

Time allotted | 20 Minutes

Topic: **Guest Speaker Discussion**

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

Guest Speaker Discussion
<p>Guest Speaker(s):</p> <ul style="list-style-type: none">• Dr. Nick Hopkins Chief Scientist Jacobs Institute, Buffalo, NY• Topic: Jacobs Institute - Creating Innovation Space in Neuroscience & Stroke [presentation slides, available for download in Health Check-up drobox folder]
<p><i>[the following is a synopsis of the discussion, and has been lightly edited for length and clarity]</i></p> <p><u>Introduction</u></p> <p>Thank you for inviting me to say a few words about what we're doing in Buffalo –I'm excited to share this with the Hamilton community. My hope is that it might it generates more cross-border relationships. I'm almost Canadian, I live in Canada during the summer (having spent 11 summers in Temagami). What your community has put together here in Hamilton is what we need to do in Buffalo. We have lots of pockets of innovation around the Buffalo Niagara Campus – but we need people to pull the innovation community together.</p> <p><u>Discussion</u></p> <p>Everyone here probably knows about the impact of cardiovascular disease. It is what kills everyone.</p> <p>A few words about stroke - the projected number of strokes is going up, both in Canada and the US. The treatment of stroke is following interventional cardiology. Everything that we learned decades ago, we're learning about stroke now – to put it simply, a stroke is just a blocked artery in the brain. The only difference is the sensitivity of the tissue in the brain. The question is how we can treat it quickly. We're trying to save the penumbra (old word for shadow) – which depends on the patient's circulation. Following a stroke there may be a large or small area that is gone – so the question is can we save the area around it.</p> <p>Stroke has been around for a long time. It was defined in 460 BC, but it took 2015 that we fully understood that opening the blocked artery is the treatment of choice. The most important study was ESCAPE – which included principal investigators out of Calgary. It demonstrated that all the way out to 12 hours, you could treat stroke.</p> <p>How do we recognize stroke – we can see it (e.g., people can't talk, are paralyzed). However, immediately after a stroke almost everyone loses the ability to recognize that they've got something wrong with themselves. They lose their cognitive ability (ie.g., "my arm was paralyzed, but I thought it would go away..."). It's up to us to diagnose it.</p>

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We can now use CT scans to check for strokes. Only if the blood volume is completely gone can we make determination that the brain is dead. The important thing that we learned, is that time = brain. We lose millions of neurons every minute. If you look through recent studies (again, in 2015), that if you can open the artery within two hours overall (2-hour goal), you can get a 90% recovery, if in 6 hours, it's 20-25% recovery.

What do we do if we see a blocked artery – we just open it up. Conceptually it's really simple, just get the artery open. The older technologies work, but now what we're doing mechanical thrombectomy – removing the clot. We use a stentriever to go in and take the clot out, or we suck the clot out, or a combination of the two. What we've discovered in stroke, that if it's small vessels in the outer edge of the brain, then lytic works – but not if they are the major vessels in the brain.

There is a huge change coming in the health system. We have patient and physician awareness around time to treat, yet there is inertia that is preventing change to how we deliver care. When you had a stroke, it used to be that we called neurology – and now you call the interventionalist and get the artery open as fast as possible. With more than 16 million strokes happening world-wide, the focus is now the 2-hour goal, with intervention as soon as possible.

What else do we need for stroke? Better technology and improved systems of care, improving how quickly we can get a stroke patient with a needle in their groin.

From the time you get a CT scan, the onset, to reaching the door of the emergency room can be up to an hour for patients. The delay of the diagnosis from CT to when you've got the artery open, is what we're working on closing. At the Jacobs Institute, we're working with Cannon to create a CT scan-angiogram device – so now we don't take patients off the table, we just put a needle in once we've got the CT scan in showing the stroke.

We built the Jacobs Institute (alongside the [Gates Institute](#)) as our shot at driving innovative delivery of cardiovascular treatment. The key is that we've got the cardiovascular system working together – combing neuro, cardio, thoracic and vascular. Putting them all together, because they use the same “highway”.

So why did we build this centre in Buffalo? We saw a high degree of incidents of cardiovascular stroke in Buffalo – we think that it may be chicken wings (!). The ultimate irony of course, is the Jacobs Institute lies in the shadow of the home of chicken wings.

Critical to the success of the Jacobs Institute is ensuring that it is 1) freestanding; 2) connected to hospital; 3) physician led; and 4) focused on innovation. As clinicians we all work in our own individual silos, and don't interact as much as we should. Our goal at the Jacobs Institute is to break down the silos, and build new care delivery paradigms. When you finish a surgery, you come out and then have cardio meet up with neuro surgeon – to think up new procedures over coffee. For example, one day 6 years ago, one of our neuro guys was talking to a cardio guy, and he suggested going down the carotid artery, which hadn't been done before – a straight shot to the blockage, with the entire procedure taking 14 minutes – which allowed for improved treatment.

The architect of the Jacobs Institute conceived of the physical layout as a “club sandwich”. We build the Cannon Stroke and Vascular Research Centre on the top floor, the Jacobs Institute on the 3rd floor, cath labs on the 2nd floor, and the vascular operating rooms on the 1st floor, alongside a hotel with 62 patient rooms. We got Cisco to build a conference centre between every cath lab and the patient room – so doctors can videoconference with the family down below. All of this is to drive communication and create collision.

The core concept was to put all of the cath labs on the same floor – there are 15 interconnected cath labs in a circle around a central meeting space where physicians can collide and interact with each other.

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We envisioned the Jacobs Institute as a not-for-profit innovation centre. The university was initially confused about the level of independence we required, but now the engineers and B-School students are rotating through the Institute. We created a space where entrepreneurs can develop a new product, without red-tape, without cost. The Jacobs Institute doesn't take a stake in companies intellectual property – we're focused on collisions, cooperation and collaboration.

When we get to the point where we make a prototype – we bring in the Buffalo University engineering school. But they don't get any IP, just the experience. Then we beat up the prototype in simulation, models, animal models – interestingly, with 3-D printers, we need animals less and less. We attempt to take the risk out of development and create value for the innovator. This is possible since the whole innovation cycle can take place in our building.

What makes it unique? We are independent of large organizations, so there is no bureaucratic overhang. We only take ideas to proof of concept stage, and then will lateral the idea to an accelerator who can advance it into market. We take a few percentage of the company if they are successful – so that we can be financially sustainable – and don't charge if we collectively decide to walk away from an idea that isn't yet ready for market.

Separately, the Jacobs Institute does TAVRs training for Boston Scientific. We also train the FDA regulators, who value our independence, and the chance to test products *in situ*. We're also developing expertise to test devices and train physicians on 3-D anatomy flow models – building a 3-D anatomy model from your CT-angiogram scan, and now we can run a device through 4 or 5 practice runs before using it on a patient.

Question & Answers

Question: How can a company get involved with the Jacobs Institute?

You can connect with the Jacobs Institute through Alex at Synapse (Alex.Muggah@SynapseConsortium.com), or reach out to us directly. We have a vascular focus, but our dream is that this building and the Jacobs Institute could become a launch pad for innovative Canadian startups that want to get going in the United States. We don't have lot of financial resources, but we have significant networks and contacts across the US – including in Silicon Valley, Boston, Minneapolis.

Our real goal, is to develop medical technology in our region. We've talked about raising funds to get started on this. [Scott Friedman](#) is working on developing start-up funds for companies that don't have those initial resources. From idea to product – it's usually a couple years of sweat equity and a couple millions of dollars – and then they hit the valley of death (95% failure rate). We want to reduce that risk. But once we've got the proof of concept, it's how do we launch a new company – there are few outlets in the States and Canada to find that exit for small companies.

Question: Talk me through how companies give up a share of their company. What about companies that have gone through pre-clinical trials?

We're interested if you're a company, have got a great idea and it fits with our program. We would work out a program (say 12-18 months), with the expectation it would consume a certain level of Jacobs Institute resources. If the idea gets to proof of concept, we'll take a small percentage of the company (e.g., 5%). We are comfortable with companies jumping in at any point of the development process – we would want a smaller share, but we need some way to keep it stable and financial.

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Question: There is a cost of the trials and researchers. Does Jacobs Institute over that?

No, we don't have resource to pay for that. It will be our contribution that gets you to proof of concept that is how we add value. That said we have the capabilities to do first in human study trials.

Question: If we bring an idea to the Jacobs Institute – how much money do we need to initiate the Jacobs process?

It doesn't cost anything to start it. If we start it and it gets to step 4 but we say "stop" – then no harm no foul, we don't charge you anything. The money to start the innovation process is coming from philanthropy to fund these projects. We see the Jacobs Institute as the sequel to Stanford Entrepreneur program, to avoid having to go to an accelerator out on the west coast – where you'll lose 40% just walking through the door. We wanted to create a business model that works that will compete with the west coast. Our return is getting 5% of the home-run idea.

Question: We're inviting vascular surgeons to Hamilton. And we have a large clinical cardiovascular trial institute. But we haven't brought it all together. Can you say a few words about your journey?

McMaster University is the centre for trial management in the world. The process – you need to buy some kneepads, because you'll be begging people to come in and play.

In Buffalo we had a hospital which was old - where I spent a lot of my career - and it was determined the city was over-bedded. We were given \$65 million to close the hospital (Gates Vascular centre is only out-patient beds) and we convinced the hospital that this was the way to go. The hospital got on board, and we raised another \$125M from HUD. We were missing a research centre, so as I was looking for philanthropic dollar NY State dropped \$125M on the university for a clinical and translational research centre. The NY State Department of Education is worlds apart from the Department of Health. We were able to get them together and see how they could combine their investment to build on each others mandates.

We also needed a major vendor in the game – which was Toshiba (now Cannon), and we convinced all the doctors to use this technology. By consolidating all of the technology, we saved \$14 million by combining all the vendors. And Cannon is all-in on this partnership. We started a leadership forum, to have all the cardio-vascular leaders meet every 4-6 weeks.

Our building is now a condominium – bringing people together. Don't see why you can't build something better here in Hamilton. We've had people from all over the world coming to see it and duplicate it (e.g., Philadelphia, Osaka, Minneapolis, Dallas, etc.). We would be happy to host a visit for Canadian government and yourselves.

Question: As Canadian company looking to enter into the US market – using Buffalo as an entry point may not attractive. What kind of value does your network across the United States bring?

Jacobs Institute provides a means for investors to leverage the brain trust in Buffalo. You're asking questions that we would need to dissect with the specific company. Understanding what is needed, and where it needs to do done. We could then collaborate to identify which connections you'll require and activate them. There are technical areas where Buffalo not the right place. But in vascular (cardio, neuro, etc.), we've got pretty amazing connections – and can leverage them connections to help start-ups and scale-ups.

Time allotted | 20 Minutes

Topic: **Communicate**

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

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<p>The Forge is hiring an Incubator Manager</p> <p>This is an exciting role, for a high-energy person keen to work hands-on with McMaster/Hamilton startups and grow the ecosystem at the grassroots. Experience with entrepreneurship is a huge asset. Some travel is required. It's a 1-year contract to start with potential to extend. For more information, please contact visit the hiring site</p>	<p>Monika Yazdanian (The Forge)</p>
<p>Synapse has created the Hamilton Innovation Partnership Portal (HIPP) to make the process simpler and more streamlined to find new partners within Canada's leading health research and educational ecosystem.</p> <p>It is a way for companies to interact with the Hamilton community. A streamlined approach, to have Synapse represent everyone. We've set up an intake form, and have asked companies to direct them to the portal. Synapse is working with HHS to test it out with companies right now, including getting the approach/questions right. This will be a sense of who wants to interact with the community, and then triage companies to relevant stakeholders within Hamilton.</p> <p>Portal is online through the Synapse website: http://synapseconsortium.com/partner/</p>	<p>Andrea Lee (HHS)</p>
<p>Innovation, Commercialization & Entrepreneurship Events hosted by Michael G DeGroot Initiative for Innovation in Healthcare (MGDII)</p> <p>Several events coming up in the fall. These workshop events are divided across four different types of series. All are welcome to attend:</p> <ul style="list-style-type: none"> • Breakfast & Learning: pick up new knowledge about current issues and trends relevant to the healthcare industry • Innovator series: in-depth discussions with emerging and existing innovators. Relevant for anyone curious about health innovation, including those who are not innovators or entrepreneurs • DevTank meeting: small, focused group discussions on particular business issues. Suited for researchers and innovators thinking about pursuing commercialization activities, or who have a project and is skill building • Innovation Sprint: the 2nd annual competition open to all students. Working with St. Joseph's Healthcare's Integrated Comprehensive Care (ICC) model to identify new ideas and solutions to improve the delivery of care through the ICC <p>Sign up through the MGDII Eventbrite page or contact Sarrah Lal: sarrah@mcmaster.ca</p>	<p>Sarrah Lal (MGDII)</p>
<p>Christmas In The Park (Dec 5)</p> <p>Celebrate the holiday season with friends, associates and fellow professionals at the McMaster Innovation Park. Enjoy delicious hors d'oeuvres, sample sweet treats and enjoy a complimentary beverage. RSVP to cwiseman@mcmasterinnovationpark.ca</p>	<p>Cori Wiseman (MIP)</p>

Discussion	Presenter
<p>Better in Toronto: Neuroscience Event (Dec 5)</p> <p>Ontario Chamber of Commerce and TOHealth!, in partnership with the Ontario Brain Institute and presenting sponsor Biogen, are bringing together speakers including scientists, clinicians, entrepreneurs and companies working in the field of neuroscience, who are bringing their world-class work to patients around the world. This event will feature an exciting panel discussion about the neuroscience opportunity for the Toronto Region. To learn more, click here</p>	<p>Alex Muggah (Synapse)</p>
<p>Ontario Trade Mission to Biotech Showcase, January 7-9, 2019</p> <p>The Export Services Branch of the Ontario Ministry of Economic Development Job Creation and Trade, is organizing a trade mission to San Francisco which will be able to accommodate a maximum of eight Ontario companies. The Biotech Showcase is an investor-focused partnering conference with the objective of offering private and public biotech companies a unique opportunity to meet with investors and biopharmaceutical executives. The 2019 event is expected to attract over 3,600 participants, and 900 investors from 50 countries.</p> <p>Members of the Ontario delegation can meet one-on-one with investors and potential partners, take the pulse on the latest biotech investment trends, hear from investment and company executives, present their company's value proposition to investors, and network with peers and potential partners. In addition, San Francisco is hosting the JP Morgan Conference during this period, which will provide participants with additional networking opportunities around town.</p> <p>For more information, please reach out to Patricia Cosgrove (Area Director, Health Industries/USA) before the application deadline of October 5th if you're interested in learning more: Patricia.Cosgrove@ontario.ca</p>	<p>Carolynn Reid (City EcDev)</p>
<p>2019 Innovation Nation Conference & Student Innovation Showcase (Jan 20, 2019)</p> <p>To learn more about the conference, attend, or enter the showcase please visit at: http://www.innovation-nation.ca</p> <p>You can also send names and contact information directly to Debra Vivian if you would like to register. Interested students need, names, a brief outline of the exhibit and a photo of the exhibitor(s) and/ or the project to be showcased.</p>	<p>Debra Vivian (CSii)</p>
<p>The Greatest Show – Hamilton Health Sciences Foundation Gala (March 2, 2019)</p> <p>Be a part of The Greatest Show and support one of the top research hospitals in Canada</p> <p>Join 500 business leaders, executives and health care professionals from across south-central Ontario as we celebrate and raise funds for innovative research projects across Hamilton Health Sciences, recently ranked in the top three research hospitals in Canada. Guests at The Greatest Show will be amazed by the talented cast of entertainers set to perform, including Montreal Rhapsody Orchestra who are back by popular demand. Are you ready to dance the night away?</p> <p>The Gala is expected to SELLOUT, so those interested in sponsorship packages, securing tables, or tickets, please contact: Tamara Pope, 905-521-2100 ext. 43744 or Milaina Wright, 905-521-2100 ext. 76787</p>	<p>HHS Foundation</p>
<p>Clinical Trials Ontario Conference 2019 (March 26-27, 2019)</p>	<p>Alex Muggah (Synapse)</p>

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<p>The dates for the 2019 CTO conference have been set. Clinical Trials Ontario is an independent not-for-profit organization established with support from the Government of Ontario. Our mandate is to provide a streamlined approach to conducting multi-centre clinical trials in Ontario, while maintaining the highest ethical standards for participant protection.</p>	
<p>Technology & Future of Healthcare 2019 (May 8, 2019)</p> <p>Hamilton Academy of Medicine is proud to be hosting the inaugural hosting the Technology & the Future of Health Care Conference (TFHC2019), bringing together innovators and clinical care experts with emerging healthcare technologies to determine the best path forward in the future of health care. Attendees will learn how technology will impact the future of health care and what new and existing technology they can incorporate into their practices today. To learn more or to register, click here: https://tfhcconference.com/</p>	<p>Dennis Divalentino (Hamilton Academy of Medicine)</p>
<p>Medical Imaging Informatics and Teleradiology Conference (May 10, 2019)</p> <p>The Hamilton-based Medical Imaging Informatics and Teleradiology (MIIT) conference focuses on emerging technologies and practices for acquiring, processing, managing, accessing, and sharing medical images, along with topics driving changes in relevant policies within Canada. This annual conference brings together experienced speakers to address challenging topics in the field of medical imaging informatics and provides a unique opportunity to approach the experts and find answers to questions and issues.</p> <p>The MIIT Conference is intended for an audience of professionals and students in engineering and computer sciences, health informatics (PACS Managers, DI Managers, IT Professionals, CIO/CTOs), health care provider (Radiologists, Technologists, Physicians), and industry roles.</p> <p>To learn more, visit the conference website</p>	<p>Alex Muggah (Synapse)</p>
<p>Call for Abstracts: e-Health Conference and Tradeshow (May 26-29, 2019)</p> <p>Digital Health Canada has put out a call for those interested in submitting an abstract for presentation at e-Health Conference and Tradeshow. Contact Health Program Chair Scott McMillan or Conference Coordinator Yurim Park to get more information at: events@digitalhealthcanada.com or 647.775.8555</p>	<p>Alex Muggah (Synapse)</p>

Time allotted | 20 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.

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<p>Synapse engages companies and organizations from outside the region that may be interested in engaging with the Hamilton ecosystem – including those that are seeking to establish a presence in Hamilton or that wish to partner with Hamilton resources and capabilities.</p> <p>For more information about upcoming engagement, or for assistance in hosting inbound visits that may be of interest to the broader community, please contact Alex Muggah: Alex.Muggah@SynapseConsortium.com</p> <p>Recent visits to/from Hamilton:</p> <p><u>Presentation @ Consider Canada Cities Alliance (Nov 2nd)</u>: Synapse supported the City Economic Development Agency in showcasing the Hamilton community to 10 new Investment Officers that have been hired by our federal partners as part of “Cross Canada City Tour - Getting to Know the Regional Ecosystem”. The focus was on Hamilton’s Advanced Manufacturing & Life Sciences sectors, where several organizations (e.g., MIP, BAHT) came together to showcase the strengths and opportunities of your respective organizations.</p> <p><u>Canada Trade Commissioner Service - Ontario (Nov 9th)</u>: three Trade Commissioners, with focus on life sciences, visited Hamilton to learn more about what is happening in the city. The Trade Commission Service is focused on providing support and guidance to companies seeking to enter new markets – including tapping into networks across more than 190 offices world-wide. While here they met with the Hamilton Economic Development Agency, several companies and some key members of the ecosystem.</p> <p><u>Ohio State to Hamilton (Nov 15-16th)</u>: Synapse hosted Dr. Michael Ackerman’s, a world-renowned expert in areas of health innovation, infection-control and sepsis, Dr. Ackerman is the Director of the Masters in Healthcare Innovation and Professor of Clinical Nursing at Ohio State University. While in Hamilton, Dr. Ackerman met with interested parties across Hamilton (e.g., School of Nursing, St Joseph’s, and Hamilton Health Sciences), as well as delivering two talks on (1) sepsis guidelines and controversies and (2) innovation based practices in healthcare.</p> <p><u>Dr. Nick Hopkins, Jacobs Institute (Nov 26th)</u>: visit from world-renowned neurosurgeon from one of the US’s leading cardiovascular research centres located in Buffalo. While here, Dr. Hopkins was able to explore collaboration opportunities with a variety of key stakeholders, including a VPs at Hamilton Health Sciences, the VP Partnerships of St. Joseph’s Healthcare, Pls from the Population Health Research Centre, as well as interventional cardiologists and neurologists.</p>	<p>Alex Muggah (Synapse)</p>

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<p>Upcoming site visits to/from Hamilton</p> <p><u>Upcoming: Bioscience Company Site Visit (Dec 5-6th):</u> Massachusetts-based company visiting Hamilton to explore interest in establishing a commercial presence in the region. Company focuses on developing a new modality of medicines – monoclonal microbials. These products are orally delivered and intended to modulate systemic immunology and biology through direct interactions with human cells in the gut. They believe they have the potential to be broadly applicable across many diseases – including autoimmune, immunoinflammatory, metabolic, neurological, neuroinflammatory diseases and cancer.</p> <p><u>Upcoming: Federal Announcement of New Space for Innovation Factory/Forge (Dec 7th):</u> the community is welcome to join our Federal partners in celebrating the announcement of a new home for The Forge and Innovation Factory on the first floor of the McMaster Innovation Park. The combined space will dramatically increase the footprint of Hamilton’s regional innovation centre and campus-based accelerator, enabling both to expand their impact across the community. The space is expected to be open to the public in 2019.</p>	
<p>The Forge & MGDII: New Entrepreneurship Website</p> <p>The Forge, along with the McMaster Initiative for Innovation in Health (MGDII) have launched the McMaster University's online entrepreneurship hub. As one of Canada's most research-intensive universities, McMaster is proud to be home to a thriving community of innovators and entrepreneurs. If you want your innovation to make an impact, or if you just want to learn more about McMaster's exciting startups and spinouts, visit the site at: https://entrepreneurship.mcmaster.ca/</p>	Sarrah Lal (MGDII)
<p>A piece by Duane Bender, the new CTO of Hamilton Health Sciences, outlines his thoughts on the future of digital health in our hospitals, and outlines his digital health plan which will drive modern IT systems into the hospital that will enable a truly mobile workforce, provide timely information to patients and clinicians, and plant the seeds for advanced analytical capabilities such as machine learning and artificial intelligence. It is clear that HHS is prepared to invest in digital technology in ways that will provide that experience to our community in the not-so-distant future.</p>	Duane Bender (HHS)
<p>Globe and Mail: Hamilton Capabilities 2018</p> <p>Perspective Marketing, in concert with Hamilton Economic Development agency published an insert in the Globe and Mail: Perspective Hamilton 2018. Highlights include Hamilton Health Sciences (HHS) which has been ranked among the top three research hospitals in Canada, as announced in November by Research Infosource Inc. Read more about the assets and resources in Hamilton here</p>	Ed Martin (Perspective Marketing)
<p>e-Health 2019 (May 26-29)</p> <p>City of Hamilton has reserved a booth at the e-Health Conference, which includes 4 registrants at e-Health 2019 at the Beanfield Centre in Toronto.</p> <p>With over 30,000 employees, 2,500 researchers and over 690,000 square feet of lab space dedicated to the healthcare sector, Hamilton has the resources needed to support digital health innovation. Hamilton’s digital health expertise, including Mohawk College - Canada's</p>	Carolynn Reid (EcDev)

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<p>2nd most research-intensive college, McMaster University - Canada's most research-intensive university and Hamilton Health Sciences - Ontario's second-largest hospital network.</p> <p>Please reach out to Carolynn Reid (Carolynn.Reid@hamilton.ca) if you'd like to participate in Hamilton's engagement at e-Health 2019.</p>	
<p>Changing the way we search for antibiotics – with a \$200, 3D-printed box</p> <p>McMaster innovators have developed the Printed Fluorescence Imaging Box – or PFIbox, for short –capable of collecting massive amounts of data that will help researchers in the Michael G. DeGroot Institute for Infectious Disease Research in their quest to discover new antibiotics. The box allows scientists to analyze more than 6,000 samples of bacteria at a time. The researchers have made the PFIbox's code open source and available to anyone who wants to use them.</p>	<p>Alex Muggah (Synapse)</p>
<p>McMaster & Mohawk – Top Post-Secondary Research Centres</p> <p>McMaster University recognized as Canada's most research-intensive university for the second straight year by Research Infosource Inc. Adding to this good news, Mohawk College was recognized as Canada's most industry research intensive college by Research Infosource Inc.</p> <p>Having two of the top post-secondary institutions in Canada for research points to the phenomenal programs and talent coming out of Hamilton and will work to boost Hamilton's international recognition as a research and commercialization capital in Canada.</p>	<p>McMaster Industry Liaison Office (MILO)</p>
<p>SR&ED vs IRAP: An R&D Funding Comparison & Analysis</p> <p>Hamilton's Economic Development Agency has done an R&D funding comparison and analysis of two popular funding programs: the Scientific Research & Experimental Development (SR&ED) tax credit and the National Research Council's grants through the Industrial Research Assistance Program (IRAP). Both programs should be considered by any Canadian incorporated business that carries out internal R&D activities.</p> <p>To learn more about which program would be a good fit for your research projects, follow this link.</p>	<p>Hamilton EcDev</p>
<p>JLABs - Johnson & Johnson Innovation Quick Pitch (Dec 7th)</p> <p>In an effort to unearth the unseen and brightest innovations in healthcare, Johnson & Johnson Innovation is launching a Quick Pitch event where innovators can apply to present to Johnson & Johnson Innovation's leadership during the week of the 37th Annual JP Morgan Healthcare Conference in San Francisco, CA.</p> <p>Focus areas: Pharmaceuticals Consumer Medical devices Vision care Cross sector lung cancer Global public health</p> <p>Submission deadline: December 7, 2018</p>	<p>Breanne Halyk (JLABs)</p>
<p>OBIO Capital Access Advisory Program (CAAP) Next Round</p> <p>Next round of the CAAP commencing in April 2019 (press release). Submission deadline for CAAP applications (via this link) is Friday, December 14th, 2018 at 5pm.</p> <p>Guided by international steering committee of investment and business experts, CAAP:</p>	<p>Klaus Fiebig (OBIO)</p>

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<ul style="list-style-type: none"> • Provides advice & guidance on business goals, how to position for a successful raise, investor targeting and introductions, and access to experts with business scaling know how. • Drives fundraising success for health science companies (therapeutics, diagnostics, medical device, digital health) looking to raise post-seed funding. • CAAP companies are invited to participate in several targeted OBIO events. including events organized around key investor conferences <p>Additional info about CAAP and this year’s application process is available here Information Teleconference/webinar on Thursday, December 6, 2018 at 12:00 noon, register here. E-mail inquiries to Dr. Klaus Fiebig at klausfiebig@obio.ca.</p>	
<p>2019 Manning Innovation Awards (Deadline December 17)</p> <p>Successful Canadian innovators who are improving the lives of Canadians and others around the world through your commercialized innovation are invited to consider nominating themselves for a Manning Innovation Award!</p> <p>Since 1982, The Ernest C. Manning Awards Foundation has been creating a culture of innovation in Canada by discovering, celebrating and rewarding Canadian innovators of all ages. There are several prizes, with 4 awards of \$100,000, \$25,000, \$10,000 and \$10,000.</p> <p>The rules of eligibility are as follows:</p> <ul style="list-style-type: none"> • Nominees must be Canadian citizens residing in Canada • Innovations must be successful, either commercially or among the intended end users <p>Innovations must be current and demonstrate elements in the following areas:</p> <ul style="list-style-type: none"> • Intellectual Achievement - The degree of intellectual achievement or quality of ingenious thinking and experiment to discover, create or conceive the innovation. • Uniqueness and Originality - Refers to the state of being original; the freshness of aspect, design or style utilized to produce the invention. • Development - Refers to the extent to which the idea or concept has been thought through to completion. • Commercialization - Refers to the degree of successful commercialization or quantifiable impact of the innovation (not forecasted or projected). • Benefits - Refers to the economic and/or social benefit to Canada resulting from the innovation. <p>For more information, including nomination forms, please go to: www.manningawards.ca or contact Southwestern Ontario Manning Innovation Awards Chapter Chair Gary Svoboda at gs@adventusresearch.com</p>	<p>Alex Muggah (Synapse)</p>
<p>Emerging Health Leaders Program!</p> <p>The Emerging Health Leaders (EHL) Program is a two-week, life-altering experience that will challenge your thinking and push you to become a better leader! If you are a student or young professional seeking to make a difference in the health landscape, enhance your leadership capabilities, and give yourself an edge when entering the world of work— EHL is the program for you!</p>	<p>Alex Muggah (Synapse)</p>

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Apply to take advantage of the Early Bird rate for Spring & Summer 2019 offerings of the program. EHL is an interdisciplinary program, welcoming students from all programs and faculties. Enrolment is limited. For more information, click here	
An interesting report was recently released by the Impact Center at the University of Toronto, called The Land of Straded Pilots . The report examines the shape of the health technology (health tech) industry in Canada with a focus on three specific questions: Does Canada actually have a problem with health tech commercialization? If so, how extensive is that problem? And what is causing it?	Alex Muggah (Synapse)
3i Ontario , lists grants, funding and partnership opportunities for life science companies. 3i Ontario is maintained by Azimuth Health Group, an Ontario Innovation Broker	Alex Muggah (Synapse)
<p>Yordas Group Workshops</p> <p>Yordas – recently located in Hamilton – is a leading provider of scientific, environmental, human health, global regulatory and sustainability consulting services. We have international capability with supporting offices and representation in North America, Asia and Europe, and commercial activities across 40 countries. They offer a wide range of training courses, including on Biocides, hazardous chemicals, OSPAR and REACH regulations.</p> <p>For more information, please contact Giselle Vincent: g.vincett@yordasgroup.com, Yordas Group Lead, North America</p>	Giselle Vincent (Yordas)
<p>Celebrating Engineering Design, Innovation and Entrepreneurship (Dec 10th)</p> <p>The community is invited to a public showcase of work in progress by graduate engineering students from the W Booth School of Engineering Practice and Technology at McMaster University, with Featured Speaker: Ty Shattuck, CEO, McMaster Innovation Park, who will be delivering a talk: "Designing an Innovation Ecosystem: An Ultimate Systems Engineering Problem."</p> <p>Select presentations will cover themes ranging from energy and transportation to health and wellness. They are representative of projects now emerging in Innovation Studio, a key component of the teaching and learning experience at the W Booth School. This year's iteration of the studio is being led by Dr. David Potter, an Associate Professor at the W Booth School specializing in leadership, innovation, entrepreneurship and creativity.</p> <p>To learn more or to register, click here</p>	Alex Muggah (Synapse)
<p>MIRA and Labarge Research Day, Poster Competition (Dec 7)</p> <p>The McMaster Institute for Research on Aging (MIRA), the Labarge Centre for Mobility in Aging and the Labarge Optimal Aging initiative will host the MIRA & Labarge Research Day to showcase research in aging from across McMaster University and recognize the generous donations of Chancellor Suzanne Labarge.</p> <p>McMaster researchers in aging are invited to submit a poster at the time of registration. McMaster trainees of all levels (undergraduate and graduate students and postdoctoral fellows) from all Faculties are encouraged to enter their poster in the trainee poster</p>	MIRA

Discussion	Presenter
<p>competition; a certificate and monetary award will be presented to the top poster in each trainee category.</p> <p>The MIRA & Labarge Research Day will be held at the McMaster Innovation Park. Registration is free and is now open.</p>	

Hamilton Health Innovation: Calendar Highlights

November

- Nov 27: [LSO's Annual Policy Forum, November 27th](#) (LSO)
- Nov 27: Emerging Trends in Biomedical Engineering (MGDII)
- Nov 27: [Capital | Talent | Tech with Harvey Foote, SE Health](#) (VentureLab)
- Nov 29: [Breakfast & Learn - Commercialization Plan 101](#) (MGDII)
- Nov 30: [Hamilton Project Showcase Fall 2018](#) (CityLAB)

December

- Dec 5: Christmas in the Park (MIP)
- Dec 5: [Better in Toronto: Neuroscience Event](#) (OCC)
- Dec 7: [MIRA and Labarge Research Day, Poster Competition](#) (MIRA)
- Dec 7: JLABS Pitch
- Dec 10: [McMaster W Booth School Innovation Showcase](#) (McMaster University)
- Dec 12: Emerging Therapeutics: Cancer Treatments (MGDII)
- Dec 13: [Ecosystems: Facilitating vs. Hindering Health Innovation](#) (MGDII)
- Dec 21: Health Innovation Devtank: Budgeting for Health Start-ups (MGDI)

January (and beyond)

- Jan 7-9: [Trade Mission to Biotech Showcase](#) (Ontario)
- Jan 20: [2019 Innovation Nation Conference & Student Innovation Showcase \(CSii\)](#)
- Mar 2: [The Greatest Show – Hamilton Health Sciences Foundation Gala](#) (HHS Foundation)
- Mar 26-27: [Clinical Trials Conference 2019](#) (CTO)
- Mar 26-29: [eHealth Conference 2019](#): Health Canada's National Conference & Tradeshow (ICS)
- Apr 1-5: [Toronto Health Innovation](#) (TOHealth!)
- Apr 3-4: [Canada's MedTech Conference](#) (MEDEC)
- Apr 29 – May 3: Hamilton Health Innovation Week (Synapse)
- May 8: [Technology & Future of Healthcare 2019](#) (Hamilton Academy of Medicine)
- May 26-27: [e-Health Conference and Tradeshow](#)
- June 3-6: [BIO International Convention](#) (Biotechnology Innovation Organization - BIO)