**

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

Discussion	Presenter
<p>Don't miss the 2022 Synapse Competition on March 23rd!</p> <p>The Synapse Life Science Competition is designed to help move some of the most innovative life science products and services out of the lab and into the market, by pairing up life science innovators with business and entrepreneurship students.</p> <p>Attend this year's Showcase, get connected with Hamilton's life science community, and help us celebrate the innovators as we award \$80,000 in cash prizes! Registration is limited!</p>	<p>Jennifer Gauvreau (Innovation Factory)</p> 
<p>Hamilton Life Science Sector Strategy Presented to Hamilton Council (by KPMG)</p> <p>On February 16th Hamilton Economic Development division presented, along with delivery partner KPMG, the Life Science Sector Strategy report for the City of Hamilton. This report was created in with input from dozens of community stakeholders, and with the support of the Synapse Consortium's Michael Jones.</p> <p>The process included extensive research and analysis, and consultations with government officials, businesses and investors. This report examined the strengths of the life sciences sector in Hamilton and explore opportunities as well as attracting future investment. The report outlines an actionable roadmap to grow the sector.</p> <p>Read the full report here</p>	<p>Asmaa Al-Hashimi</p> 
<p>\$32 million gift for biomed at McMaster</p> <p>A \$32 million donation will boost McMaster University's role as a hub for biomedical innovation, entrepreneurship and global health. The gift will create the Marnix E. Heersink School of Biomedical Innovation and Entrepreneurship to educate the next generation of entrepreneurial health innovators.</p> <p>"Healthcare, innovation and entrepreneurship go hand-in-hand. We've seen how McMaster encourages this trend and I was inspired. The possibility of amplifying health-care innovation beyond McMaster is what motivates me to make this donation, which I consider an investment in the creation of more opportunities for others."</p> <p>The gift totals USD\$25 million, or more than \$32 million Cdn. These funds will support the creation of the school; the establishment of two endowed professorial chairs in biomedical innovation and in biomedical entrepreneurship; a development fund for innovation and commercialization as well as \$5 million funding for the new Global Nexus building, a contribution being matched by the university. It also includes the funding for the Mary Heersink Centre for Global Health.</p>	<p>Gay Yuyitung (McMaster)</p>

Discussion	Presenter
<p>Mohawk College Partners with Bay Area Health Trust to Offer Training Aimed at Helping Seniors</p> <p>Age Safe Canada, a national training and advocacy organization dedicated to making the lives of seniors aging at home safer is proud to announce its relationship with Mohawk College. Mohawk will be adding the Senior Home Safety Specialists (SHSS) certificate to their Continuing Education offering. The Senior Home Safety Specialist course empowers professionals with actionable ways to better help educate clients, older adults and their family members on the serious issues of home safety, fall prevention, financial exploitation and personal safety.</p> <p>“We are excited about the launch of the SHSS within Mohawk College,” said Peter Kalra, President and CEO of Bay Area Health Trust, which licensed the rights to Age Safe in Canada. “Ensuring that graduates interested in the growing field of Seniors Care and Aging at Home have a good grasp of real-life scenarios is a very important goal for us.”</p> <p>Read the full press release here</p>	<p>John Hands (Bay Area Health Trust)</p>
<p>Cristina Gage Appointed as Interim Dean of Applied Research @ Mohawk College</p> <p>We are pleased to announce that Cristina Gage has been appointed as the Interim Dean of Applied Research at Mohawk College.</p> <p>Jeff McIsaac, who has served as the Dean of Applied Research since July 2019, has been appointed as the Interim Dean of Engineering Technology and Aviation.</p> <p>Cristina joined Mohawk College in 2017 as Director, Applied Research Operations where she served as a member of IDEAWORKS’ senior leadership team with responsibility for overseeing all aspects of applied research operations at the college.</p> <p>Prior to joining Mohawk, Cristina served as a Clinical Research Manager at McMaster University for 13 years. She holds a Master of Business Administration in Marketing and Finance and a Master of Science in Health Research Methodology and Research Policy Evaluation, both from McMaster University.</p> <p>Please join us in welcoming Cristina to her new role, and congratulating Jeff on his interim role.</p>	<p>Karen Linesman (Innovation Factory)</p>
<p>Mohawk College leads Canada in industry engagement in national research rankings</p> <p>Mohawk College retained its position as a top-10 research college in Canada and ranked first in Industry Research Income, according to national rankings released today.</p> <p>Energy lab 2Reflecting the growth and success of IDEAWORKS, Mohawk’s applied research division, Mohawk has earned a top-10 position for its research activities in the Research Infosource annual rankings for three consecutive years. A decade ago, when the college first expanded its applied research activities, it ranked 33rd in the country. In addition to its overall finish, Mohawk was considered among the top-ranked large colleges in Canada in three categories:</p> <ul style="list-style-type: none"> • 1st - Industry Research Income – Mohawk applied research projects raised more than \$3.3 million last year. (Industry grants and contracts represented 50% of total research income). • 2nd - Research Partnerships – 254 partners collaborated with the college on applied research projects. 	<p>Jeff McIsaac (Mohawk College)</p>


Discussion	Presenter
<ul style="list-style-type: none"> 3rd - Paid Student Researchers – IDEAWORKS employed 349 students in applied research projects. <p>In total, IDEAWORKS was engaged in 254 research partnerships during the ranking period, completing 71 projects with industry partners.</p>	
<p><u>Hamilton: Canada’s Emerging Leader in Life Sciences Research, Innovation and Commercialization</u></p> <p>On March 9th, government & industry-leaders presented an overview on Hamilton’s new Life Science Sector Strategy, ecosystem, investment and real estate opportunities.</p> <p>To secure a copy of the Life Science Sector Strategy, or other presentations that were delivered, please contact Asmaa Al-Hashimi (Al-Hashimi@Hamilton.ca)</p>	Asmaa Al-Hashimi (City of Hamilton)
<p><u>The Goodness Wave With Jessica Lunshof of TAMVOES Health</u></p> <p>On this episode of RAW Podcast, Sarah sits down with Jessica Lunshof. Jessica shares her wishes for other women and a ripple effect she would love to see out in the world for women. Jessica is the Co-Founder and President at TAMVOES located in Waterloo Ontario.</p> <p>During this episode, Jessica shares her story of how she became a women entrepreneur and the story behind TAMVOES. and much more!</p>	Annie Horton (Innovation Factory)
<p>Join Ontario Trade Mission to BIO 2022</p> <p>Export Growth Branch of the Ministry of Economic Development, Job Creation and Trade is planning to organize a trade mission to BIO 2022 for interested companies. This mission will be in person.</p> <p>The registration fee will be \$780, with the program accommodating one person per company. Companies wishing to bring additional staff will be able to do so via BIO’s regular registration process.</p> <p>If you are interested in attending BIO, please be sure to register as early as possible as we anticipate high demand.</p> <p>To register or learn more, contact Patricia Cosgrove <patricia.cosgrove@ontario.ca></p>	Patricia Cosgrove (MEDJTC)
<p><u>OBIO Panel Discussion on Talent Recruitment in Health Sciences – March 29</u></p> <p>OBIO and the Toronto Region Immigrant Employment Council (TRIEC) will co-host a panel featuring industry leaders from Myant, Swift Medical, Oncoustics and Vital Biosciences, this webinar will focus on the role technology plays in talent recruitment in health science, and the resulting needs for software development, IT, data science, AI and machine learning professionals to support business growth. The panelists will also share insights, opportunities and challenges specific to Canadian health science companies.</p> <p>For more information, or to register, click here</p>	Andreea Norman (OBIO)


Discussion	Presenter
<p>Jack Gauldie being Awarded Community Services Award at Life Sciences Ontario Annual Awards Presentation on May 18</p> <p>Jack Gauldie is a world-renowned scientist, water polo Olympian, recipient of the Order of Canada and leader at St. Joseph’s Healthcare, Hamilton. On May 18, he will add another honour at the LSO Annual Awards Gala.</p> <p>Now entering its 19th year, LSO’s Annual Celebration of Success has formed a reputation as an important platform to recognize the individuals and companies driving the success of Ontario life sciences. This year we are hopeful to have the event once again in-person. The LSO Awards are also our largest single fundraising vehicle—supporting our advocacy, educational, and networking events. The event also serves an important charitable function: proceeds from the event’s silent auction support the Sanofi Biogenius Challenge.</p>	<p>Andy Donovan (LSO)</p>
<p>Innovation Canada Helping SMEs Connect with Right Government Supports</p> <p>If you are interested in exploring government support programs (grants, Capital/financing, R&D, hiring, exporting, tax credits etc.) for your business, Innovation Canada/ISED can support.</p> <p>Please feel free to reach out to me at Kusala.Jayasuriya@Canada.ca</p>	<p>Kusala Jayasuriya (Innovation Canada)</p>
<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>	<p>Sarrah Lal (MGD-HICE)</p>

Time allotted | 15 Minutes

Topic: **Collaborate & Accelerate**

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

Discussion	Presenter
<p>Want to Connect with your Ecosystem: Check out the Synapse Health Ecosystem Directory</p> <p>Synapse has created a Director of +200 private- and public-sector organizations in the Hamilton (and regional) health innovation ecosystem which work alongside the Synapse Consortium to support of the commercialization of health innovation. Learn more about what others are up to, and identify potential collaborative partners at: www.synapseconsortium.com/directory</p>	<p>Alex Muggah (Synapse)</p> 
<p><u>Engaging Mohawk College's IDEAWORKS</u></p> <p>IDEAWORKS projects in general (of which, MEDIC is one area) which was provided and may help with identifying if Mohawk College can support our companies with projects. This might be a refresher for some or all of us, but highlighting nonetheless:</p> <p>Tips for Innovation Factory Referrals to IDEAWORKS</p> <ul style="list-style-type: none"> • Our four innovation centres (MEDIC for Digital Health, AMIC for 3D printing, EPIC for energy efficiency related projects and MTIC for Medical Technologies related challenges) are active during this time- but note that due to existing commitments, are often looking at projects one month to three months in the future. • Other areas of expertise are on a case by case basis, especially this year, with a number of our faculty committed to teaching and revamping courses • The ideal applied research partner is one that is in the scaling stage; they have some revenue and can meet a lot of the funding agencies criteria for funding or want to self-fund a research project. Typically what we look for is 2+2; two years in business with two employees • We recommend working with us on projects that aren't mission critical but can help the company explore an innovative idea. <p>What about start-ups?</p> <ul style="list-style-type: none"> • If they require a few tips or advice, we can normally chat with them (or if there is a critical mass -like five or six companies in a space-, we can do a webinar type discussion). • They can see about the availability of capstone projects, where students generally work on projects for a four month period, for free, in order to get course credit. It may help with MVPs. <p>Contact Andrea Johnson for more information: andrea.johnson4@mohawkcollege.ca</p>	<p>Andrea Johnson (Mohawk College)</p>
<p>The CONNECTION - McMaster University Online Partnerships Portal!</p> <p>The Connection is a new program offered by McMaster's Office of Community Engagement (OCE) designed to facilitate online, mutually beneficial partnerships between campus and local Hamilton community organizations. As communities look for ways to adapt and rebuild in response to COVID-19 The Connection will make the process of addressing Hamilton community and University identified needs easier by providing online tools and resources. It's a way for everyone who sees themselves as part of a collective community-campus effort to connect and respond to COVID-19 locally</p>	<p>Gay Yuyitung (MILO)</p>

Discussion	Presenter
<p>Collaborating with McMaster Institute for Infectious Disease Research (New Intake Form)</p> <p>In addition to our ongoing COVID-19 research initiatives at McMaster, the Michael G. DeGroot Institute for Infectious Disease Research is mobilizing its strong research community to assist Canadian researchers and businesses in their attempts to find solutions to the international crisis. The IIDR teams have the capacity to assist with the testing of anti-viral compounds and products, as well as the testing of products or devices aimed at sterilization. This includes new methods for sterilizing personal protective equipment. They are able to offer services in the following areas:</p> <ul style="list-style-type: none"> • BSL2 cell culture infection with representative human coronaviruses; • Testing of methods or products that are designed to inactivate the virus; • Biochemical/enzyme studies with anti-viral agents. <p>Cell culture and small animal models of SARS-CoV-2 infection can be performed in McMaster’s secure biosafety level 3 facility. Availability for BSL3 testing is very limited, and projects requiring this type of work will be screened and prioritized by an internal committee.</p> <p>If you have a product or innovation that you are interested in pursuing further and feel that we could be of assistance to you, please reach out to us through the online form. Each project will be evaluated to determine if McMaster has the capabilities and capacity to perform the required testing.</p>	<p>Gay Yuyitung (MILO)</p>
<p>Hamilton-based technologies available for licensing</p> <p>Each year researchers at McMaster, Hamilton Health Sciences, and St. Joseph’s Healthcare Hamilton make new discoveries that lead to new products, services, or process improvements to help companies expand their pipeline or increase their productivity. The business development team at MILO is here to help you tap into and access these discoveries as efficiently as possible. MILO’s objective is to support effective transfer of these technologies to companies for social and economic benefit and enable the continued growth of research excellence at the institutions.</p> <p>Please contact Glen Crossley, Associate Director, Business Development and IP or search the list to see some of the technologies currently available for licensing or further R&D</p>	<p>Glen Crossley (MILO)</p>
<p>Hamilton Innovation Partnership Portal</p> <p>Synapse has created the Hamilton Innovation Partnership Portal (HIPP) to make the process simpler and more streamlined to find new partners within Canada’s leading health research and educational ecosystem. It is a way for companies to interact with the Hamilton community. A streamlined approach, to have Synapse represent everyone. We’ve set up an intake form for companies to direct request to the portal. Portal is online through the Synapse website: http://synapseconsortium.com/partner/</p>	<p>Michael Jones (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>

Discussion	Presenter
<p><u>Government Call for Innovative Solutions</u></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 information on NGen’s COVID-19 Response Program, see the full bulletin, review the project guide, and share your capabilities in the form below. • Ontario Website for PPE Suppliers to Post Products for Sale: Review a list of companies that sell personal protective equipment (PPE) and other supplies to keep your employees and customers safe from COVID-19. Apply to be added to the workplace PPE supplier directory <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>	<p>Innovation Factory & Synapse Consortium</p>

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 \(COVID-19\)](#)