2020-2021

University of Toronto Entrepreneurship

Annual Report

U OF T ENTRE PRENEUR SHIP

UNIVERSITY OF TORONTO

Contents

A Letter from the Director

On behalf of the University of Toronto Entrepreneurship (UTE) community, I would like to thank you for your support over the past year and welcome you to our 2020-21 Annual Report. "It has been a year unlike any other" is a phrase we have grown accustomed to during the COVID-19 pandemic and while it describes the challenges and loss so many of us have faced, it also describes a year of triumphs and achievements for U of T innovators at a scale we have not seen before. The level of engagement in entrepreneurial activity is higher than it has ever been, despite (or more likely because of) the pandemic. Record applications for almost all cohort-based U of T accelerator programs were complemented by virtual programming that allowed speakers, mentors and investors to engage with the U of T community from anywhere on the planet. The pace with which companies that are connected to the U of T community achieve significant revenue and funding milestones, seem to increase each month.

Congratulations to the founders and teams behind companies including Ada, Atomwise, Deep Genomics, Notch Therapeutics and Xanadu who are disrupting their respective industries and, truly, only getting started. Entrepreneurship Week 2021 featured an inaugural Scaleup Showcase, celebrating 10 of these high-growth companies and giving their founders an opportunity to share advice with the next generation.

U of T has always played a leading role when it comes to innovating to improve our collective health and well-being. So, it should come as no surprise that during the 100th anniversary of U of T's critical role in the discovery of insulin, our entrepreneurs are leading the way in the battle against COVID-19—whether it be alumnus Derrick Rossi, co-founder of Moderna Therapeutics, or early-stage startups such as LSK Technologies, 16 Bit AI and MedEssist. The momentum behind our life and health sciences entrepreneurs is evidenced by the explosion of ventures participating in the Health Innovation Hub accelerator in the Temerty Faculty of Medicine, which has increased by an average of 25-30% over the past four years.

Evidence of U of T entrepreneurs creating social impact goes well beyond health matters and includes dozens of other areas, such as climate and sustainability, combating racism, eliminating poverty and feeding the planet. In fall 2020, we announced 18 recipients of the Lo Family Social Venture Fund, who received non-dilutive investment to address these and other challenges facing our global community.

Let's face it: events looked different in 2020-21. The ONRamp, UTE's 16,000 square feet of co-working and event space sat quietly for most of the year. But that didn't stop the UTE Community from delivering almost 100 events—a dozen of them during our fifth annual Entrepreneurship Week under a "business as virtual" banner.

Over 2,000 attendees participated in events ranging from a pitch competition celebrating International Women's Day, to the digital True Blue Expo, to marquee events such as the RBC Prize for Innovation and Entrepreneurship and RBC Speaker Series supported by our great partner RBC.

There were many other firsts for the UTE Community beyond a virtual Entrepreneurship Week, including:

- Launch of the Intellectual Property (IP) Education Program, which is helping to make IP literacy accessible to all students, researchers, faculty and alumni
- Inaugural Indo-Canadian Entrepreneurship Exchange (ICEE) event with partners at Indian Institute of Technology Bombay and Society for Innovation and Entrepreneurship in Mumbai
- Indigenous Entrepreneurship pilot program led by U of T Mississauga's home for social entrepreneurship, ICUBE, in partnership with RedBird Circle
- New partnerships with global peers in the innovation community, including XPRIZE and C100
- Introduction of a structured UTE Startup Perks program accessible to all entrepreneurs in the UTE community
- 300+ students, staff and alumni attending "Collision from Home," one of the largest tech conferences on the planet

The UTE community is a network of passionate individuals spread across three campuses and over ten U of T accelerators. At U of T, when we talk about acceleration, we talk about much more than the venture creation most often attributed to a startup accelerator. We believe in accelerating new ideas and technologies, accelerating social impact, accelerating personal development and talent. The programs and initiatives that constitute our ecosystem are as diverse as the community we support, and our impact is vastly greater than the sum of our parts. This is because there is no wrong door for someone who is curious, innovative, and eager to learn and create.

As the UTE community begins a new academic year, you can expect many more firsts and the momentum of the past year to continue building. This fall, we launched a new UTE website, featuring a startup job board, a branded toolkit that enables our companies to show their "True Blue" pride, and a robust set of new tools and targeted landing pages for investors and other stakeholder communities.

We are optimistic that as our campuses re-open, we will safely be able to welcome you back to the ONRamp with additional sanitization and health precautions in place. We plan to double down on our commitment to make the UTE community inclusive and welcoming for all, by introducing several new initiatives, including a tri-campus Black Founders Network.

Finally, we look towards 2023 and our new home in the Schwartz Reisman Innovation Campus, which will undoubtedly become one of the biggest hubs for entrepreneurial activity in the city. Our entrepreneurs were not the only ones who were busy during the pandemic; it has been exciting to watch this transformational new building grow from a hole in the ground just a year ago, into what will become a blank canvas waiting for our ecosystem to start innovating. I encourage you to join as we start to fill that canvas.

Jon French
Director, University of Toronto
Entrepreneurship

U of T is the place to innovate

At U of T Entrepreneurship, we believe that the purpose of innovation in society is to solve its most pressing challenges, improve people's daily lives and encourage prosperity locally and globally.

Our mission is to enable a diverse group of creative thinkers to move their ingenious ideas from conception to impact by capitalizing on U of T's global research capacity, our deep talent pool, and our unmatched entrepreneurship and innovation network.

U of T is Canada's leading engine for research-based startups and a global leader in transforming ideas into products and services that impact the world.

500+ startups
created in the past 10 years

$2 billion
in investment generated

#1
in Canada for research-based startups

Top 10
in university-managed incubators globally

5,000
jobs created

>> Learn more about U of T Entrepreneurship

Our Community

The University of Toronto Entrepreneurship community consists of 10+ accelerators across three campuses.

Our entrepreneurial initiatives leverage the numerous strengths of a globally recognized university to provide an incredible range of unique offerings to current or aspiring innovators.

We believe in entrepreneurship as a catalyst to accelerate:

- Entrepreneurial education to develop world-leading talent
- The adoption of new technologies
- Discussion around innovative ideas
- The participation of under-represented and racialized groups in our ecosystem
- The creation and growth of new companies for economic and social benefit

All photos in this report were taken prior to COVID-19.

U of T Accelerators

UNIVERSITY OF TORONTO
FACULTY OF ARTS & SCIENCE
Centre for Entrepreneurship

CREATIVE DESTRUCTION LAB

<DCSIL>
WHEREFOUNDERSAREMADE
Department of Computer Science Innovation Lab

Hi² Health Innovation Hub

ICUBE UTM

InnovED

Institute for Aerospace Studies
UNIVERSITY OF TORONTO

The BRIDGE
Business · Research · Innovation

The ENTREPRENEURSHIP Hatchery

TheHub

UTEST
UNIVERSITY OF TORONTO
EARLY-STAGE TECHNOLOGY

>> Learn more about U of T accelerators

U of T Entrepreneurship Week

In **March 2021**, the University of Toronto's entrepreneurial community and campus accelerators celebrated the positive impact that innovation and startup activity can have on our economy, health, and the planet. The fifth annual U of T Entrepreneurship Week featured 13 events, 48 speakers, 60 startups and $90k in prize money awarded to U of T ventures.

THE WEEK IN NUMBERS

1024
Attendees

60
Participating startups

47
Speakers

$90,000
Prize money awarded

2067
Social media engagements

41
Countries

448
Expo booth visits

1336
Expo booth interactions

#UofTEntWeek Highlights

True Blue Expo – virtual tradeshow with 40+ booths showcasing startups, U of T accelerators and community partners

Three **equity, diversity and inclusion (EDI) events**: Pitch with a Twist (ICUBE), Celebrating Leaders: Black Women in Business (The Hub), Fireside at FemSTEM (H2i)

RBC Speaker Series featuring keynote speaker **Derrick Rossi**, U of T alumnus, co-founder of Moderna Therapeutics and serial entrepreneur

Inaugural **Scaleup Showcase** featuring founders from 10 of U of T's fastest-growing companies

>> Watch the highlights from Entrepreneurship Week.

EVENTS

RBC Speaker Series: Biotech, Innovation and New Therapeutic Paradigms for Patients

With 200+ in the virtual audience, the RBC Speaker Series was the signature event of U of T Entrepreneurship Week.

Moderna Therapeutics co-founder, U of T alumnus and serial entrepreneur, Derrick Rossi discussed his journey as a biologist-entrepreneur and his thoughts on biotechnology innovation in conversation with BNN Bloomberg anchor, Amber Kanwar.

Q&A session with U of T biotech entrepreneurs and co-founders: Joella Almeida (MedEssist), Seray Çiçek (LSK Technologies) Natalie Galant (Paradox Immunotherapeutics) and Cameron Stewart (Mesosil).

>> Watch the RBC Speaker Series on demand.

Scaleup Showcase

The inaugural Scaleup Showcase featured 10 of U of T's fastest growing companies, which together have raised over $300M in investment and created more than 450 high-value jobs in Canada and abroad. The event was co-hosted by Helen Kontozopoulos, Chief Evangelist, ODAIA and Kurtis Scissons, Co-director of UTEST and Director of University Ventures, and featured the founders of the below startups.

erthos   ada   blueJ   OTI

KEPLER   HYPERCARE

AmacaThera   EBT medical   WINTERLIGHT   ODAIA

>> Watch the Scaleup Spotlight highlight reel.

EVENTS

Showcasing Equity, Diversity and Inclusion (EDI)

Pitch with a Twist

Hosted by ICUBE in celebration of International Women's Day, this business pitch competition provided a platform for women-identifying entrepreneurs to showcase their startups to an all-women panel. It distributed $20k worth of prizes.

Fireside at FemSTEM

This interactive conversation hosted by H2i featured Dr. Soror Sharifpoor, Director, Strategy & Translation, Ted Rogers Centre for Heart Research.

Celebrating Leaders: Black Women in Business

Presented by The Hub, this panel featured three extraordinary Black women in business sharing their journeys and their thoughts on the challenges facing society today.

>> Visit the UTE community events calendar.

RBC Prize for Innovation and Entrepreneurship

The RBC Prize is U of T Entrepreneurship's largest pitch competition of the year. Ten shortlisted startups from across the U of T ecosystem had only three minutes to speed-pitch their business idea to an impressive judging panel for $50k+ in prizes. These are the 2021 winners:

Early-Stage Winners

1st Place

Gerard O'Leary
CTO & Co-founder
NerveX Neurotechnologies

2nd Place

Meg Sharma
Co-founder
Elaya

People's Choice

Jeffrey Fasegha
Co-founder
Fyyne

Later-Stage Winners

1st Place & People's Choice

Avneet Ghotra
CTO & Co-founder
ALT TEX

2nd Place

Alex Gordon
CEO & Co-founder
Revolve Surgical

Award-Winning Entrepreneurs & Innovators

RBC Post-Doctoral and Graduate Fellowships

Five University of Toronto trainee researchers working on artificial intelligence, anti-cancer therapies, pandemic prevention and international learning were awarded RBC Post-Doctoral and Graduate Fellowships at this year's virtual Entrepreneurship Week.

2021 RBC Graduate Fellows

Harris Chan
PhD Candidate, Department of Computer Science and the Vector Institute
Research topic: Goal-Agnostic Exploration for Multi-Goal Reinforcement Learning

Amlan Kar
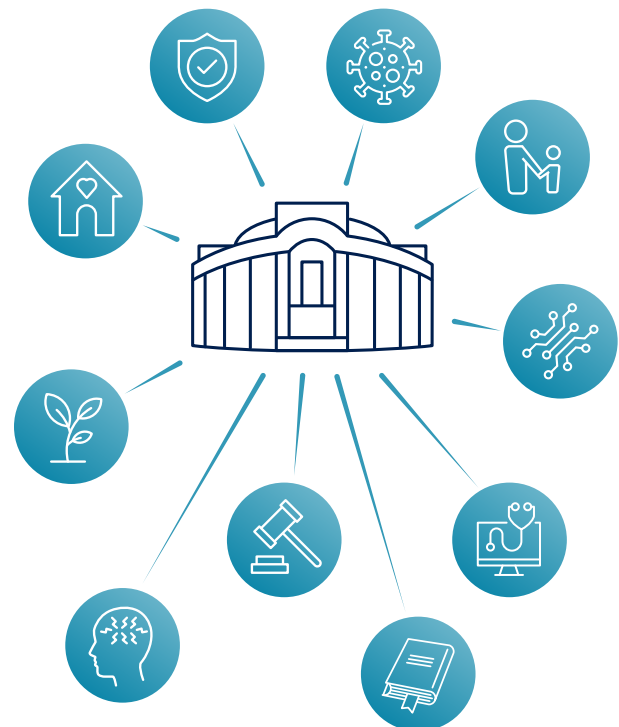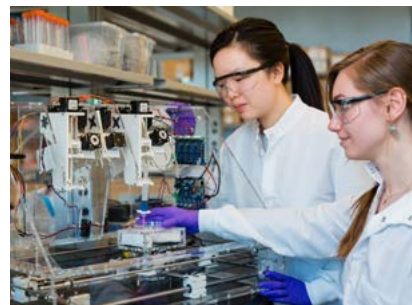*PhD Candidate, Department of Computer Science and the Vector Institute*
Research topic: Machine Learning for Machine Learning Data

Roshni Thawani
Master's Candidate, Faculty of Information
Research topic: Creating a digital application prototype to support international learning experiences

2021 RBC Post-Doctoral Fellows

Maxwell Farrell, PhD
Department of Ecology and Evolutionary Biology
Research topic: Predicting the severity of cross-species infectious diseases

Ilya Yakavets, PhD
Department of Chemistry
Research topic: Deep learning framework for self-driven development of combination cancer chemotherapies in a microfluidic spheroid-on-a-chip platform

>> Discover funding opportunities for entrepreneurs

Lo Family Social Venture Fund 2020 Winners

Established in 2020 through a generous $500k donation from Kenneth and Yvonne Lo and family, the Lo Family Social Venture Fund helps U of T students and recent graduates take the most promising, solutions-based social enterprises to the next level by providing support for student-driven ventures that will positively impact the global community—particularly in Asia. A total of 18 U of T students and recent alumni have been awarded up to $30k in funding. Among the recipients are some of U of T's most impactful founders who have developed innovative solutions ranging from sustainable textiles to affordable and portable electricity.

Yassine Bensaada
Alumnus, Biotechnology
Affiliation: ICUBE (UTM)

Divebox is a local resale marketplace that offers the convenience of local delivery and in-app payments. It is the easiest and safest way to buy and sell secondhand goods.

Sofia Bonilla
Alumna, Chemical Engineering & Applied Chemistry
Affiliation: ICUBE (UTM)

HOPE Pet Food is a meat-free sustainable pet food.

Seray Çiçek
Alumna, Leslie Dan Faculty of Pharmacy
Affiliation: Health Innovation Hub (H2i)

LSK Technologies makes a small device that can rapidly test for COVID-19 and other diseases at points-of-need, such as doctor's offices and workplaces.

Patrick Diep
Graduate Student, Department of Chemical Engineering & Applied Chemistry
Affiliation: The Entrepreneurship Hatchery

Indus is a new start-up striving to grow the future of food with engineered 3D-printed smart soil.

Jeffrey Fasegha
Alumnus, Rotman Commerce
Affiliation: ICUBE (UTM)

Fyyne is a mobile-first platform that allows beauty artists to run their businesses more effectively and efficiently.

Avneet Ghotra
Alumna, Department of Geography
Affiliation: ICUBE (UTM)

ALT TEX is a biomaterials startup, creating sustainable fabrics for eco-conscious fashion retailers through its closed-loop model.

Nancy Hamdy
Alumna, Department of Physiology
Affiliation: ICUBE (UTM)

Axonaly is a startup venture revolutionizing mental health and community care.

Zain Hasan
Graduate Student, Engineering
Affiliation: The Entrepreneurship Hatchery

Vinci Labs was founded with the simple but powerful vision of making quality healthcare accessible through the use of technology.

Shrey Jain

Undergraduate Student, Faculty of Applied Science & Engineering
Affiliation: UTEST

Flatten is a non-profit organization focused on developing agile, inexpensive and robust self-reporting participatory syndromic surveillance tool for the COVID-19 pandemic internationally.

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Jamie Lee

Alumna, Rotman Commerce
Affiliation: ICUBE (UTM)

Swate is a mobile app that provides recipe and meal plan recommendations to users by leveraging grocery inventory tracking so that individuals can use groceries optimally and decrease household food waste.

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Santiago Luna

Alumnus, Dalla Lana School of Public Health
Affiliation: Health Innovation Hub (H2i)

Augmented Reporting is an economical and easy-to-use cloud virtual clinical assistant that provides automatic echo measurement analysis and reporting.

....

Taaha Muhammad

Undergraduate Student, Temerty Faculty of Medicine
Affiliation: Health Innovation Hub (H2i)

BlockPaisa is specifically designed to meet the financial needs of small businesses.

....

Olugbenga Olubanjo

Alumnus, Department of Civil & Mineral Engineering
Affiliation: Centre for Entrepreneurship

Reeddi innovatively provides clean, reliable and affordable electricity to individuals, households and businesses operating in energy-poor regions of the world.

Clara Rebello

Alumna, Department of Psychology
Affiliation: The Hub (UTSC)

Buoyancy helps with self-empowerment and resilience enhancement based on the belief that one should activate the strengths that they already possess.

....

Yi (Yvonne) Ru

Graduate Student, Department of Mechanical & Industrial Engineering
Affiliation: ICUBE (UTM)

YourTable connects people to eat and network together through their shared interests in food and business industries.

....

Shane Saunderson

Graduate Student, Department of Mechanical & Industrial Engineering
Affiliation: Creative Destruction Lab

Babbly is an AI-powered platform that analyzes a baby's voice to monitor their brain development during formative months.

....

Ryan Tam

Alumnus, Faculty of Applied Science & Engineering
Affiliation: The Entrepreneurship Hatchery

Aerlift's drone delivery system and logistics management technology enables governments to provide life-saving healthcare services to some of the hardest-to-reach populations around the world.

....

Cho Yin Yong

Alumnus, Department of Computer Science
Affiliation: The BRIDGE (UTSC)

PickEasy is a mobile app that allows individuals, groups and couples to explore local restaurants without having to argue or disagree over where to dine.

Intellectual Property Education Program

The Intellectual Property (IP) Education Program is an interactive, free, online training program from U of T Entrepreneurship. Its aim is to equip students, faculty and staff with a broad foundation in intellectual property and its general applications in today's knowledge economy.

Intellectual Property (IP) is a critical element of the global innovation economy. It generates value and wealth for individuals, companies and countries. It also ensures the health and well-being of Canadians by creating a system of protections for inventors who want to share new medicines and technologies with the world. While successfully protecting and leveraging IP has become an important factor for many entrepreneurs and their startups, basic IP literacy is a skill that will help all of us in today's world.

Program Breakdown

The IP Education Program consists of two levels: Level 1: IP Foundations and Level 2: IP Strategy and Application. For each level, learners are expected to spend 2-4 hours completing modules and associated quizzes. Students receive recognition for successful completion on their Co-Curricular Record (CCR).

1

IP Foundations

Introductory modules for learners with no prior IP knowledge.

2

IP Strategy and Application

Based on the Innovations & Partnerships Office (IPO) Guide for Inventors and Guide for Startups.

Did you know?

Businesses with a higher awareness of IP and those that hold formal IP are much more likely to experience higher growth, expand their markets, and receive various types of financing.

As intellectual property becomes an increasingly important driver in economic prosperity, the need to bridge the IP awareness gap for innovators and entrepreneurs has never been more relevant.

70%
of U of T licensees are already known to inventors and IPO staff.

Small- or medium-sized businesses that hold formal registered IP are:

4x more likely to export

2x more likely to be high worth

27% more likely to seek financing

60-75%
of the annual net revenues from the commercialization of IP that was created with substantial use of University resources is retained by inventors.

EVENTS

IP Matters — Know Your Rights
November 12, 2020

In celebration of the launch of the IP Education Program, the University of Toronto hosted a presentation and interactive fireside chat on the importance of IP rights and the opportunities presented when we protect and commercialize IP in today's knowledge-based economy.

The panel featured some of Canada's top IP legal experts and leading entrepreneurs, including Natalie Raffoul, Jim Hinton, Myra Tawfik, and Saara Virani. The Honourable Ross Romano, former Ontario Minister of Colleges and Universities, also gave remarks on the importance of IP rights to Ontario's economic growth.

IDEAS NEED PROTECTION.
LEARN HOW TO PROTECT YOURS WITH THE IP EDUCATION PROGRAM.

IP — Ask Me Anything
May 20, 2021

UTE hosted a virtual conversation on all matters IP featuring an expert panel that included Jennifer Fraser, Director of Innovations, Innovations & Partnerships Office, Vikram Pandit, Co-founder & CEO, U of T startup Phycus Biotechnologies and Kurtis Scissons, Director of University Ventures and Co-director, UTEST.

Jennifer Fraser
Director, Innovations in the Innovations & Partnerships Office

Vikram Pandit
Co-Founder & CEO
Phycus Biotechnologies Inc.

Kurtis Scissons
Director of University Ventures and Lead of UTEST

>> Register for the IP Education Program online.

U of T @ Collision Conference

U of T was proud to partner virtually with Collision for a second year. The annual tech conference, one of the largest of its kind in North America, took place from April 20-22, 2021.

Presentations by Geoffrey Hinton (Chief Scientific Advisor, Vector Institute for Artificial Intelligence, U of T University Professor Emeritus, Vice President and Engineering Fellow at Google, and the "godfather of deep learning"), and University of Toronto alumnus and entrepreneur Allen Lau (Co-founder, Wattpad) were among the highlights of the opening day at this year's influential Collision technology conference.

Collision plans to return in person to Toronto in June 2022 and we are optimistic that U of T will be able to play a major role in showcasing our great city and university to visitors from around the globe.

UNIVERSITY OF TORONTO
COLLISION
APRIL 20-22, 2021

International Entrepreneurship

Indo-Canadian Entrepreneurship Exchange

This spring, UTE and the Office of the Vice-President, International launched the Indo-Canadian Entrepreneurship Exchange (ICEE) Program, a joint initiative in partnership with the Indian Institute of Technology Bombay (IITB) and the Society for Innovation and Entrepreneurship (SINE).

The cohort-based exchange program aims to support budding entrepreneurs, improve research collaboration, and establish a strong, two-way innovation talent pipeline. The program will support between 10-20 participants each year who will spend time in both Toronto and Mumbai, once international travel safely resumes.

ICEE Speaker Series

On May 28, SINE, IITB and U of T hosted the first in a four-part speaker series for students and early-stage startup founders. The launch event of the ICEE 2021 Speaker Series celebrated the kick-off of the Indo-Canadian Entrepreneurship Exchange program and gave students and entrepreneurs a platform to learn about opportunities across Indian and Canadian startup ecosystems.

The second installment of the ICEE Speaker Series, *Founder Life: Indo-Canadian Startup Stories,* took place virtually on October 21. Focused on founder stories, this event featured four entrepreneurial leaders with international aspirations and venture experience in fields such as robotics, nanotechnology, cyber security, influencer marketing and non-fungible tokens.

>> Learn more about the ICEE program.

C100

U of T Entrepreneurship is now a proud community partner of C100, a privately funded, not-for-profit association that works to galvanize the global Canadian tech diaspora to support, inspire and advance Canadian entrepreneurship.

XPRIZE

U of T is the first Canadian member of the XPRIZE Higher Education Alliance—a global group of leading higher education institutions committed to engaging their constituencies in projects with XPRIZE. XPRIZE uses large-scale global incentive competitions to crowdsource solutions to the world's grand challenges.

In the Headlines

U of T startups attract investments and headlines at home and abroad. Anchored in U of T's strengths in revolutionary fields such as health sciences, AI and information technology, these are the startups to keep on your radar in 2021 and beyond.
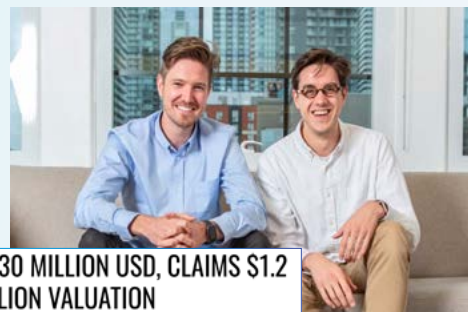
ADA SUPPORT

Founder: Mike Murchison | *U of T alumnus*

Elevator pitch: Leader in automated customer service, offering AI chatbot for large brands. Clients include Facebook, Square and Zoom.

Big raise: $130M USD Series C

U of T affiliation: Graduate of Creative Destruction Lab 2016/17 cohort

ADA SECURES $130 MILLION USD, CLAIMS $1.2 BILLION VALUATION

ALT TEX CLOSES $1.5 MILLION PRE-SEED ROUND TO COMMERCIALIZE SUSTAINABLE POLYESTER ALTERNATIVE

ALT TEX

Founders: Avneet Ghotra | *U of T alumna* and Myra Arshad | *York U alumna*

Elevator pitch: Sustainable fashion and biotechnology startup that has developed a polyester replacement fibre for clothing that can be re-engineered from food waste.

Big raise: $1.5M CAD pre-seed round

U of T affiliation: Member of ICUBE's Scale-Up Program and Creative Destruction Lab's 2020/21 cohort

KEPLER COMMUNICATIONS

Founders: Mina Mitry, Wen Chen Chong, Jeffrey Osborne, Mark Michael | *U of T alumni*

Elevator pitch: The largest satellite operator in Canada, Kepler develops constellations of small low-orbit satellites that are one-tenth the size of alternatives.

Big raise: $72.6M CAD Series B

U of T affiliation: Graduate of Creative Destruction Lab (2015/16), Start@UTIAS and the Entrepreneurship Hatchery (2015)
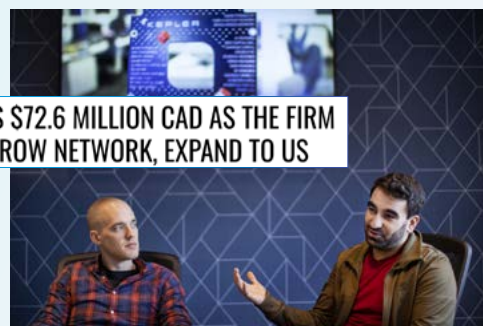
KEPLER RAISES $72.6 MILLION CAD AS THE FIRM LOOKS TO GROW NETWORK, EXPAND TO US

DEEP GENOMICS SECURES $226 MILLION CAD LED BY SOFTBANK AS IT SCALES AI DRUG DISCOVERY PLATFORM

DEEP GENOMICS

Founder: Brendan Frey | *Professor, Department of Electrical & Computer Engineering, U of T*

Elevator pitch: Deep Genomics uses artificial intelligence and machine learning to program and prioritize transformational RNA therapies for almost any gene in any genetic condition.

Big raise: $226M CAD

U of T affiliation: Graduate of UTEST (2015) and Creative Destruction Lab (2015/16)

Startup Spotlight

This is the place to speed up drug discovery

In the spotlight: Structura Biotechnology, founded by U of T PhD candidate, Ali Punjani

University of Toronto startup Structura Biotechnology builds novel software for cryo-electron microscopy, which aims to help scientists understand the structure and function of protein molecules.

"Every biological process that happens inside of the human body or any living organism is carried out by tiny little protein molecules that each have a particular structure – a 3D shape – that interact with one another," explains Ali Punjani.

That's why 3D visualization of protein molecules is essential to understanding biological processes – everything from how a virus can infect a body, to moving muscles and firing neurons. Until recently, the process of building detailed 3D images of protein structures was a slow and time-consuming task. Structura's ground-breaking software, which uses cryo-electron microscopy (cryoEM) images to build atomic-scale 3D images of protein structures, is accelerating this key step in drug discovery and life sciences research.

Drug discovery innovation thrives at U of T

Structura was spun out of the University of Toronto's Department of Computer Science. Punjani, who is also a U of T PhD candidate, initiated the software development while working in the lab of Prof. David Fleet.
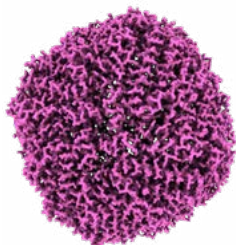
Since its inception, Structura has been able to access vital resources from across the U of T entrepreneurship ecosystem, including the Innovation and Partnerships Office, the Department of Computer Science Innovation Lab (DCSIL), the Centre for Entrepreneurship (formerly the Impact Centre) and the University of Toronto Early-Stage Technology (UTEST) program. Structura has also taken advantage of the valuable office space at U of T's ONRamp co-working facilities and the Banting Institute, centrally located in Toronto's innovation corridor.

"Questions about legal, hiring, customer service, pitch decks, sales strategy, all of those things were done early on with the help of campus accelerators," says Punjani. He also credits UTEST with playing a major role by providing in-kind contributions, initial seed funding and ongoing mentorship and feedback. Structura took initial seed funding from UTEST and MaRS Innovation in 2017. Since then, they have grown entirely on their own with the support of customers and a global community of researchers that rely on their software.

Structura Bio's big impact starts at the molecular level

Using machine-learning and computer vision algorithms, Structura has built a core computational technology to power the discovery of the function of protein molecules. By using single-particle cryoEM – the breakthrough technology that won the Nobel Prize in 2017 – Structura's software makes it possible to ingest images of a particular protein from an electron microscope and create an atomic-resolution 3D image of its structure.

"Coronavirus is a perfect example," says Punjani. "At the beginning of the pandemic, several teams around the world collaborated to put together a sample of a spike protein of novel coronavirus, synthesize and freeze it and take pictures of it in an electron microscope." Structura's software was then used to process those images to model the 3D structure of coronavirus, so scientists could see how the virus works and start to generate ideas for vaccines.

In December 2020, Structura officially launched cryoSPARC Live, the most widely used platform for real-time processing of cryoEM data. The platform has been deployed at dozens of electron microscopy facilities worldwide and is revolutionizing data processing paradigms for cryoEM.

The company has exciting plans for global partnerships and is looking to grow its team of nine with several new hires. Structura is also committed to re-evaluating its organizational vision, ensuring it aligns with the change its founders are hoping to see in the world: more understanding of how life works and new and better medicines.

>> Discover more U of T startup stories online.

INSULIN 100

2021 marks the **100th anniversary** of the discovery of insulin, highlighting the collaborative effort that U of T and its partner hospitals and industry partners took to develop, advance and distribute this life-saving treatment to millions worldwide.

Equity, Diversity and Inclusion in Entrepreneurship

The UTE Community supports the principles of equity, inclusion, and diversity where participants, partners and collaborators of all backgrounds, lived experiences, identities and walks of life feel welcome, supported and respected.

We are committed to nurturing a sense of community where a difference of opinion and perspective that embodies mutual respect, collaboration and professionalism is encouraged. We are unwavering in our commitment to maintaining an environment for all members of the UTE family to participate fully and thrive.

Indigenous Entrepreneurship Program

The Indigenous Entrepreneurship Program launched by UTM's ICUBE in partnership with RedBird Circle Inc. is based on traditional knowledge and created in partnership with Indigenous experts. The first cohort supported 16 Indigenous-identifying entrepreneurs from U of T and beyond. The program aims to build career competencies, eliminate barriers, facilitate partnerships and mentorships, and build pathways to success for Indigenous entrepreneurs and change-makers.

Black Founders Network

Launched in October 2021, the Black Founders Network is an initiative to support current and prospective Black entrepreneurs across the tri-campus through relevant programming, access to capital and a community of peers, mentors and allies. It was developed by U of T Entrepreneurship in consultation with 100+ stakeholders, including students, alumni, senior leadership and external community champions and is mapped to the recommendations of the Anti-Black Racism Taskforce.

Cassels Fourlines Women in Entrepreneurship Fund

The Cassels Fourlines Women in Entrepreneurship Fund supports women-identifying entrepreneurs through prize funding and event support. As a community partner, Cassels played an integral role in bolstering the success of women entrepreneurs in 2020-21, by supporting:

- March 8, 2021 | Pitch with a Twist: Celebrating International Women's Day
- March 10, 2021 | Celebrating Leaders, Black Women in Business
- March 24, 2021 | FemSTEM 2021 Pitch Competition

Cassels also provided in-kind support to over 10 U of T startups.
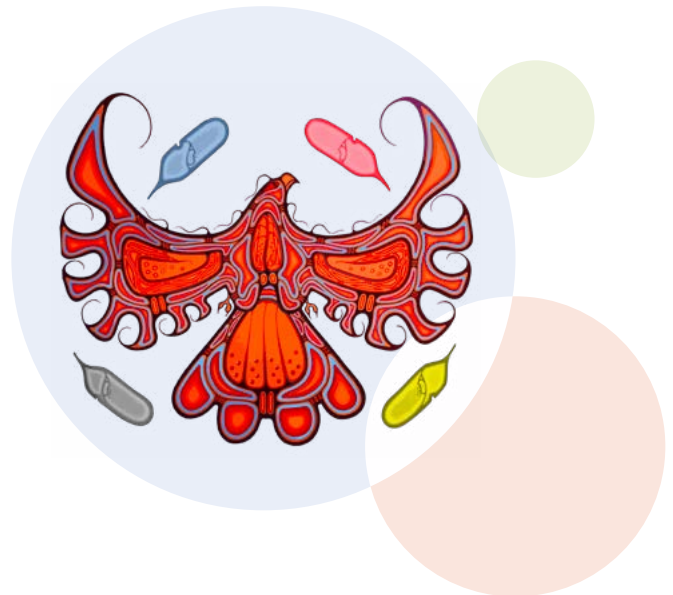
U of T Pride Pitch

On June 16th, ICUBE hosted the second year of U of T PRIDE Pitch, a competition that offers $5,000 in cash prizes to recognize, reward, and accelerate the U of T community's LGBTQ2S+ entrepreneurs. The participants—Yalla! Let's Talk, Maya Saggar Consulting, HeyGenius, Walking on Water Fashion Show, and Archipelago—all filled the (virtual) room with a passionate entrepreneurial spirit to pitch their businesses to a panel of judges.

Launching the New UTE Website

One of U of T Entrepreneurship's 2021-22 strategic priorities was to build a new website that is as innovative as the entrepreneurial community it serves. The new home of UTE online delivers just that. It features new resources for startups, improved wayfinding, content tagging and bold, fresh design.

● ENTREPRENEURS.UTORONTO.CA

is the new home of UTE online

The improved storytelling capabilities of the redesigned site will help UTE to shine a light on U of T startups that are changing the world for the better, entice investors to back our ventures and attract partners to sponsor programs, events and awards. As the anchor of the UTE Multi-Site Network, the new platform has the power to share content across multiple sites in the community and streamline communication efforts, starting with H2i and UTEST which will be coming online with their own sites in the months ahead.

Built within an intuitive user-experience design framework, the new website better serves the diverse audiences of this group – from startups, students and alumni, to investors and community partners.

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New Tools for Startups

- With over 2,500 jobs at 300+ U of T startups, the UTE Startup Job Board is the largest university or college startup job board in North America, and maybe the world!
- Startup Marketing Toolkit including the new U of T Startup wordmark, U of T logos, branded templates, key messages and boilerplate to highlight your startup's U of T affiliation.
- UTE Community Portal Login – a centralized platform for startups, accelerators and mentors in the U of T Entrepreneurship community.
- U of T Startup Perks: a suite of venture-friendly offerings for companies affiliated with the U of T Entrepreneurship community
- Community Code of Conduct
- Targeted investor page and access to the *Deep Tech Download*

Key Features

- U of T Accelerator directory with sort and filter to find the right accelerators to bring your big idea to life or level up your existing business.
- Resources for Startups including a list of helpful organizations, guides and resources from U of T and external partners.
- Funding oppportunities for both budding and established entrepreneurs, including awards, prizes and grants.
- Startup Spotlight featuring U of T's innovators who are creating game-changing startups.
- Startup Directory including a comprehensive list of innovative U of T startups.
- UTE community news & events calendar

Looking Forward
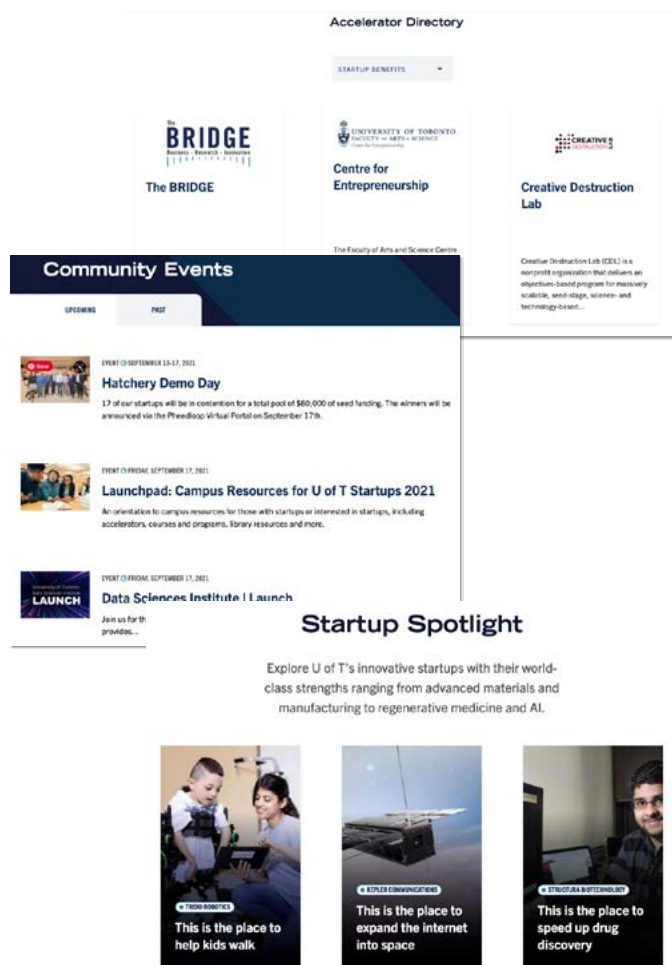
Beyond the launch of its new game-changing website, evolving IP Education Program, and new international partnerships, UTE has even more in store to support budding entrepreneurs and established innovators in 2022. Here is a preview.

Growing the Black Founders Network

The Black Founders Network (BFN) launched with a virtual event featuring engaging conversations with Black founders, investors and community members and keynote remarks by Michael Seibel, Managing Director of Y Combinator. In the months ahead, the BFN will welcome the first cohort of Black founders to its Accelerate stream, and explore options to deploy venture funding. We plan to deliver relevant BFN events, thought leadership, networking opportunities and workshops for Black entrepreneurs. The BFN's three pillars: Core, Accelerate and Scale, are open to all Black-identifying U of T students, faculty and alumni and will provide industry- and stage-agnostic support and resources to increase the number of successful, Black-led U of T startups.

>> Get to know the BFN.

Equity, Diversity and Inclusivity (EDI) Survey

Measuring the participation of all groups within the UTE Community is a major focus moving forward. Ensuring we have the Equity, Diversity and Inclusion (EDI) data built in to applications for programs and awards will allow us to identify gaps and do better, faster. Optional self-reporting, anonymity and privacy protection are paramount to this initiative. The EDI survey will provide key data to inform future initiatives and programming to support underrepresented communities in the entrepreneurial ecosystem.

Schwartz-Reisman Innovation Campus

The future home of U of T Entrepreneurship and the ONRamp, the Schwartz-Reisman Innovation Campus will eventually spread across 750,000 square feet in the heart of Toronto where the academic, hospital, government and business communities intersect. It was made possible through a generous gift from Gerald Schwartz and Heather Reisman.

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