Hamilton Health Innovation Check-up: Meeting Minutes

October 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	Alex Muggah, Director, Synapse Consortium
Virtual Location	Join Zoom Meeting: https://zoom.us/j/405351918 Dial in: +1-647-558-0588,,405351918#

Next Monthly Check-up: November 30th 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 Health Innovation Partnership Portal (HIPP) to facilitate finding new partners within Canada's leading health research and educational ecosystem located in in Hamilton, Ontario.

Minutes for our monthly check-up meetings are not published and are for reference purposes only. We do our best to ensure all information is accurately portrayed, and that no privileged/private information is inappropriately disclosed. Past meeting minutes can be access through a public Dropbox, using the following link.
For additional information on any subject, to contact a presenter directly, or should you have an adjustment to make to the notes made here, please contact: Alex.Muggah@SynapseConsortium.com. Updates will be reflected in a revised version of the monthly minutes.

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

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

Hamilton Health Innovation: Calendar Highlights

Check out Synapse's online calendar

November

- Oct 26-28: Toronto Global Forum – Forging a Resilient Economy (TGF)
- Oct 28: Covid-19: Adopting analytics can improve patient care and resource management (CHT)
- Oct 29: Securing the Future
- Nov 2-6: Empowering the Life Sciences in Ontario's post-pandemic Future (LSO)
- Nov 3: Infoway Partnership: Fall Series (Infoway)
- Nov 3: Career + Calling Virtual Networking Expo (Redeemer University)
- Nov 4: Overcoming Clinical Communication Barriers Utilizing Digital Health Technologies (Hypercare)
- Nov 5: Is it All Genetic? The Role of Biology and Driver Genes in Childhood Cancer (JLABS)
- **Nov 8: Synapse Life Science Competition – Call for Application Closes (Innovation Factory)**
- Nov 10: ePrivacy in Health Care Course (NIHI - McMaster University)
- Nov 12: Mohawk College Future Ready Leadership Signature Series (Mohawk College)
- Nov 17: AGE-WELL Startup Community Launch & UK Health Sector Access Event (AGE-WELL)
- Nov 21: BioTEC 2nd annual pitch competition (BioTEC)
- Nov 30: Hamilton Health Check-up (Synapse Consortium)

December and Beyond

- [nb: there will be no December Health Check due to holidays]
- Dec 7-8: Canada Regulatory MedTech Conference 2020 (Medtech Canada)
- Jan 11: Health Ventures Certificate Program – Winter session (MGD Health ICE)
- Jan 25: Hamilton Health Check-up (Synapse Consortium)
- Jan 31: Innovation Nation Conference (CSii)

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): • Sarrah Lal Assistant Professor, Division of Education & Innovation Education Lead, MGD Health Innovation, Commercialization & Entrepreneurship • Leigh Wilson, PhD Project Development Manager, MGD Health Innovation, Commercialization & Entrepreneurship (MGD Health ICE) • Milica Vukmirovic, PhD Michael DeGroote Innovation, Commercialization, and Entrepreneurship Fellow – McMaster University Innovation and Commercialization Consultant – St. Joseph's Research Institute [presentation slides used, and are available for download in the Health Check-up drobox folder]
Discussion *[the following is a synopsis of the discussion, and has been lightly edited for length and clarity]* Today, we'll have three speakers, Sarrah Lal, Leigh Wilson and Milica Vukmirovic, who are helping to build health entrepreneurship in Hamilton. Sarrah and Leigh will provide an update on the Clinic @ McMaste. Milica will provide an overview of a similar and related initiative at St. Joseph's Healthcare, called the Clinc @ St. Joe's Overview of "the Clinic @ Mac" Very excited about giving an overview of what's happening at "The Clinic" and we wanted to provide you a consolidated view into what we're doing at McMaster University. First and foremost, the Clinic is an effort to create a community of innovators in support of entrepreneurship. The Clinic is a combination of efforts across two key pillars: (1) Education @ The Clinic, and (2) Residency @ The Clinic. Our two health pillars (Education and Residency) provide a means for clinicians, researchers and students to learn about innovation development processes and apply these to ongoing research or clinical projects. Much of the information that has been shared with the community to date has involved recruitment of teams for the clinic Residency program, but the Education pillar is an important part of moving the needle forward around entrepreneurship, and is meant to flow into the other pillar (Residency). When thinking about the design of these two pillars, we thought about the three stages of validation of the commercialization process: problem validation (is there an inadequately served challenge), analytical validation (does innovation generate intended value), contextual validation (innovation achieve intended income in and with the context of interest). Different questions are asked at each stage, but the idea is to identify the right problem, find the right solution, and then implement it in the right context. Together this allows us to work towards maximizing success. Education @ the Clinic focuses on the initial stages of validations – how to identify the right problem and design a solution that makes sense. We look to help potential entrepreneurs answer some critical questions (e.g., is there an unmet need, how to assess value, does solution provide value, are there resources to support).

Guest Speaker Discussion

For the Residency @ the Clinic stage, we're focused on later stage of validation of the solution and contextual validation – such as pilot studies, clinical trials, prototyping, and how we operational work to create value. The type of questions considered at this stage include: do I have the right people? how do I build and validate this solution/prototype? can the innovation become commercially viable? how do I fundraise?

The Clinic @ Mac: Education @ the Clinic

The Education @ the Clinic pillar is meant to support a better understanding of the process of entrepreneurship, and how we encourage people to explore these aspects of their work. It's also important to building an understanding of the general sense of a health innovation idea and whether there is something commercially viable that could be pursued (or not). Our goal is to teach people how to validate ideas, and work through projects (grounded in theory) as well as connecting people into the networks that will be needed to succeed.

Through programming and engagement, we help individuals navigate the "idea-to-impact" process, and validating early-stage ideas and projects. The three core program are: the Health Venture Program, Innovators in Scrubs, and the Clinical Health Innovation program. Additional programming and learning are also offered

- Health Venture Program (assess market value of an existing idea or project): we've had +100 graduates, +70 projects, and we've framed the program around 3 modules of design solutions. Individuals/teams need to have an existing idea to get into the program, and we've had a few successful ideas come out. Requires problem, solution and business model validation. Its asynchronist online learning over 13 weeks, providing individuals an opportunity to explore whether an idea has market value.
- Innovators in Scrubs (identify and validate a new innovation opportunity): we have +60 graduates, with participants going into clinical settings, working with clinicians to identify opportunities for innovation and then work on move those ideas forward. No existing project or idea is required to start with, as the goal is to discover a unique opportunity that can be developed. Participants go through a program focused on learning how to pitch, understand design, and work in an inter-disciplinary team. Some experience in healthcare, business, engineering or design is required to contribute to the Scrubs team. This program is a high-touch experience over 16 weeks, with weekly in-person meetings.
- Clinical Health Innovators Program (explore health innovation as part of your career trajectory): set to start in January 2021, and will be focused on clinicians who want to develop technology, but don't necessarily want to leave their current roles. It is an accreditation course, and we hope to get ~75 participants. We understand that for clinicians there is some uncertainty around what entrepreneurship look like. Many physicians feel as though people are telling them they need to build a company, and their reaction is "no". In many cases, this is because they don't have time. But they remain intrigued by opportunities to engage. The program is meant to mix-and-match participants with a range of different topic areas (e.g., regulatory, IP, raising capital, prototyping, solution brainstorming, etc.), covering a wide number of programs that can help them prepare to be a consultant, advisor, or founder, depending on their level of interest/engagement. There is also opportunities for some innovation coaching and career discussion – encouraging people to think about more ways to support innovation than just starting up a company.

When it comes to admission criteria for these Education @ the Clinic programs, there is nuance about what is best for different individuals. Initially, we wanted to have one program that would work for everyone, but as we progressed, we realized that this wasn't the best approach. Not everyone has a project, nor does everyone want to be an innovator, and finally, not everyone is going to want to work at the same pace.

The three Education @ Clinic programs operate in parallel. If you have a clinical/research project and want to explore whether there is commercial value, then the Health Venture Program is ideal. By the end of the program, you can identify whether an idea has (or does not) market value. Next, Innovators in Scrubs brings together a

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team of interdisciplinary experts without a project, and then embeds them in a clinical context. They talk to health administrators and practitioners and identify what is required to solve – and work towards building a product through to commercialization and hopefully company creation. The Clinical Health Innovation Program will help clinicians explore how innovation fits into their career, while offering participants the chance to earn accreditation credits. This is not meant to force them into become entrepreneurs, but rather to set them up to support innovation.

The Clinic @ Mac: Residency Program

For the Residency at the Clinic, we are recruiting people and teams to be part of a program. The goal is to accelerate growth by identifying ideas with commercial potential and matching these validated projects match them to coaches, advisors and mentors. We have conversations on a weekly basis and help with fundraising. As well, we helping with recruitment to identify talent that can join the team – helping to bring in other disciplines based on the needs of the project. The residency is only open to teams and companies with an association with McMaster university – they could be students/employees, or they could have been graduates from one of the education programs above. The ultimate goal is to create a community of innovators.

The Clinic @ Mac is a new physical location, with construction having ended this October. It's a large conference area located in the Health Sciences building, and we're hoping that people will be able to access it by the Spring. There are meeting rooms that can be booked by Clinic-associated groups as well as space for staff.

What we've done thus far, is we've started to support teams of students/faculty/staff, and have focused on supporting 8 teams virtually. Instead of a general call to the community, we started to work with teams that we were familiar with. A few groups arrived through the Education @ the Clinic programs that Sarrah mentioned, as well as other teams that had been working at McMaster. Another came from our connections at the research hospital Hamilton Health Sciences (via the McMaster tech transfer office, MILO).

During this pilot program, we've been trying to figure out which resources that we can assemble and activate to help them. We have innovation coaches, who like a team-member have provided hands-on support on a weekly basis working on articulating milestones and a roadmap the team could follow. We've delivered some content that we recognized that the teams needed (e.g., IP, rapid prototyping, introductions to other start-up entrepreneurs from our mentor directory). We're fortunate to have a strong partnership with the Forge, and we were able to access their Academy programming which is offered to Forge residents. We're trying to create more bandwidth to support start-ups in the community, rather than competing with existing capabilities. We've created a mentor directory – many who are on the call today – professionals who are willing to help and mentor this team. Anyone who is interested in helping out, please connect with us (wilsle@mcmaster.ca).

Lessons learned from the summer cohort helped us formulate our call for this year. We realized the value in our teams should have a clear value proposition from the get-go, we're looking for teams that have done some initial validation of their innovation. The decision was taken that there needs to be an affiliation with McMaster or MGDII in order to participate. We also wanted there to be a team associated with the project (rather than just a single individual), or a willingness to accept other people and form a team. And finally, we wanted to make sure the project was something that could move forward and get success with.

We have started a cohort of 10 teams, who are covering a wide range of interests, such as digital health applications, medical devices, drug discovery platforms, etc. The team leads tend to be students from iBioMed, HVP, BEng as well as some clinicians and McMaster faculty.

What are we offering these teams – we are offering innovation coaches to work one-on-one with the teams. Building out a directory of mentors, who can provide expertise across a variety of fields. We're offering weekly

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programming – whether its content that the team needs or a chance to connect or provide targeted support. We're doing team-to-mentor meetups, to identify mentors to see how they can support. We work with the Forge to access programming. We have a database of research resources, which students can access to access market reports and patent searching. We also have a Board that will review the progress of the team to offer advice, and potentially offer seed funding if they have a need. We're a growing effort, and trying to identify additional ways that we can support and see entrepreneurs be successful.

Residency at The Clinic @ St. Joe's

We started this summer in the residency program, and our initial focus is on developing innovative approaches in the domains of lung, kidney, genitourinary and mental health. These are all areas of expertise at St. Joseph's Healthcare, Hamilton, where the Clinic @ St. Joe's is located.

The Clinic @ St. Joe's accepts projects that develop new drugs and innovative early stage technology as well as new methods to improve the patient experience or clinical practice. We'll soon have a physical location in this hospital, which can serve for professionals and physicians people can meet and to develop, validate and implement innovation in person.

The eligible projects for the Clinic @ St. Joe's need to have a formulated proof of concept study, which will be supported by preliminary results, a clear IP position (determined in collaboration with MILO). Teams will have a student/postdoc lead, with high commitment. We also require that teams have attended the Health Venture Program or similar education model, so they are not completely beginners and we can go into more advanced stages of commercialization discussions..

Similar to the Clinic @ Mac, we provide access to networks, mentors, and the other two clinics. We work closely with MILO, the Forge and innovation Factory. Our hope is to provide teams with support to undertake the steps to assess the commercialization potential, including: market assessments, IP strategy, regulatory strategy, build a minimal viable product/prototype, and fundraise. All of this in support of the goal of commercializing the innovation.

We have a few teams already in place, and I'll share a few of these to give you a sense of the projects that we've started.

- Dr. Satia, who has developed a device to track chronic cough, with a high potential to target unmet need.
- Dr. Hirota, a diagnostic that will be able to predict the severity of COVID-19. The technology could help with testing and provide answers around how long they should stay in quarantine, helping the management of COVID-19. They have already obtained $500k in non-diluted funding for this project, and founded a company Dr. Doxey (from University of Waterloo)
- Dr. Krepinsky, who are working on a novel treatment for diabetic kidney disease that is based on interesting basic research to develop a druggable target. They're hoping to start clinical studies.
- Dr. Austin and Dr. Magolan, have developed a product looking at systemic therapeutics to treat high cholesterol and non-alcoholic fatty liver disease.

We started this summer, and I would like acknowledge the support of Shin Wang (MBA candidate at McMaster), who has been helping us. He comes from DeGroote business school and helped us do the initial commercial potential of the potential projects. We are looking forward to continuing the work with DeGroote. I would also like acknowledge the efforts of Gail Martin, Jack Gauldie and Jeremy Hiroto from the St. Joseph's Research Institute who have helped make this program go forward.

Guest Speaker Discussion
We would like to position the Clinic @ St. Joe's to expand and support commercialization capacity that already exists in Hamilton. We want to work with key members of the community to foster commercialization in the community. Coming out of this meeting, we are hoping to provide you with a few asks. First, we'd be interested in broadening our network of investors and mentors. We're also hoping to have introductions to investors and commercialisation funding agencies, as the Clinic @ St. Joe's can't support the funding for full commercialization. Finally, we're also hoping to see company formation in Hamilton, and for this we will need exposure to C-suite level executives to support these companies.
Question & Answers Question: Are there are metrics you're hoping to hit in terms of the Clinical Health Innovation Program *Answer: we're aiming to have 75 physicians engaged. And it will be CME accredited, so physicians will get professional credits for participating. Medical residents and medical students are also welcome to participate. We are advertising at clinicians both at McMaster and outside of McMaster. There is an interest in seeing this program as being a leading practice nationally – so for those who are interested, please reach out to Sarrah Lal (lals2@mcmaster.ca)* Question: How is the raising capital seminar being run (part of Clinical Health Innovation Program) *Answer: Typically, we run participants through the type of capital that are available, and how they can access it. This is done from a theory and activity-based learning, followed by a consulting session with access to a start-up that is currently going through fundraising activities. We may also involve alumni who have raised capital.* Question: Can you clarify the intersection between the Clinic @ Mac and the Clinic @ St. Joe's. Are they meant to work together, or in parallel? *Answer: We're working on that. We're trying to figure out. For example, Milica has areas of expertise that fits with those projects, and which also had gone through the HVP program and were physically located at St. Joe's. But how we will move forward, it's TDB* Question: How can this community support you, what other resources could we surface? *Answer: the mentorship is key to us. Some of the teams don't know enough about regulatory strategy, or the rapid prototyping process. In terms of content delivery, we're looking for mentors to help deliver that content so that those who have lived it can provide that expertise to the teams. We're also looking for funding so that we can push some of these early stage companies forward – especially where there is gap funding. We need a better understand where we can identify the funding that can help us with device development.* Question: Is there a way that we can amplify your message out through social media channels? *Answer: Our communication staff is working on a website, which is almost done. Once that's up you'll be able to see it at: https://healthinnovation.mcmaster.ca*

Time allotted | *15 Minutes*

Topic: **Communicate**

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

Discussion	Presenter
Apply to participate in the Synapse Competition (deadline Nov 8) Ontario's premier life science pitch competition applications close on November 8, 2020, at 11:59pm. Do want to grow your company or bring your life science innovation to market? • Develop your commercialization plan, and pitch for cash and in-kind prizes • Participate in business training workshops to help you bring your idea to market • Work with Masters/Ph.D. students with expertise in biomedical, business and engineering • Connect with the innovative life science community **Your pitch could win you cash and in-kind prizes!** Please find links to learn more and apply today: • Learn more (Brochure) • Learn more and apply now: www.synapselifescience.com	Jennifer Gauvreau (Innovation Factory)
Bay Area Health Trust Signs Agreement for Rights to a Patented Molecular Medium Allowing for Increased COVID-19 Testing Capacity (Financial Post) Bay Area Health Trust, a Hamilton-based company, today announced an exclusive licensing agreement for the 'McMaster Molecular Medium ("MMM") with McMaster University. Developed by researchers from St. Joseph's Healthcare Hamilton's Disease Diagnostics and Development Group, MMM will enable labs to safely increase their COVID-19 testing capacity and therefore return results faster. In anticipation of global shortages of nasal swabs and other virus testing supplies, including transport media that preserve the integrity of collected samples, Dr. David Bulir, a researcher from McMaster University and The Research Institute of St. Joe's Hamilton recognized the need for a better way. "We saw very early that control and containment of this pandemic would need vastly increased testing capacity, and the ability to leverage partners within our community has been critical to getting this technology into the hands of both public health as well as private organizations," said Dr. Gail Martin, Executive Director of The Research Institute of St. Joe's Hamilton. MMM is a temperature-stable storage medium that can maintain Coronavirus specimens for up to 14 days, significantly longer than standard transport media. MMM inactivates – kills – the virus so it cannot replicate and potentially infect a lab technician. The genetic material is kept stabilized and ready for testing. Another key benefit of using MMM is the ability to pool specimens. Specimen pooling can enable labs to significantly increase their testing capacity. Since most tests produce negative results, only pools that come back with positive results will need to be further tested. "This agreement is a testament to the value that Bay Area Health Trust and our operating units like Bay Area Research Logistics can bring to its beneficiaries and the growing Hamilton health care ecosystem," said Peter Kalra, President and CEO of Bay Area Health Trust.	Alex Muggah (Synapse)

Discussion	Presenter
Canadian Technology Accelerator Unveils Inaugural Bi-Coastal Digital Health Cohort – Including VoxNeuro and Hylvy Health Today, the Canadian Technology Accelerators (CTA), a global initiative led by the Government of Canada's Trade Commissioner Service, unveiled its cohort for the first ever bi-coastal program dedicated to the development of high-potential, early-stage digital health start-ups. Led by the Consulates General of Canada in New York and San Francisco, the program enables Canadian entrepreneurs to gain in-depth market intelligence, strategic guidance and access to key stakeholders in two of the most dynamic hubs for digital health and venture capital in the United States. The 14-week virtual program targets companies actively raising their Seed to Series A funding rounds by providing tailored workshops, mentorship and networking opportunities to accelerate their entry into these markets. Upon the completion of a cross-country recruitment campaign, a panel of venture capitalists and leaders in the digital health start-up ecosystem selected 11 companies to join the competitive program, including VoxNeuro and Hylvy – two Hamilton startups	Jennifer Gauvreau (Innovation Factory)
$4 Million for McMaster study to explore COVID-19 impact on older adults (Hamilton Spectator, Oct 3) McMaster University is leading a new nationwide study on the impact of COVID-19 on aging Canadians as concerns over a second-wave of the virus continue to grow. On Thursday, the study received $4 million from the federal government to look at COVID-19 infections in Canadians over the age of 50. Older adults are widely considered to be at the highest risk for the most severe outcomes of the virus. "The point of our study is to understand how many people in this age group … were actually truly infected," said Dr. Parminder Raina, the scientific director of the McMaster Institute for Research on Aging, who is leading the study. The research — which is being funded by a federal task force for researching COVID-19 — will collect blood samples and questionnaires from more than 19,000 participants through the Canadian Longitudinal Study on Aging (CLSA), a long-term federally-funded study led by McMaster with more than more than 50,000 participants. Read the full article here	Alex Muggah (Synapse)
Prova supported by Ontario Brain Institute Investment of $50,000 to Boost Neurotech Sector The Ontario Brain Institute (OBI) today introduced its latest cohort of 2020 ONtrepreneurs – recipients of Canada's single largest award for early-stage neurotech entrepreneurs. The award will help accelerate the commercialization of their technology through access to funding, resources, and mentorship. With a focus on promoting brain health, the OBI ONtrepreneurs Program was established in 2012 to provide successful candidates with an investment of $50,000. In addition, they receive 12-months of training opportunities, one-on-one mentorship and commercialization support in order to help launch and grow their ventures.	Innovation Factory

Discussion	Presenter
"New medical technologies offer enormous potential benefits to the patients who need them and to society as a whole but the commercialization path from concept to the clinic – or wherever else the solutions will be deployed – is challenging, especially for early-stage entrepreneurs", said Aaron Weinroth, OBI ONtrepreneurs Program judge and mentor. "The OBI ONtrepreneurs program's much needed financial support, personalized mentoring, and training will advance these outstanding local neurotechnology innovators through this delicate phase of their journeys, helping to ensure their success and further strengthen Ontario's world-class neurotech cluster."	
VoxNeuro and UHN Sign Agreement to Launch Concussion Study (Financial Post) Hamilton-based VoxNeuro is pleased to announce that it has signed an agreement with The Kite Research Institute (KITE), which is the research arm of Toronto Rehab – University Health Network (UHN), to complete a multi-month study at The Hull-Ellis Concussion and Research Clinic. The study launched September 30, 2020, and will follow concussed patients through their treatment and recovery. One of the most challenging consequences of concussions is to accurately assess the adverse impact to cognitive function. Cognitive function reflects all mental abilities that allow us to live healthy, independent lives, like memory, concentration, information processing, executive function and decision making. Today, healthcare professionals predominantly rely on subjective assessments and behavioural tools to estimate the damage to cognitive function a patient is experiencing. VoxNeuro's neurotechnology generates objective quantifiable data that accurately informs the status of cognitive function.	Kimberly Elliot (VoxNeuro)
McMaster Joins $2.5 Million Project to Tackle Child and Youth Health A new Canada-wide collaboration will develop a research ethics review process to facilitate efficient multi-site pediatric studies. Based at Queen's University and led by Clinical Trials Ontario (CTO) and the Maternal Infant Child and Youth Research Network (MICYRN), the Canadian Collaboration for Child Health: Efficiency and Excellence in the Ethics Review of Research (CHEER) aims to improve child health in Canada by enhancing and expediting child health research. CHEER is supported by $2.5 million in funding from the Canadian Institutes of Health Research (CIHR), by the CIHR Institute of Human Development, Child and Youth Health and the CIHR Institute of Genetics. Canada is a world leader in child health research, but investigators developing multi-site research studies often encounter challenges with gaining Research Ethics Board (REB) approval across multiple provinces. This can delay research, increasing the costs and timelines of conducting studies and creating setbacks for patients and families who are waiting for new evidence and treatments. To address these challenges, CHEER is building a web-based system that researchers and REBs can use to enable a single REB review for studies conducted across the country.	Alex Muggah (Synapse)
MedStack Announced as CIX TOP 20: Canada's Most Innovative Technology Companies CIX Canadian Innovation Exchange has today announced the CIX TOP 20 Early and CIX TOP 10 Growth innovative Canadian technology startups that have been inducted into the annual program. The selected companies represent a diverse range of technology companies spanning software, AI, medtech, fintech, big data, security, SaaS and cleantech sectors. These game-	Alex Muggah (Synapse)

Discussion	Presenter
changing, on-the-rise companies were chosen by the CIX 2020 Selection Committee of 120 North American technology investors. CIX has two curation programs – the CIX TOP 20 Early, for companies with net revenue of less than CAD $5 million or who have raised less than $10 million, and the CIX TOP 10 Growth program for later stage companies.	
Amazon Canada to Build 855,000 sqft Fulfilment Centre in Hamilton, 1500 jobs Recently, Amazon Canada announced their intent to create a fulfilment centre and delivery station in Hamilton. The fulfilment centre represents one of the largest local investments in terms of square footage in the City's history. This private investment will bring over 1,500 new jobs when the facilities are scheduled to open in 2021. Amazon Canada's plans include a new 855,000 square foot fulfillment centre to be located adjacent to John C. Munro Hamilton International Airport. A new 50,000 square foot delivery station in Stoney Creek will power the last mile of Amazon's order fulfillment process. Packages are transported to these delivery stations from Amazon fulfillment and sortation centres, and then loaded into vehicles for delivery to customers.	Invest Hamilton
Hamilton one of Canada's Top Locations to Invest…Again The City of Hamilton has once again been named one of Canada's top locations in Canada in which to invest by Site Selection Magazine of Atlanta, Georgia. "The annual Canada's Best Locations feature sheds additional light on Canada's many location options for corporate site selectors," says Mark Arend, editor in chief of Site Selection.	Invest Hamilton
Picomole working with McMaster, secures DND IDEaS grant for COVID research Following a connection by Synapse with researchers at McMaster, Picomole has recently learn that they have been approved for a Department of National Defense IDEaS grant for COVID research. Dr. Duong submitted the application and was just notified of the approval. This project will allow McMaster to collect breath samples that will be analyzed using our technology. Picomole believes that we will be able to detect COVID in the breath and be able to provide non-invasive screening for COVID because of this research.	Patti Ryan (Picomole)
Complete City of Hamilton Stakeholder Engagement Survey by November 1 We are looking to capture the thoughts and opinions of a representative sample of Hamilton's entrepreneurs, services providers and anchor institutions, similar to what we did 5 years ago for the 2016-2020 Action Plan. As an active participant in Hamilton's economic ecosystem, it would be greatly appreciated if you could respond and provide your input, as well as encouraging others within your Hamilton network to do the same. The survey closes on November 1st. Here is link to the survey.	Julie Richards-Bramhill (City of Hamilton)

Discussion	Presenter
Congratulations to Prof Dawn Bowdish (MIRC), having been elected to the prestigious Royal Society of Canada Dr. Bowdish has initiated and driven an impactful research program in Aging and Immunity since starting at MIRC and has quickly become a leader in the field both in Canada and world-wide. In recognition of this, The Royal Society of Canada (RSC) has elected her as a Member of The College of New Scholars, Scientists and Artists. The College recognizes select individuals who, within 15 years of having completed their post-doctoral studies, have already made exceptional achievements and demonstrated leading scholarly and research excellence. Currently, only 286 individuals in Canada across both Arts and Sciences hold this prestigious position. See the announcement and link to the full list of the RSC Class of 2020 here.	Alex Muggah (Synapse)
Celebrate Research @ St. Joe's Goes Virtual (catch it again) Each year, the Research Institute of St. Joe's comes together to celebrate the achievements of our researchers, research programs, staff, and students. It also gives us the opportunity to thank our donors for their continued support, announce the winners of the student research poster competition, and network with our local partners in research. Missed the Live Premiere? No Problem – Watch the Full Virtual Ceremony! A full schedule of the awards ceremony video is available in the YouTube description. Thank-you to everyone who participated in the live premiere of Celebrate Research 2020.	Gail Martin (St. Joe's)
Jeff Spence joining as new General Manager at Hemostasis Reference Laboratory Jeff will be taking over from Judy Rubin who will be joining LabCorp in the United States (though will continue to be based out of Ontario). Hemostasis Reference Laboratory (HRL) is a Canadian Laboratory with over 25 years of experience in providing quality coagulation testing services to customers internationally. HRL is a provider of non-diagnostic laboratory services, specialising in coagulation testing with over 100 validated assays and multiple testing platforms.	Judy Rubin (Hemostasis Lab)
VoxNeuro and The Canadian Football League Alumni Association Sign Collaboration Agreement VoxNeuro and the Canadian Football League Alumni Association (CFLAA) are joining forces to offer objective cognitive assessment to CFLAA members, including Canadian football players, former CFL players, and other communities of interest. Through the partnership, these groups will also raise awareness of long term impacts of head trauma, like concussion. For ageing Canadians who have experienced head-trauma throughout their lives, a growing concern is understanding its relationship with cognitive decline. Under the terms of the agreement, VoxNeuro and the CFLAA will collaborate to share the message that long-term effects of head-trauma, from concussion and sub-concussive blows, are prevalent, and not exclusive to athletes who have dedicated their lives to playing impact or high-risk sports. Brain injuries can happen to anyone and each injury is unique - meaning they need to be assessed and treated accordingly.	Kim Elliot (VoxNeuro)

Discussion	Presenter
Hand-held device lets patients monitor their own blood for cancer biomarkers Researchers at McMaster and Brock universities have created the prototype for a hand-held device to measure a biomarker for cancer, paving the way for home-based cancer monitoring and to improve access to diagnostic testing. The device works much like the monitors that people with diabetes use to test their blood-sugar levels and could be used in a medical clinic or at home, all without lab work, greatly simplifying the process for testing blood for cancer's signature. A user would mix a droplet of blood in a vial of reactive liquid, then place the mixture onto a strip and insert it into a reader. In minutes, the device would measure an antigen that indicates the degree to which cancer is present. The prototype has been designed to monitor prostate specific antigen (PSA) and the technology can readily be adapted to measure other markers, depending on the form of cancer or other chronic disease.	Alex Muggah (Synapse)
FedDev Ontario supports expansion of Toronto Innovation Acceleration Partners Programming The Federal Economic Development Agency for Southern Ontario (FedDev Ontario) announced a contribution of $6.5 million to Toronto Innovation Acceleration Partners (TIAP). This funding will be used to leverage TIAP's decade-long expertise in scouting and incubating health science technologies; to enable access to management talent for health science ventures; and to support the growth of health science companies into domestic anchor companies. By supporting venture creation in therapeutics, medical devices and health science AI from our academic members, and through new collaborations with Queen's and McMaster universities, the program aims to broaden the life science innovation infrastructure in southern Ontario.	Alex Muggah (Synapse)
University of Western Internship Program –75% support for companies to hire Interns I thought you might have employers who are interested in our long term internship program. We have many students in Biology, Medical Sciences, Chemistry, Data Science and Computer Science etc. that are currently working in life sciences and biotechnology companies. These interns are able to go out to work for 8 to 16 months starting between May and September. Plus there is significant government funding to help fund up to 75% of the wages for these students and I can complete most of the funding application for companies . If employers are looking for talent, I am always happy to help them hire Western University students. Fore more information, contact Lauren Starr: lstarr2@uwo.ca	Lauren Starr (Western University)
LSO's Annual Policy Forum (November 2-6) Now entering its 11th year, the LSO Annual Policy Forum brings together key stakeholders to strategize how we can accelerate our life sciences sector. The 2020 Policy Forum, "Empowering the Life Sciences in Ontario's post-pandemic Future" features speakers from a broad spectrum of industry and government as well as robust opportunities for audience engagement.	Andy Donovan (LSO)

Discussion	Presenter
This year's forum welcomes our Keynote Speakers, Alan Bernstein, President & Chief Executive Officer, CIFAR, André Picard, Health Columnist, The Globe and Mail and the author of five books, and more! New speakers are added weekly.	
NIHI - McMaster University ePrivacy in Health Care Course (starts Nov 10) The amount of data being collected is increasing every day, as well as the importance of protecting it. Regulations and legal requirements for protecting data are rapidly changing. Organizations that lose the confidence of customers by a data privacy breach can be catastrophic and hurt the bottom line. Everyone from new employees to C-Suite executives need to stay up-to-date. The ability to demonstrate that you have a leading privacy program will increase consumer confidence and customer satisfaction. The *NIHI - McMaster ePrivacy Certificate of Completion Course* will provide you everything you need to know to become leading experts in ePrivacy. The course is broken down into four easy to follow modules that will make you and your organization leaders in the field of ePrivacy. 25 Sessions, 30 Hours. 20 Recorded & 5 Live, Interactive, Online. Live Session Dates: Nov. 10, Dec. 8, 2020, Jan. 12, Feb. 16, March 2021	Alex Muggah (Synapse)
Mohawk College Future Ready Leadership Signature Series (Nov 12) 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. Future Ready Leadership Signature Series 2 | Nov. 12 2020 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.	Andrea Johnson (Mohawk College)
AGE-WELL Startup Community Launch & UK Health Sector Access Event (Nov 17) Innovation in healthcare and technology for seniors is more relevant than ever. This event will mark the launch of Canada's AgeTech Startup Community, supported by AGE-WELL, Canada's technology and aging network, and Startup Canada, the voice for Canada's entrepreneurs. After opening remarks from Startup Canada and AGE-WELL, we will have a fireside chat and community Q&A with Rakuten Kobo CEO, Michael Tamblyn. During the second hour, we will hold our first high-value event for the community, presented by leaders from the England's Academic Health Science Network (established by NHS England in 2013 to spread innovation at pace and scale – improving health and generating economic growth).	Michael Chrostowski (AGE-WELL)
BioTEC 2nd annual pitch competition (Nov 21) Focusing on early-stage student-run ventures related to medical devices, digital health, and therapeutics. It will be held virtually on November 21, 2020, and they're aiming to attract upper year undergraduate and graduate student teams from across Canada. Teams will have the opportunity to present their startup idea to a panel of leading health tech venture capitalist judges with $5000 in prizes available. Below, they've drafted an email body and included an infographic which can be passed on to your students.	Alex Muggah (Synapse)

Discussion	Presenter

JLABs Events Going Virtual (various)
 	
• Is it All Genetic? The Role of Biology and Driver Genes in Childhood Cancer (Nov 5)
  ○ Is it really all genetic? Join JLABS on November 5 to hear experts in this field discuss work being done to more deeply understand the gene-disease relationship of childhood cancers, the development of novel strategies and therapeutics that target pediatric-specific driver genes, and how bedside, rapid tumor genetic testing can improve identification at diagnosis and relapse.
• Meet with ... BioGeneration Ventures (Nov 13)
  ○ On 24 June 2020 BioGeneration Ventures announced1 they closed their BGV IV fund of €105 million. The investments will focus on entrepreneurial innovation in therapeutics in Europe. Join JLABS virtually on 13 November, where Edward van Wezel, Managing Partner of BioGeneration Ventures, will elaborate on the firm's aim to build new companies around either single assets or technology platforms with the goal of creating transformational new medicines.
• Medical Device Startup: The Path from Academia to Company (Nov 19)
  ○ Every entrepreneur knows that the road to innovation can be filled with unexpected turns and many bumps along the way. For many medical device innovators, the path from ideation to production is constantly rerouting, making it especially hard to succeed. Coming from within the trenches of a large academic institution is often times considered as a roadblock itself. So… where do you start? Where do you turn to find the best pathway from the inside out? How do you drive your idea into disruption? JLABS as they welcome experts in the space who share their views on how to tackle the roadblocks along your path
 	
To learn more about upcoming JLABs events, click here
	Amanda Raponi (JLABS)

MGD-HICE Educational Webinars & DevTank Meetings Operating out of the Michael G. DeGroote School of Medicine at McMaster University, the Michael G. DeGroote Health Innovation, Commercialization & Entrepreneurship (MGD-HICE) aims to accelerate the exploration of health innovation opportunities and creation of socioeconomic impact. Check out the full suite of programming here	Sarrah Lal (MGD-HICE)
Government Calls for Innovative Solutions • 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.	Innovation Factory & Synapse Consortium

Discussion	Presenter
• 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 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.	

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
MMRI Industrial Training Program The McMaster Manufacturing Research Institute (MMRI) invites participation in our new industry training program. The goal of this program is to build problem solving skills so participants can be proactive contributors in a rapidly changing workplace environment. This educational program uses a problem-based learning approach to address a wide range of topics of direct importance to advanced manufacturing. Three streams of study are offered through the program: Advanced Manufacturing Materials, Advanced Manufacturing Processes, and Industry 4.0. Starting with a problem or performance improvement opportunity, learners generate a project, take a series of courses to build their background and then apply those skills to complete their project. Courses are structured around real industry challenges and build applied knowledge by covering the fundamentals, using demos and case studies to make it real. Upon completion participants earn a certificate of completion from McMaster University in one or more streams. For more information, feel free to reach out to our team at mmri-ed@mcmaster.ca. We are happy to answer any further questions you may have and look forward to partnering with you on this new learning initiative. Courses are being offered starting in October 2020, and you can apply anytime, as courses will be repeated. By taking one course per week, you can obtain a certificate in one stream in 3 months. You can obtain certificates in all three streams in 6 months.	Stephen Veldhuis (McMaster MMRI)
7th edition of the Canada-Chicago Mentoring Program (Deadline, Nov 13) This year, we have space for four, innovative life sciences companies, who will benefit from the full C2MP program in Chicago (in-person and virtual variations are prepared for whatever 2021 brings). It will end with a pitch in Chicago and then an introduction to the Life Sciences ecosystem in Philadelphia to maximize results for companies and exposure to the US market. To learn more, contact: CHCGO-td@international.gc.ca	Julien Rosan (Foreign Affairs Canada)
Engaging Mohawk College's IDEAWORKS IDEAWORKS projects in general (of which, MEDIC is one area) which was provided and may help with identifying if Mohawk College can support our companies with projects. This might be a refresher for some or all of us, but highlighting nonetheless: Tips for Innovation Factory Referrals to IDEAWORKS • 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	Andrea Johnson (Mohawk College)

Discussion	Presenter
• The ideal applied research partner is one that is in the scaling stage; they have some revenue and can meet a lot of the funding agencies criteria for funding or want to self-fund a research project. Typically what we look for is 2+2; two years in business with two employees • We recommend working with us on projects that aren't mission critical but can help the company explore an innovative idea. What about start-ups? • If they require a few tips or advice, we can normally chat with them (or if there is a critical mass -like five or six companies in a space-, we can do a webinar type discussion). • They can see about the availability of capstone projects, where students generally work on projects for a four month period, for free, in order to get course credit. It may help with MVPs. Contact Andrea Johnson for more information: andrea.johnson4@mohawkcollege.ca	
The CONNECTION - McMaster University Online Partnerships Portal! 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	Gay Yuyitung (MILO)
Collaborating with McMaster Institute for Infectious Disease Research (New Intake Form) In addition to our ongoing COVID-19 research initiatives at McMaster, the Michael G. DeGroote Institute for Infectious Disease Research is mobilizing its strong research community to assist Canadian researchers and businesses in their attempts to find solutions to the international crisis. The IIDR teams have the capacity to assist with the testing of 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: • BSL2 cell culture infection with representative human coronaviruses; • Testing of methods or products that are designed to inactivate the virus; • Biochemical/enzyme studies with anti-viral agents. Cell culture and small animal models of SARS-CoV-2 infection can be performed in McMaster's secure biosafety level 3 facility. Availability for BSL3 testing is very limited, and projects requiring this type of work will be screened and prioritized by an internal committee. If you have a product or innovation that you are interested in pursuing further and feel that we could be of assistance to you, please reach out to us through the online form. Each	Gay Yuyitung (MILO)

Discussion	Presenter
project will be evaluated to determine if McMaster has the capabilities and capacity to perform the required testing.	
Hamilton Innovation Partnership Portal 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/	Andrea Lee (HHS)
Submit Community Events on the Innovation Factory Calendar Our calendar is home to Innovation Factory workshops and networking events as well as events from the community which help support our local entrepreneurs and businesses. If you have an event which may a fit, please submit it and we will review it within five business days.	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)