Hamilton Health Innovation Check-up: Meeting Minutes

March 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	Alex Muggah, Director, Synapse Consortium
Virtual Location	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: April 25th 9:00 – 10:00am | McMaster Innovation Park (via Zoom)
Please sign up to our mailing list to receive meeting minutes and other important updates.

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

April

- Apr 6: The Search for Solutions to the Delivery Challenges of Nucleic Acid-Based Therapies (JLABS)
- Apr 6: Emerging Opportunities in the Life Sciences sector (Ontario Government)
- Apr 8: Biomedical Discovery & Commercialization Engage Symposium (McMaster BDC Program)
- Apr 8: Takeda Leadership in Gastroenterology Innovation & Research (University of Toronto)
- Apr 12: Live from Canada: The Future of BioManufacturing (CENE & McMaster Innovation Park)
- Apr 14: Waterloo Innovation Summit (University of Waterloo)
- Apr 19: adMare Global Leaders Webinar (adMare Bioinnovations)
- Apr 21: LSO Webinar Series: Medical Device (LSO)
- Apr 25: Hamilton Health Check-up (Synapse Consortium)

May& Beyond

- 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 30: Hamilton Health Check-up (Synapse Consortium)
- 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)
- Sep 19-22: Creating Communities of Innovation (AURP)
- 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?

SOPHIE
Southern Ontario Pharmaceutical & Health Innovation Ecosystem

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 innovation. Learn more about SOPHIE here

HEALTHI
Hamilton Ecosystem to Accelerate and Leverage Trials of Health Innovation

Leverage up to $15,000 in funding to work directly with the Research Administration groups at Hamilton Health Sciences or The Research Institute at St. Joe's Hamilton to create the pre-trial protocols and documents required to undertake a commercialization project or clinical trial in one of Canada's leading research hospitals. Learn more about HEALTHI here

Time allotted | *30 Minutes*

Topic: **Guest Speaker Discussion**

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

Guest Speaker Discussion
Guest Speaker(s): • Jennifer Gauvreau Manager, Marketing & Events, Innovation Factory • Saumik Biswas CEO & Founder, Tenomix • Roe Sivanandan CEO, Goji Technology Systems • Sarrah Lal CEO & Founder, Kultura Diagnostics • Rachel Bartholomew CEO & Founder, Hylvy Health [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

On March 23, 14 companies wrapped up a 3-month period of training and mentorship as part of The Synapse Competition, Ontario's premier life science pitch competition. Together, the participants took home $175,000 in cash and prizes. The Synapse Competition is dedicated to fostering the commercialization of innovation in the life science sector. Delivered by Innovation Factory, in collaboration with the Synapse Consortium, this competition assists innovators, scientists and researchers to bring their ideas to market, increase revenues, leverage intellectual property attract, investment and create jobs. Today, we get to hear form the top three finalists: Tenomix, Gojitech, and Kultura.

Overview of Synapse Pitch Competition (Jennifer Gauvreau, Innovation Factory)

My name is Jennifer Gauvreau, and I'm the manager of marketing events at Innovation factory. I am responsible for supporting the Synapse Competition - wonderful initiatives like this. But really much of the kudos goes to Kaitly Spivak, who delivered a very successful and amazing competition this year. I wanted to tell you a little bit of background about the competition before we get to meet the finalists, for those who aren't familiar with it.

Innovation Factory established the Synapse Life Science Pitch Competition in 2013 to help entrepreneurs, scientists, researchers to bring their ideas to market attract investment and create jobs. That's obviously a tall order for a pitch competition, but it's more than that. The innovators form teams with post-secondary students, who support them throughout the pitch competition. They then participate in a three-month training program where they're responsible for developing a commercialization plan and investor pitch in support of their efforts to scale and grow their business.

As part of their completion of that Pitch Competition program, each finalist received a $5,000 grant. This was made possible in part through the support of the SOPHIE program. The top three finalists – Tenomix, Gojitech and Kultura who are here with us today – were selected to present at the pitch showcase on March 23. This event

Guest Speaker Discussion

was attended by almost 200 people online, which is just incredible, and demonstrates the level of support and momentum around our life science ecosystem.

Since its inception, the Synapse Competition has worked with over 100 companies and have awarded over $675,000 in cash and in-kind prizes to the finalists. Each year, the finalist become more impressive every year. We see tremendous growth and success from past participants, who have gone on to raise millions of dollars and be very successful in their own right.

I'd like to take a moment to reflect on one positive outcome we've seen during the past few years. Specifically, we've seen our companies continue to work with their student team members long after the competition closes – often hiring them on full time. This is really exciting for us, and speaks to the important of nurturing and developing talent.

We've been extremely fortunate with the generosity of our sponsors and funders who have made the Competition possible. If you'd like to learn more about the competition, please feel free to connect with me or Kaityln.

If you'd like to be connected with any of the finalists, you know, don't hesitate to reach out as they are all looking for strategic opportunities, connections and opportunities to grow their business. You can learn more about all 14 participating companies and check out their pitches online. You can also watch the competition again, including the top three pitches. With that, I'd like to hand it over to our amazing top three finalists, so you can learn more about them.

Overview of Tenomix (First Prize), Saumik Biswas

It's such a pleasure to be here today. I'm the CEO and one of the founders of Tenomix, a medical technology company. Tenomix was formed by four of us last July after the Medical Innovation Fellowship Program in London, Ontario. Since then, I've been so fortunate to work with amazing teammates who have expertise in a number of different disciplines, including business engineering, pathology and medicine, and our mission at genomic system develop novel technologies that target inefficiencies in the pathology workflow, optimize cancer care, and reduce healthcare costs.

Today, I'll be talking about a massive challenge in pathology lives that involves colon cancer tissues. In 2020, almost 27,000 Canadians were diagnosed with colorectal cancer – or 273 Canadians being diagnosed every day. Now when we look at the colon cancer staging process, part of it involves pathology staff manually searching through surgically removed colon cancer tissue for lymph nodes. This can taken anywhere from 1-2 hours for larger samples. Now, I want you to imagine yourself in the shoes of pathology staff, who are doing this tedious search process by hand, trying to find small lymph nodes that are the size of a pencil tip. Through customer discovery, we confirm that this process is indeed tedious, expensive and unreliable. What's shocking is lymph nodes can be missed in 30 to 60% of North American cases, which can lead to inaccurate cancer staging and improper treatment for patients.

Pathology staff desperately need a solution that can help decrease the labor, reduce costs, and reliably locate lymph nodes. And after hearing the pain points, we've developed the Lymphonator, a novel benchtop robotic scanning device that automates the lymph node search process. We're changing the tedious search process, which is a key bottleneck to accurate cancer staging. By integrating early feedback from pathology staff, our device offers several benefits, including seamless workflow integration, better lymph node detection, set and forget operation and reduced cost for pathology pipes.

Guest Speaker Discussion

Pathology staff only need to place the sample in their device, press the start button, and then our device will do the rest of the work. Ultrasound imaging and software are used to identify lymph nodes that then guide a robotic arm that marks lymph node locations for easy extraction by pathology staff. And from our early experiments with our alpha prototype, we've been able to locate small lymph nodes that are difficult to find by hand. The need for this device is timely given increasing colon cancer cases, ongoing pressures faced by pathology labs, and the growing demand for lab automation.

Our go to market plan, since we've already engaged with several key opinion leaders, will first target large North American academic hospitals that have pathology teaching programs. These trainees will be trained with this device, and they will then be our advocates after their programs, to open the doors to non academic and private pathology. The labs in Canada will be our initial validation market. We're also actively pursuing several great leads in the US. Once expansion takes place in the US and global labs, we'd be looking at a massive $559 million opportunity each year.

Going forward, we'll continue with software development. In terms of IP we filed a provisional patent last year. So we'll convert this to a PCT this device to capture a larger market share for filing in countries with a high rate of colon cancer. From there, we'll then finish our beta prototype for clinical pilot study early next year, as we work with our consultants to secure regulatory approval. From there we plan for production sales in 2024.

I lost my aunt to improper colon cancer staging at a really young age. There are millions of others who are fighting cancer on a day to day basis. But these stories are what motivate my team and I to work hard and see this technology reach the market. Ultimately, my team and I are dedicated to helping patients get the best quality cancer care. And here at Tenmoix, we're ready to fight for cancer patients one lymph node at a time.

We'd love to connect with anyone who could provide connections with investors with an interest in medtech, as we are looking to raise in late Q3 early Q4 of this year. We're also interested in connections with pathology labs in the US or have connections or representatives from Cancer Care Ontario. We'd also love to connect with any organizations that can help guide some of the regulatory and QMS work.

I wanted to thank the many wonderful individuals from so many organizations across the community who have supported us. Thank you to Innovation Factory and the Synapse Consortium for holding such a wonderful competition. For us, we were able to build a strong investor-ready business plan, build strong relationships with faculty staff in Hamilton, work with many phenomenal students. (Kyle, if you're out there, thank you very much.) And the funding we received will help with our beta prototype development and setting up a future clinical pilot study.

Overview of Gojitech (Second Prize), Roe Sivanandan

We're Gojitech Technologies . I like to start with a little question: "when were you last at your doctor's office, seeing doctors with their faces in their computer screens, clicking frantically from one screen to another while trying to listen to you?" Imagine your next visit to your doctor's and you find yourself with it being just you and your doctor, face-to-face without visual or electronic distractions.

GojiTech is a Canadian healthtech startup based in Ontario addressing problems in clinical practice. Using the latest in artificial intelligence technology, we made it our mission to make it easier for clinicians to use computers. Over the years clinics have had to rely more on computer systems to do their jobs. This has led to a type of burnout and a loss of key face to face interactions with patients. Clinicians are spending far too much time working with computers and not enough time providing care and focusing on their patients.

Guest Speaker Discussion

Stated simply, the problem is that the clinicians are spending on average about six hours a day engaging electronic systems. This includes two hours a day on electronic documentation for every one hour of patient visit, with an additional six hours navigating through digital systems during, before, and after a patient visit. This is leading to a loss of time to digital systems which could be redirected to care for patients, lost income for clinics and clinicians. It can also lead to burnout of doctors and nurses to the point some are leaving the profession. We believe there's a better way. We're focused on healing the healers and let them get back to their passion: caring for their patients.

Our solution is an intelligent assistant that works with existing systems and software solutions, making it simple to incorporate Gojitech. We're really focused on removing the friction between adopting technology, recognizing their existing technologies.

We provide a way for clinicians to simply turn the mic on and talk naturally with their patients. Our AI transcribes the audio and takes care of the documentation and clinical tasks in the system. Our system works with voice, touchless gestures, and even suggests the next best care action recommendations by using digital quality measures. Our solution is built with privacy and security safeguards so that the clinicians can meet the jurisdictional privacy requirements, such as PHIPAA in Ontario, HIPAA in the US, and GDPR In Europe.

Gogitech helps clinicians a several ways, including three I'd like to flag here. First, we remove what doctors call "Death by 1000 clicks" – no more manual data entry. Second, we give back over 200 hours of time. Third, we automate clinical notes in real time to avoid having to dictate notes. All of this for a minimal investment from the clinicians of around $60 per user per month. Clinical centres realize over 30x return on that investment, based on our research. Payers stand to benefit greatly from added clinical insights and quality improvements, where our automated digital quality measures. We codify the data with no SNOMED or ICD-9 and -10 and FHIR standard compliance.

Our market is very large. Healthcare is one of the fastest growing, and continuously growing, sector. In the US and Canada, we see about 17.5 million users with value of close to $12 billion. To achieve our mission, and to exploit the market opportunity, we have assembled a world-class team of founders with prior startup experience and exits, including an AI. We work together with each other in successful execution and are well connected in healthcare to turn this venture into a massive Canadian success story.

Our go-to-market strategy is to use channel partners. To this end, we have signed three already. And these partners give us over 300,000 clinicians in Canada and the US. We've had some strong traction so far. We have also won a project with Ontario Biosciences Innovation Organization (OBIO), which will help us fund a demonstration project with $100,000 to test our product and build more products with family or teams. We have also secured funding from Canada innovations venture capitalist out of San Francisco, and several grants. We have also received funding from OCI for market readiness, and IRAP for some research initiative projects in the coming months.

With the pipeline we've already established, we are hoping for 1-2% adoption over three years. This will result in USD$2.4 to $4.8 million in annual recurring revenue. We're not a biotech company, we're a software as a service company. For SAS company, this revenues puts us in a very strong position. When considering our competitors, they are very strong. However, our uniqueness is in the ability of clinicans to simply turn us on and have all of the work automated.

We finished second in the synapse competition and are very thankful for those funds to help us continue on our path to product market fit. Thanks for this opportunity to present us.

Guest Speaker Discussion

Overview of Kultura (Third Prize), Sarrah Lal

Kultura Diagnostics is a company that was incorporated in February 2022. The company is focused on helping to better diagnose and manage gluten sensitivity, which includes everything from celiac disease to non-celiac gluten sensitivity, wheat allergies, and gluten intolerance. All of these conditions are within our catchment space. We've been on a rapid pace of development, having placed third in the Synapse Pitch Competition. We've raised $15.5k so far and are looking for more funds as we continue to grow.

We have a multidisciplinary team that operating across multiple countries, including Canada and France, with expertise in business and chemical engineering. We have a strong network who are supporting us as advisors with specialists in celiac disease. We also experts specialized in adult celiac disease as well as pediatrics. We also have an individual on the team who's focused on machine learning and AI. We are very grateful for the support we've received from this community through Synapse and Innovation Factory. We're also connected into the University of Toronto ecosystem, through H2i and the hatchery.

Gluten sensitivity is a condition that you've probably heard of, indeed you probably know people who have it. Indeed, 40% of people have some form of it. However, only 90% of people have been diagnosed or have spoken to a clinician with the intention of getting some kind of management strategy. Unfortunately, the challenge is that while 40% have this condition there is a 10 year diagnosis delay. There are many complexities with gluten sensitivity, but the symptoms are not very specific.

This ends up wasting a lot of money – $11k on average in the US per person across other services they have to access, people can lose eight days of productive work, so employers suffer. And unfortunately for these individuals, they also have an increased risk of developing other conditions because of unaddressed gluten sensitivity, including things like cancer. Once having navigated the convoluted pathways to getting diagnosed, many do not manage their condition effectively. 60% of people struggle to manage their gluten sensitivity, because it requires adherence to a gluten free diet and interfacing with health professionals, and there is no way to monitor symptom improvement over time. It is hard to manage symptoms – they're not specific, they're unique to each individual. One thing that Kultara wants to address is that management is qualitative, rather than quantitative (i.e., like with diabetes).

The current journey that patients are usually on is incredibly wasteful. They might spend 10 years trying to get diagnosed, which can be very expensive in terms of time and money. Once someone is referred for a test, it's fast, but you need to consume gluten to elicit the positive immune reaction. Once you get the diagnosis, there is very little follow-on education and support. Ultimately this leads to subpar outcomes.

We need to do better. The solution that Kultura has is to empower individuals to more efficiently, affordably, and conveniently manage gluten sensitivity through an AI-driven behavioural approach. We have a three-part solution. The first part that we're working on right now is a digital solution that will help to change behaviors, impacting lifestyle and diet factors that actually help you feel better. As patients learn more about your condition and how you need to you need to manage it for yourself.

Next year, we plan to launch a wellness product version. This breathalyzer will detects compounds related to the condition and essentially allows you to monitor symptom fluctuations up and down using those compounds. Links to digital tools will helps patients understand the nature of their symptoms, when they improve, and help optimize a health management plan using the digital tool and breathalyzer.

In 2024, the third part of the solution (Gluten DTX) will be deployed to support clinicians to help manage the care of these patients. Care providers who manage the care of those with celiac disease or other forms of gluten

Guest Speaker Discussion
sensitivity, have hundreds of patients who have this. So they need something to simplify management and also be able to optimize outcomes and coach individuals towards improved performance in managing their condition. Kultura is a local Hamilton company, and we have big goals in the summer to leverage the clinical partnerships that we're developing. We plan to complete a pilot of our digital tool with 100 patients. We are completing expert panels with experts in Canada, the US and Finland. Finland has a lot of celiac disease in their population and they're quite interested in this space. And then we are, of course, as always, very interested in additional forms of funding. This type of development work, as you all know, is expensive. We are open to contacts, recommendations as well as any other advice or tips and tricks that you want to give us along our way.
Introduction to Hylvy & FemTech Canada (Rachel Bartholomew) Hello, my name is Rachel, the CEO and Founder of Hilvy, which I'm going to quickly pitch. We are working on a pelvic floor rehabilitation device that does remote patient monitoring. Our smart pelvic rehab system provides a device, app and clinician software that creates real time data to give patients a more comfortable and informed experience through pelvic health recovery. In 2020, I had the chance to participate in the Synapse pitch competition – it was my first competition – and we ended up in 3rd place. So we think of ourselves as being a Synapse baby. Recently, Hylvy also became one of the first SOPHIE projects to get kicked off, with a clinical trial happening at HHS & McMaster University. We've been deeply appreciative of Daniele, from the HHS Research administration group, who has been amazing in helping us get this clinical trial off the ground. Going forward, we're looking to plug ourselves into the London ecosystem, to seet up a multi-site clinical trial, as well as connecting with investors as we begin prepping for Hylvy's seed round. Separately, I'd like to talk about FemTech Canada, a space for people to get to know the companies creating the latest and greatest FemTech products and services in Canada. I've been assisted by Andrea Guest (Innovation Factory), who has helped me to pull this coalition, and website, together. The genesis for the site when I was in a naturopathic vitamin store, browsing through a magazine which had "What the heck is FemTech?" as a lead article on the front page. I thought to myself "I'm in FemTech – I want to know what the heck is FemTech, and what they think it is!". After flipping through a couple of pages, lo and behold, I discover that it's five pages all about American FemTech Companies. I think this can't be right, there are lots of people doing amazing things in Canada and we need to tell their stories. We need to do something about this. So over a long weekend, I pull up my socks and create a database of all the companies working in women's health in Canada. I end up with a list of 51 companies, which I used to build a website to showcase their technology, accomplishments, and other information that might be helpful to this community. I included information about who these companies are and what stages they are at. I also listed investors that have made investments into FemTech companies. And then I went out and tried to create some hype around it. Next thing I know, Andrea at Innovation Factory come knocking on the door. Her idea was to take FemTech Canada to the next level – to which I immediately said "yes, let's do it!" So we created an advisory board with other FemTech Canada leaders, drafted a proposal to the federal government to get the coalition off the ground and delivering support to companies nationwide. The goal is to establish a coalition to help develop and nurture more women's health tech companies. We'll have events and networking to inspire more women to start woman's health care companies. We are all excited to see where it goes.

Time allotted | *15 Minutes*

Topic: **Communicate**

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

Discussion	Presenter
Ontario invests $40M, part of a $580M state-of-the-art cell and gene therapy facility in Hamilton to take life sciences sector to the next level. Expects to create 250 jobs. A new cell and gene therapy manufacturing facility being built in Hamilton will anchor the future of life sciences jobs and innovation in Ontario while advancing pioneering medicine with the potential to cure many forms of cancer, cardiovascular disease, Parkinson's disease and diabetes. Vic Fedeli, Minister of Economic Development, Job Creation and Trade, welcomed the $580 million investment in the OmniaBio Inc. facility as he unveiled the government's new innovative life sciences strategy. Through Invest Ontario, the province's investment attraction agency, subject to reaching a definitive agreement, the province will invest up to $40 million to help create the OmniaBio manufacturing facility, which will be spun out of Toronto's Centre for Commercialization of Regenerative Medicine (CCRM). Located at McMaster Innovation Park, OmniaBio will be a commercial-scale cell and gene therapy facility operating as a contract development and manufacturing organization (CDMO). A CDMO works with other life sciences companies, large and small, to commercialize and manufacture their products. This arrangement allows life sciences companies to focus on research for new therapies and medical breakthroughs – and on growing their business. The facility builds on almost $2 billion in recent transformational investments in Ontario by leading pharmaceutical companies, including Sanofi, Resilience and Roche. It will increase the province's biomanufacturing capacity, strengthen domestic supply chains and boost Ontario-made innovation. It is scheduled to begin operations in early 2024. Provincial support for the OmniaBio project is part of Taking Life Sciences to the Next Level, the province's plan to grow Ontario's life sciences sector and secure new investments in next-generation health technologies, medicines and vaccine manufacturing. Read the press release about the Ontario Government investment here Read the CCRM brief about the Ontario Government investment in OBIO here	Ty Shattuck (MIP) & Michael May (CCRM)
Hamilton-founded Triumvira Immunologics Completes Extension of Series A Financing, for Total Round of Approximately $100 Million (Business Wire, March 23, 2022) Triumvira Immunologics, a clinical-stage company developing novel, targeted autologous and allogeneic T cell therapeutics that co-opt the natural biology of T cells to treat patients with solid tumors, today announced the completion of an extension of its Series A financing, bringing the total round to approximately $100 million. Triumvira was founded in Hamilton, with in offices in Austin, Texas. The proceeds of the financing will support the continued preclinical and clinical development of Triumvira's T cell Antigen Coupler (TAC)-T cell therapy programs. Triumvira's proprietary TAC	Jonathan Bramson (Triumvira)

Discussion	Presenter
receptor, a multi-domain chimeric molecule, interacts directly with the natural T cell receptor to uniquely help T cells recognize and eliminate tumor cells. The company's lead program, TAC01-HER2, is currently being evaluated in a Phase 1/2 clinical trial for patients with HER2-overexpressing solid tumors (TACTIC-2), including breast, gastric, ovarian, pancreatic, gall bladder and non-small cell lung cancers. "Our proprietary TAC technology platform offers an innovative approach to developing novel autologous and allogeneic treatments for solid tumors, and we are excited to advance our pipeline through 2022 and beyond." said Paul Lammers, President and CEO of Triumvira. Triumvira is a clinical-stage company developing unique, non-gene edited, first-in-class targeted autologous and allogeneic T cell therapeutics that co-opt the natural biology of T cells to treat patients with solid tumors. The company's proprietary T cell Antigen Coupler (TAC) technology is a robust and versatile platform that activates natural T cell functions differently from cell therapies such as CAR-T and engineered T cell receptor (TCR) therapies.	
Over $175,000 awarded in cash and prizes through Innovation Factory's ninth annual Synapse Life Science Competition – Congratulations first place Tenomix On March 23, 2022, nearly 200 people from the region's thriving life science ecosystem, gathered virtually for the culminating Showcase event for Innovation Factory's ninth annual Synapse Competition, Ontario's premier life science pitch competition. Following an intense three-month training and commercialization program, 14 of Ontario's innovative early-stage life science companies unlocked a $5,000 grant to support their commercialization journey to business success. The top three Synapse Competition finalists; Tenomix, Goji Technology Systems Inc, and Kultura Diagnostics went on to deliver their pitch to the esteemed judging panel and compete for their share of over $105,000 in cash and in-kind prizes, while the remaining eleven finalists competed in a "Quick Pitch" for $2,500. Tenomix was named the grand prize winner, taking home a prize of $50,000 in cash along with an in-kind prize package courtesy of Shift Health, an in-kind legal package from Ridout & Maybee LLP, and a one-year membership with Life Sciences Ontario and the Hamilton Chamber of Commerce. Goji Technology Systems Inc took second place receiving $20,000 in cash, an in-kind legal prize from Gowling WLG, as well as a one-year membership with Life Sciences Ontario and the Hamilton Chamber of Commerce. Kultura Diagnostics came in third place receiving $7,500 in cash, an in-kind Legal package from Bereskin & Parr LLP, as well as a one-year membership with Life Sciences Ontario and the Hamilton Chamber of Commerce. HDAX Theraputics won this year's "Quick Pitch" prize of $2,500 cash.	Kaitlyn Spivak (Innovation Factory)
Dr. Jack Gauldie to be honored with community service award at LSO Gala, May 18 Our congratulations to Dr. Jack Gauldie, Distinguished University Professor, Department of Pathology and Molecular Medicine, McMaster University and VP Research at St. Joseph's Healthcare, Hamilton. Jack is being recognized for his outstanding community service by LSO on May 18, in Toronto. Jack's is renowned globally for his academic work defining the molecular regulation of acute and chronic inflammation and the role of factors, such as Interleukin 6 (IL-6) and Transforming Growth Factor, in the regulation of chronic inflammatory and fibrotic diseases, as well as the	Andy Donovan (LSO)

Discussion	Presenter
molecular regulation of mucosal immunity. He has published more than 400 scientific articles and has a citation h-index more than 100. Dr. Gauldie was Chair of the Department of Pathology and Molecular Medicine for fifteen years. He was on the Gairdner Foundation Medical Review Panel and Advisory Board, 2002-2011. He served as Vice President Research at St Joseph's Healthcare Hamilton for the past 5 years and earlier on the Board of St Joseph's, 2012-2015. He was on the Board of Genome Ontario, 2011-2019, and served as Acting Chair, 2018-2019. He has been on the Ontario Research Fund Advisory Board since 2005 and is currently Chair of that Board since 2011.	
VoxNeuro hires new CEO, hits key milestones, as it embarks on its mission to become "The Brain Company" (Financial Post, March 30, 20222) VoxNeuro Inc., a software as a medical device (SaMD) brain health company that analyzes brain-based biomarkers to assess cognitive function, announced a number of significant developments including (i) receipt of US patent 11278230 entitled "Systems and methods for cognitive health assessment" which provides protection for VoxNeuro's competitive advantage (specific EEG-based neuropsychological assessments that generate event-related potentials associated with key cognitive functions, and the output of a cognitive health report), (ii) the establishment of a US-based expert clinical study program to assist in expanding VoxNeuro's product offerings across a range of neurological pathologies, and (iii) the retainer of a seasoned executive, Jason Flowerday, as Chief Executive Officer. Mr. Flowerday joins VoxNeuro as it prepares to solidify its product development plans and pipeline. Following the launch of its first product in the Spring of 2021, a SaMD general cognitive assessment that healthcare providers leverage in clinical decision-making, VoxNeuro is in the process of formalizing partnerships with channel partners to assist with its roll-out across the United States. In parallel, the Company is working to finalize its initial clinical programs with leading American institutions and medical specialists to develop a series of valuable diagnostic products in the areas of Depression, Concussion, Alzheimer's, Schizophrenia and Bi-polar disorder. The Company expects that these clinical programs will commence in the second half of 2022. Since inception, VoxNeuro has been led by co-founder James Connolly, the son of John F. Connolly, PhD, the world-renowned neuroscientist responsible for the Company's groundbreaking cognitive assessment technology. With the addition of Mr. Flowerday as CEO, James Connolly will continue as a central member of VoxNeuro's leadership team, taking on the new role of Chief Business Officer and overseeing key initiatives in the U.S. market.	Douglas Martin (VoxNeuro)
Mohawk MEDIC & TAMVOES make it easier to track vita data (Canadian Healthcare Technology) Mohawk College's newest applied research partnership with a local digital health start-up will make a difference to the thousands of Canadians who are tired of having their healthcare records stored in multiple places. Mohawk College's mHealth and eHealth Development and Innovation Centre (MEDIC) has partnered with Waterloo-based TAMVOES, creator of a health management platform that allows individuals to collect and securely store copies of their health information, such as surgical history, vaccinations, allergies, medications, laboratory tests and much more. TAMVOES provides users with both a mobile and web platform that hosts their information in one easy-to-access place. The company also recently announced an Apple Health Integration for its brand	Doug Ward (Mohawk)

Discussion	Presenter
new mobile app that will allow users to import data such as heart rate, blood pressure and respiratory rate into the platform. “Even the healthiest of people have reams of health information about them captured in various places. Especially when there is illness or injury, it’s key that patients and caregivers make informed decisions based on complete and accurate information,” says co-founder Madison McBay. “Working with MEDIC will give us access to technical expertise around high-level integration that we wouldn’t otherwise have as a start-up.” Medical test results are a large piece of the data that Tamvoes users, and all individuals concerned about their health or that of their loved ones, want to access. Currently these can be fractured across multiple laboratories and systems, including government databases, with limited to no access available to individuals. MEDIC’s digital health software developers have designed a universal integration hub that can be easily extended by Tamvoes to different repositories of data to fetch and securely store health data in a Tamvoes user’s Personal Data Trust. The same hub is also connecting Tamvoes users to other services, such as test analysis and interpretation.	
AURP Announces Canada's Co-Host AURP 2022 International Conference, including MIP AURP, a global nonprofit membership association serving university and institutional research park communities and innovation districts, today announced MaRS Discovery District, David Johnston Research + Technology Park and McMaster Innovation Park will co-host AURP's 2022 International Conference, September 19-22, in Toronto, Ontario. With the theme of "GLOBAL INNOVATION AT SCALE: ROBUST STRATEGY. DELIVERING IMPACT," the Ontario Life Sciences Corridor, which includes the Toronto, Hamilton and Waterloo region, represents the ideal host location for AURP's 2022 International Conference. The Ontario life sciences and innovation corridor has a diverse ecosystem with a combination of start-ups, step-ups and established multi-national corporations with leading researchers and innovators who have pioneered transformational discoveries within the region and the world.	Alex Muggah (Synapse)
Building a better doctor: Entrepreneur Kelly Dore devised a way to measure the emotional intelligence of med school applicants (Hamilton Spectator, Mar 21, 2022) Kelly Dore, an associate professor in the departments of medicine, obstetrics and gynecology at Hamilton’s McMaster University helped devise a test which provide valuable information that can’t be captured by GPAs or MCAT scores. They demonstrate a student’s capacity for empathy. They point to morality and to judgment. And they provide the foundation for the kind of emotional intelligence that Dore feels defines an effective doctor. She wanted to reward that intelligence in med school candidates — while also making the entire application process more accessible and less prone to bias. Dore and oncology professor Harold Reiter founded Altus Assessments in 2014 to both make that statement and actually measure those skills. There is ample research that suggests the better a physician’s communication and interpersonal capabilities, the better a patient’s outcomes: the patient is more likely to share relevant information about their health problems, leading to a more accurate diagnosis, more appropriate treatment, and better adherence to whatever medical plan is put in place.	Alex Muggah (Synapse)

Discussion	Presenter
Drawing upon her background in cognitive psychology and health education, as well as research in professionalism and situational judgment, Dore helped create a test for social intelligence called Casper. Video-based scenarios might delve into work-life balance or personal sacrifice or an ill-advised social media post. Each of the 15 scenarios brings with it three questions, which applicants have just five minutes to answer. Altus's solution: a diverse group of raters, trained in implicit bias, each scores a different one of the scenarios, which have been tweaked over the past decade to adjust for power dynamics and cultural sensitivities. The students' answers are scored across 10 metrics, including professionalism, resiliency, motivation and ethics.	
McMaster Innovation Park and IMPACT at UCalgary Announce MOU to Enhance Access to Clinical Trials for Life Sciences Ventures For Life Sciences venture companies, health-related innovations ready for clinical trials are being accelerated, through a Memorandum of Understanding between McMaster Innovation Park (MIP) and the Integrated Management Platform to Accelerate Clinical Trials (IMPACT) at the University of Calgary (UCalgary). The MOU facilitates access to the leading-edge IMPACT clinical trial program for MIP tenant life sciences ventures, while providing opportunities for growing UCalgary IMPACT ventures to advance toward commercialization and manufacturing at MIP. IMPACT assists ventures with the timely initiation and completion of clinical trials vital to the licensing and commercialization of health-inventions in the domestic and international markets. Dr. Karen Mossman, McMaster University's Vice-President, Research and Chair of MIP's Board of Directors says "collaborations are critical to maximizing our innovation potential. This partnership will provide significant opportunities for our researchers and innovators and advance our capacity to commercialize our life sciences discoveries."	Alex Muggah (Synapse)
Biomedical Discovery & Commercialization (BDC) Engage Symposium, April 8th As a supporter of the Biomedical Discovery and Commercialization program, it is our pleasure to extend an invitation to our annual BDC Engage Symposium taking place virtually on Friday, April 8th. The purpose of the symposium is to celebrate the learning and achievements of the BDC students. The morning session will highlight our third-year undergraduate students and the afternoon session will highlight our Master's students. We expect 150 guests including students, faculty members and community partners. The Symposium will take place over Zoom. Please see the event page to learn more about the BDC Engage and see the agenda	Jennifer Crane (McMaster)
Live from Canada & McMaster Innovation Park: The Future of Biomanufacturing Join the CENE and MIP for "Live from Canada: The Future of Biomanufacturing", which is the first CENE event to be held live from Canada at McMaster Innovation Park in Hamilton, Ontario. If you aren't able to attend in-person we welcome you to join via Livestream. With a renewed commitment to biomanufacturing, Canada is a great option for companies interested in building or expanding their biomanufacturing capabilities. At this event you'll learn about the plans for biomanufacturing development in Hamilton with a case study of a cross-border company that has successfully implemented this biomanufacturing strategy. This event if free and open to the public but registration is required. RSVP here.	Lindsay Aldworth (CENE) & Jonathan Hunt (MIP)

Discussion	Presenter
For homegrown medical technology startups, Canada is a tough market to break into (Globe and Mail, March 22) Intellijoint Surgical Inc. is one of Canada's leading medical device startups. The Kitchener company's navigational tools are used by surgeons in 15,000 procedures annually to help improve outcomes of hip and knee replacements, mainly in the U.S., Australia, New Zealand and Japan. And the company was named Canada's fastest-growing technology startup by Deloitte in 2020. Yet despite developing its technology with the help of 12 Ontario orthopedic surgeons and receiving Health Canada approval in 2015, Intellijoint has never made a sale to a public hospital at home – until now. On Tuesday, the company will reveal it has sold its flagship product, Intellijoint HIP – which includes a mini-camera, laptop and instruments to aid with the accurate positioning of implants – to Toronto's Humber River Hospital at a news conference Ontario Premier Doug Ford is set to attend. But circumstances behind the sale speak to a chronic problem facing domestic medical technology innovators that one deal won't solve: a lack of demand for new medical technologies from publicly funded hospitals and health authorities in Canada. Funding for the six-figure purchase of Intellijoint equipment and enough disposable items used during surgery (screws, discs, reflective markers and sterile drapes) for 1,200 procedures – two to three years' worth – is not coming from Humber's operating budget. Rather the funds were raised by its foundation at the behest of Humber surgeon Dr. Sebastian Rodriguez-Elizalde.	Alex Muggah (Synapse)
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)

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
Want to Connect with your Ecosystem: Check out the Synapse Health Ecosystem Directory 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	Alex Muggah (Synapse)
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 • 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	Andrea Johnson (Mohawk College)
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)

Discussion	Presenter
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 project will be evaluated to determine if McMaster has the capabilities and capacity to perform the required testing.	Gay Yuyitung (MILO)
Hamilton-based technologies available for licensing 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. 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	Glen Crossley (MILO)
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/	Michael Jones (Synapse)
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.	Annie Horton (Innovation Factory)

Discussion	Presenter
Government Call 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. • 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.	Innovation Factory & Synapse Consortium

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)