BioHubNet

Transformative Talent Development



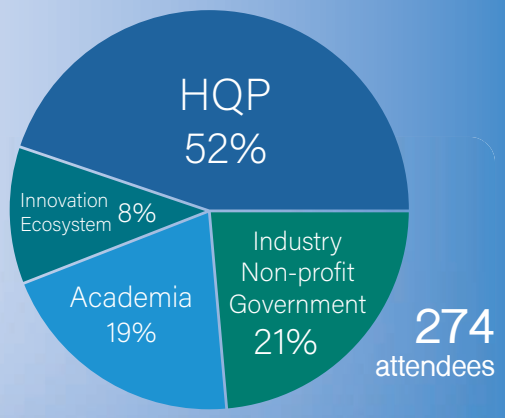
2025

Annual Symposium & Training Week Report

www.biohubnet.ca

The BioHubNet Annual Symposium & Training Week (Oct.27-30, 2025) brought together trainees, researchers, industry leaders, and ecosystem partners to advance Canada's biomanufacturing talent pipeline. Designed around BioHubNet's three pillars – ENGAGE (industry-focused training), EXPERIENCE (experiential learning), and EQUIP (Venture funding support) – the event showcased practical skills, real-world applications, and collaborative pathways that support an industry-ready workforce.

HQP - Highly Qualified Personnel
MSc/PhD trainees, postdocs, research associates, and lab technicians with advanced training.



Participants by type

Executive Summary

Training Week Highlights: Preceding the Annual Symposium, the Training Week engaged over 130 HQP through 5 specialized workshops focused on industry-relevant skill development, complemented by site visits and networking opportunities at 2 leading CDMOs.

Keynote Address: Dr. Kelly Parato's keynote highlighted the continued growth of Canada's biomanufacturing sector and underscored emerging opportunities for strategic talent development to support this expansion.

Panel Sessions: Seasoned industry professionals shared their career journeys and offered valuable insights into the core competencies, skills, and attributes employers seek in today's biomanufacturing workforce.

VentureLift Lightning Talks & Pitch Competition: HQP entrepreneurs showcased their innovations through 3-minute lightning talks and a pitch competition.

Professional Development Session: Participants were guided in identifying transferable skills, strengthening industry-ready résumés, and exploring purpose-aligned career pathways across the life sciences ecosystem.

Interactive Discussion Session: Representatives from academia, industry, government, and the innovation ecosystem engaged in a collaborative discussion to examine shared challenges and identify solutions to strengthen Canada's biomanufacturing and life sciences sector and accelerate the translation of innovation to market. The session emphasized the importance of building a more resilient workforce by aligning training programs with in-demand industry skills – an area where BioHubNet's programs deliver significant impact.

To learn more about BioHubNet, visit www.biohubnet.ca







Training Week Overview October 27-29



At the OBIO Entrepreneurship Bootcamp, HQP appreciated exposure to business models, funding sources and grants alongside strong networking opportunities that extended beyond traditional research topics. ***"This workshop is also a great networking opportunity"***



The Medical Affairs Workshop, led by Dr. Jefferson Tea (Agilis Health), was tailored for MSc/PhD learners, highlighting that MSL engagement is a two-way street built on insights from key opinion leaders and practical examples. ***"By understanding market access and pharmacovigilance are acutally part of Medical Affairs, I will expand my job search"***



BioZone offered HQP a first look at bioreactors, from an 80-L unit down to a benchtop model. Students had hands-on opportunities to learn about different parts and functions of the bioreactors and were able to take samples. ***"It's a valuable way to gain industrial skills and improve employability."***



CATTI Aseptic Techniques and GDP Workshop - equipped HQP with practical insight into how GMP and GDP guide biomanufacturing. Through SOP writing, aseptic technique observation, and cell counting, they gained hands-on skills that strengthen their readiness for roles in the CGT sector. ***"This program is a powerful catalyst for closing the gap between academia and industry."***



The Toronto High Containment Facility (THCF) Tour offered a first-hand look at high-containment research spaces and the safety measures for different pathogen risk groups. Through guided walkthroughs and a Q&A, trainees gained practical insight into key infrastructure, PPE, and operational requirements.
"Seeing the added CL3 systems and THCF's role during COVID-19 clarified Canada's infectious



At Eurofins CDMO Alphora, tours of SSRD, analytical, biologics and chemistry departments sparked two-way discussions on student and industry needs and highlighted an encouraging hiring outlook. ***"It was a really a great interaction between industry and graduate students."***



A visit to OmniaBio's CDMO facility gave students an eye-opening bench-to-clinic perspective and included candid Q&A about the company's growth.
"First time visiting a GMP facility - a truly unique eye-openining experience."

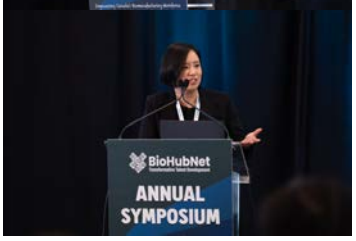
Annual Symposium October 30



Opening Remark

Professor Leah Cowen, Vice-President, Research & Innovation and Strategic Initiatives at the University of Toronto, opened BioHubNet's first Annual Symposium.
" Canada's biomanufacturing sector is growing rapidly, and yet we face a very critical challenge, which is a talent gap ... BioHubNet is uniquely positioned to lead this transformation."





BioHubNet Core Programs

BioHubNet Scientific Director Professor Molly Shoichet introduced BioHubNet as national training initiative addressing pandemic-exposed talent gaps through its three pillars: ENGAGE, EXPERIENCE, and EQUIP.

Director Yoo Jin Park highlighted the expanding online training platform, industry-aligned micro-credentials, industry internships, knowledge exchange placements, and entrepreneurial support offered across the three pillars. Early outcomes include strong uptake, with hundreds of registrants, active employer engagement, and nearly 20 trainee-led ventures supported.



Keynote Address

From Innovation to Impact: Biomanufacturing Strengths and Opportunities in Canada

Dr. Kelley Parato (NRC) urged bridging the gap between discovery and early clinical development, highlighting the federal Biomanufacturing & Life Sciences Strategy and NRC's "gene-to-batch" assets–such as new clinical-trial facilities, proprietary platforms and advanced analytics. She emphasized the need for cross-disciplinary, GMP-ready talent and more risk capital plus clear regulation to move Canadian innovations from lab to clinic.



Panel 1 *"Beyond the Bench: Key skills and competencies for industry readiness"*

A session exploring the foundational skills and competencies that support a successful transition beyond the bench.





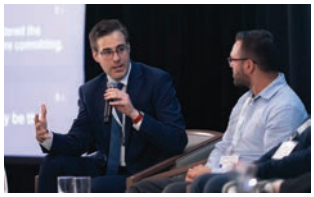
Moderator: Gilbert Walker, BioHubNet Scientific Co-Director
Panelists: Cynthia Elias (*Sanofi*), Rob Henderson (*BioTalent Canada*), Anna McGovern (*MMGI*), Logan Germain (*Queen's University*)





Panel 2 *"Inside Industry: Real-world career journeys"*

A session exploring real-world career paths beyond the bench and the skills needed to translate scientific training into industry impact.





Moderator: Darius Rakus, BioHubNet Scientific Co-Director
Panelists: Neil Blackburn (*OmniaBio Inc.*), David Sealey (*AstraZeneca Canada*), Lisa Wise-Milestone (*Moderna Canada*), Helen Sarantis (*BlueRock Therapeutics*), Jonathan Labriola (*Synakis*)



Spotlight on EQUIP VentureLift Awardees



Marc Shenouda (Neuropeutics Inc.) is developing a small-molecule therapy for ALS that targets TDP-43 aggregation; their lead compound reduces aggregates in preclinical models and is headed into IND-enabling studies toward early clinical trials.



Ehsan Zare Bidaki (ThermOcular AI Corp.) is commercializing a dual infrared/visible camera that records a short ocular video to screen for dry-eye disease by analysing temperature patterns; he leads the company with CSO Paul Murphy.



Narjes Allahrabbi (Fertilead Inc.) is creating a patent-pending microfluidic device that concentrates healthy sperm via tiny channels, lowering costs and boosting success for intrauterine insemination.



Jonathan Labriola (Synakis) is developing is developing ocular solutions to provide a quick, comfortable, and convenient recovery for patients with retinal injuries and disease.



Olga Klushina (Oculum) is building an AI-powered imaging module that clips onto surgical microscopes to provide real-time, dye-free virtual staining of transparent eye tissues, improving patient safety and shortening procedures.



Stephanie Buryk-Iggers (Sparked Inc.) is developing a handheld, saliva-based device that screens for cardiovascular disease risk, designed for both clinical and at-home use.



Avantika Vaidya (on behalf of Sushant Singh, VRIT Inc.) is transforming surgical care through INSITE, a handheld bioprinter that deposits bioactive scaffolds onto wounds to promote faster healing and reduce scarring, thereby improving patient outcomes.

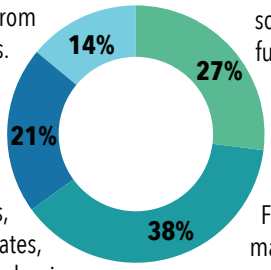
SETTING THE STAGE: WHO WAS IN THE ROOM?

85+ Participants from academia and industry gathered across 12 roundtables to discuss key challenges and actionable insights.

The discussion included a balanced representation from all corners of the life sciences ecosystem.

Innovation Ecosystem
HQP who are start-up founders or in leadership roles; advisors from accelerators and incubators.

Industry / Non-Profit /Government
Founders, CSOs, BSD directors, scientists, consultants, and funding agency representatives.



HQP
Senior graduate students, postdocs, research assoicates, and lab technicians in academia.

Academia
Faculty, program directors, managers from specialized programs,and core facilities.

Topic 1: Future of Canada's Biomanufacturing & Life Sciences Ecosystem

Challenges

- AI, Data & Automation: AI adoption is slowed by weak data-sharing frameworks, limited dataset access for start-ups, and low workforce AI literacy.
- Funding & Commercialization: Early-stage companies struggle due to funding gaps and limited mechanisms connecting academia, start-ups, and industry.
- Workforce & Talent: Canada faces skill shortages due to insufficient work-integrated training, lack of national talent platforms, and barriers for internationally trained experts.

Opportunities

- Academic/Training Programs: Expand AI literacy and create longer, work-integrated training models such as 12-month rotational internships.
- Policymakers: Establish open-access data frameworks and introduce new funding streams, including support for academia–start-up partnerships and government in-kind VC matching.

Topic 2: Accelerating Innovation: From Research Bench to Market

Challenges

- Structural Bottlenecks in Funding, IP, and Infrastructure: Early commercialization is hindered by unclear IP ownership, limited guidance on patenting and regulatory pathways, and trade-offs between control and speed when accessing funding.
- Talent and Training Misalignment: Industry needs long-term, skills-specific talent, but rigid academic programs and limited regulatory or commercialization training prevent graduates from meeting those needs.
- Regulatory, Data, and Market Barriers: Slow, fragmented regulation, Canada's low-priority market position, and limited access to high-quality datasets collectively slow innovation and AI adoption.

Opportunities

- Academic/Training Programs: Strengthen researcher readiness by providing education on IP/regulation and embedding longer, work-integrated learning experiences.
- Policymakers: Accelerate commercialization and collaboration by standardizing IP and ethics processes, creating unified regulatory pathways, and promoting early industry–regulator engagement.
- Funding Agencies: Boost commercialization capacity through incentive programs for PIs and expanded pilot-scale and proof-of-concept infrastructure such as CDMOs.
- Industry: Advance innovation by forming pharma data-sharing consortia and defining minimal datasets and timelines needed to generate actionable insights.

Topic 3: Closing the Talent Gap: Aligning Skills with Industry Demand

Challenges

- Talent and Training Misalignment: Graduate programs prioritize publications over industry-relevant experience, leaving trainees unaware of non-academic career paths.
- Common Skills Gaps: Graduates lack key technical, soft, business, and emerging-technology skills needed by industry, including GMP, communication, regulatory, and AI literacy.
- Experiential Learning Deficits: Academic structures rarely support substantial industry placements, limiting students' ability to gain hands-on skills such as cleanroom, GMP, and pilot-scale experience.

Opportunities

- Early Career Awareness: Incorporate early-stage exposure to diverse industry career paths within graduate training.
- R&D Development Literacy: Strengthen students' understanding of the development side of R&D and the roles associated with it.
- Co-Designed Training: Build curricula and placement programs collaboratively with industry to align competencies with workforce needs.
- Expanded Work-Integrated Learning: Scale up co-ops, internships, and embedded industry programs to provide meaningful practical experience.
- Integrated Skill-Building: Embed communication, leadership, teamwork, and business literacy into training through hands-on activities like case competitions, hackathons, and multidisciplinary capstones.

DESIGNED FOR IMPACT: HOW BIOHUBNET IS THE SOLUTION

Since its launch in early 2025, BioHubNet has been addressing critical gaps in training, experiential learning, and startup support through its three core pillars: ENGAGE, EXPERIENCE, and EQUIP.



Based out of the University of Toronto, BioHubNet currently supports HQP (graduate students, postdoctoral fellows, research associates, laboratory technicians) from 14 Ontario institutions/hospitals and scaling to expand its impact nationally.

ENGAGE delivers industry-led training to help HQP bridge critical skills gaps and prepare for careers in the biomanufacturing & life sciences sector. Through its custom Online Training Portal, BioHubNet has enabled >120 HQP to access 75+ on-demand short courses, hands-on workshops, and microcredentials (valued at up to $5,000), all designed to build in-demand, industry-relevant skills. BioHubNet will soon launch curated Learning Pathways to further address the most common skills gaps identified by industry partners.

EXPERIENCE provides experiential learning opportunities through 4–24 month industry internships and 4–6 month Knowledge Exchange (KE) placements. Internship opportunities are supported by an AI-powered matching platform that connects industry partners with job-ready HQP, helping to address the gap in on-the-job training. The KE stream provides funding to enable HQP to collaborate with research groups across disciplines and institutions, building cross-disciplinary skills that are in high demand to drive innovation and broaden professional perspectives.

EQUIP provides vital funding to pre-seed and seed-stage, HQP-led startups through the VentureConnect travel grant (up to $5,000) and the VentureLift commercialization grant (up to $25,000), supporting the advancement of health ecosystem innovation. In addition, BioHubNet provides mentorship, entrepreneurial training, and connections to the broader innovation ecosystem, including funding agencies, to support the next generation of innovation leaders.

Breakout Sessions

HQP participated in two structured career development workshops designed to build practical skills in self-assessment and professional communication. With participation from more than 150 trainees and individuals looking to strengthen their professional profiles, the sessions offered concrete guidance on skill articulation, résumé development and career exploration.





Sharing your Skills through Storytelling

Ketheisan Vigneshwaran
Career Educator, Career Exploration & Education, Student Life, U of T

The first session guided trainees in identifying their transferable skills and translating them into clear, compelling accomplishment statements. Through structured exercises, participants explored how to reframe their research experience as relevant, industry-ready competencies for a concise two-page résumé. Trainees also learned how to incorporate sector-specific terminology and industry "buzz words" aligned with their targeted roles.

Design your Career Roadmap

Dr. Nana Lee
Associate Prof., Director of Grad. Professional Development, U of T

The second session introduced core principles of career wayfinding, including defining purpose, exploring career pathways, and creating meaningful opportunities. Through interactive exercises, trainees identified where their interests, purpose, and strengths intersect, enabling them to pinpoint career options aligned with all three aspects. Peer discussions and real-time feedback further supported participants in designing a purposeful career trajectory and articulating their strengths and goals with confidence.

Through interactive exercises, peer-sharing, and real-time feedback, trainees gained a deeper understanding of how to recognize their skills, design their career path, and articulate their professional story with clarity and confidence.

Pitch Competition

Five healthcare ventures presenting their innovations to a panel of judges.

- **Sufyan Shaikh (Creative Medical Solutions)** – AutoFlow, a toilet-integrated uroflowmeter for streamlined urology workflows.
- **Soha Ahmadi (Farname Diagnosis)** – Portable electrochemical biosensor for early ovarian cancer detection.
- **Yosuke Niibori (Re:Pair Genomics)** – AI platform for designing cell-specific promoters for safer gene therapies.
- **Keera McNalty (ADEVBio Inc.)** – Engineered extracellular vesicle therapy for ischemic heart disease.
- **Yu Weng (Nanovista)** – Nanobubble-enhanced ultrasound imaging for high-resolution vascular diagnostics.



Pitch Competition Winner
Sufyan Shaikh - Creative Medical Solutions

People's Choice Award Winner
Yu Weng - Nanovista

New Partnerships Announced



Mitacs

BioHubNet announced a strategic partnership with Mitacs to strengthen Canada's biomanufacturing talent pipeline through the EXPERIENCE Industry Internship Program. This collaboration streamlines trainee access to internships across organizations ranging from early-stage start-ups to global companies.

With 150 internship units approved through the Mitacs Umbrella Program, the initiative is bridging academic training with industry needs and supporting the development of a diverse, innovation-ready biomanufacturing workforce.



CANTRAIN

BioHubNet announced a new partnership with the CANadian Consortium of Clinical Trial TRAINing (CANTRAIN) to advance education and training in clinical research and trials. Through this partnership, BioHubNet trainees will gain access to CANTRAIN's high-quality training modules, equipping them to become a skilled, future-ready clinical research workforce. This collaboration aims to empower the next generation of highly qualified clinical research professionals and strengthen Canada's health innovation ecosystem.

Post-event Survey

For those who attended the Annual Symposium & Training Week, please take a few minutes to complete our short feedback survey - it only takes 5 minutes and will help us make next year's event even better!

Take the Survey

Industry Professionals: Share Your Journey — Guide a BioHubNet HQP!

We invite professionals working in Biomanufacturing, Biotechnology, Pharma, and Life Sciences industry to join our Networking and Mentorship Program. You'll contribute just 30 minutes each month to meet 1:1 with a BioHubNet HQP on Zoom. This is a meaningful opportunity to:

- Grow your mentorship and leadership skills
- Support the next generation of professionals

Sign-up here

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