The Waterfront *1st Edition*

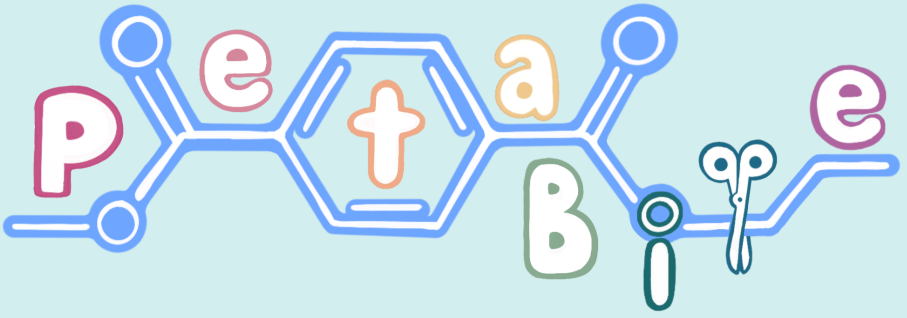
Dear iGEM Torontonians and supporters,

Welcome to the first edition of The Waterfront, iGEM Toronto's monthly newsletter! Each month we'll bring you a behind-the-scenes look at our lab work, updates on where we are at in the iGEM competition cycle, and our outreach events.

As we continue building our project, PetaBite, and representing U of T in the global synthetic biology community, we're excited to share this year's project, our latest milestones, and some upcoming events.

Introducting PetaBite

Every iGEM cycle starts with a problem worth solving. This year, ours is one of the most urgent environmental challenges of our time: plastic pollution.



Our project, PetaBite, takes aim at this problem using the power of a bacterial enzyme, PETase, capable of breaking down PET plastic found in bottles, clothing, and packaging. Using PETadex, our openly accessible database built on the Logan Index's terabytes of PETase data, we're

optimizing these enzymes to degrade plastic across a diverse range of environments.

PetaScale Wins at Vancouver's UATech Global Pitch Competition!

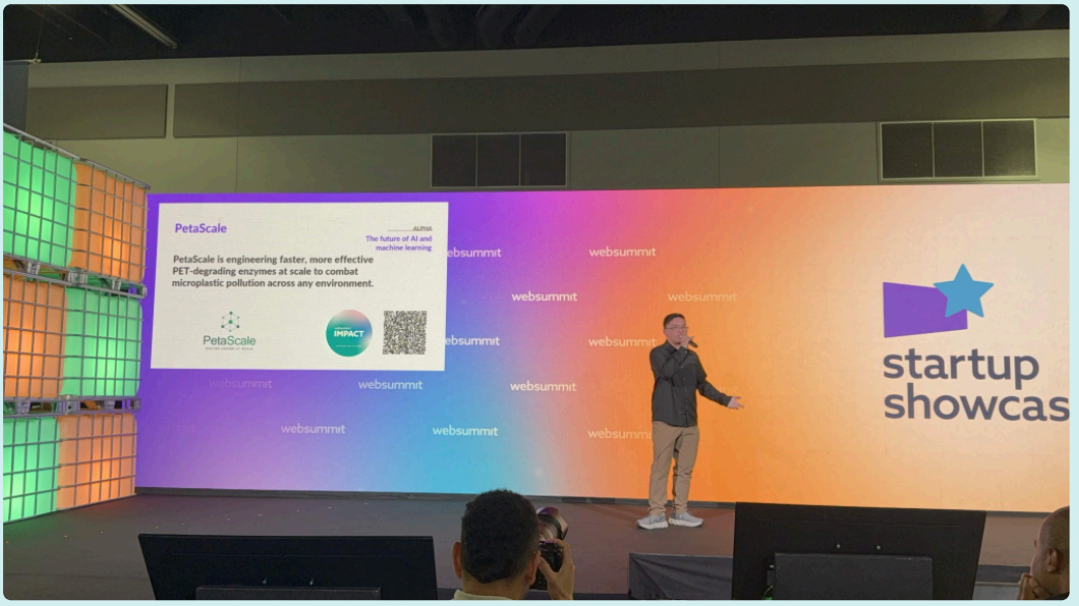
May was a big month for the team. We took PetaBite to one of the world's biggest tech stages, and came home with something to show for it.



The venture arm of our overall project, '**PetaScale'**, took the spotlight at **WebSummit Vancouver**, the world's largest tech conference! We were selected in the top 8% of 1,200 startups to present on the **main stage on May 14**, showcasing how our PETase-engineering work can help tackle global plastic pollution.

Feel free to read more about it here! The future of AI and machine learning - Web Summit Vancouver. We are featured at the 44 minute mark!

We also ran an exhibition booth introducing our branding and our platform **PetaDex**, our growing database for discovering better plastic-degrading enzymes.






PETases:
Plastic's Natural
Nemesis
Unfortunately, industry
PETases currently are unable
to scale beyond specific
conditions.



PetaScale also pitched at the **UATech Global Pitch Competition** on May 12 (picture above).

The Results:
PetaScale won the **"Award Winning Pitch"** title and earned **$25,000**! A major boost for scaling our AI-powered PETase discovery pipeline and pushing iGEM Toronto's project, **PetaScale**, onto the global stage as we work to reduce plastic pollution worldwide!

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iGEM Toronto at Calgary's Tech Futures Challenge 2026

The momentum from Vancouver carries us straight to our next showcase. Here's where we're headed next.



iGEM Toronto is heading to Calgary for the **Tech Futures Challenge (TFC) Prototype Showcase** on **May 30, 2026**! TFC brings together youth teams from across Canada to present innovative, biology-driven

solutions, and this year we'll be representing our prototype of **PetaDex**, the platform powering **PetaScale**. In fact, we already won $2,500 from TFC in a research grant back in March!

We'll highlight how PetaDex uses large-scale genomic data and AI to discover better plastic-degrading enzymes and support real solutions to global plastic pollution. Our prototype video, system design walkthrough, and Q&A with mentor judges and industry guests will cover the impact and scalability of our approach.

This is a major opportunity for iGEM Toronto to highlight how our project, PetaScale, can help reduce plastic pollution across Canada and beyond.

U of T Trash Team Collaboration

Our work on plastic-degrading enzymes only means something if it connects to the real-world problem. On May 9th, we did exactly that, taking our research out of the lab and into the community.



We teamed up with the U of T Trash Team for their Microplastic Blitz on May 9th, a hands-on community science event celebrating Ontario's Provincial Day of Action on Litter. Participants dug through sand in small teams while learning standard protocols to monitor and identify plastics. Litter included pre-production pellets, fragments, foam pieces, and firms, all similar to what the Trash Team finds along Toronto's waterfront.

Who is the U of T Trash Team? Founded in 2017, they're a science-based outreach org of students, researchers, and local volunteers working to

increase waste literacy and reduce plastic pollution across Toronto's ecosystems.



Why this matters for iGEM: The Trash Team's monitoring data makes the microplastic problem in Toronto concrete. Lake Ontario is one of the most microplastic-contaminated freshwater bodies in the world, and the waterfront sediment samples from their research show exactly the scale of the challenge. This is the real-world context our work is trying to address.

AWARDS

We've had an incredible start to the year. Before we get into what's coming up, here's a look at what the team has already accomplished from coast to coast.



iGEM Global Biohackathon – Judges' Choice Award
The 2026 iGEM Startups BioHackathon: Your First Step Into the World of BioEntrepreneurship — iGEM Blog

Recognized by judges at the iGEM Global Biohackathon Pitch Competition

WebSummit Vancouver — Top 8% Selected to Showcase
Chosen among the top 8% of 1,200 projects to present at the WebSummit Showcase, and recognised as an IMPACT project for Sustainability.

CAGEF Grant
Received a grant from CAGEF to support continued development of PetaBite
$1,800

Pitch Competition Awesome Foundation Toronto – Winner

Awarded by the Awesome Foundation Toronto Chapter in recognition of our project.
$1,000

HBSU Grant
Received a grad from HBSU to support continued development of PetaBite
$1,000



UofT Rendezvous Research Pitch
Competition Completed and presented PetaBite at UofT's annual Rendezvous with Excellence research pitch competition.

UPCOMING CONFERENCES

SUMMER CALENDER

Conference season is here, and we'll be busy. From New York to Madrid, the team is bringing PetaBite to the global stage this summer; here's where to find us!

NYC Biodesign Research Sympsonium
June 12, 2025 - NY, UNITED STATES
Hosted by the Biodesign Challenge, this symposium is an annual academic conference that brings together educators, researchers, and artists to explore the intersection of biotechnology, design, and ecology. Conference proceedings aim to situate biodesign instructional theories within educational spaces, allowing for our project to reach wider audiences!

Universidad Complutense de Madrid Conference
June 24 - 26, 2025 - MADRID, SPAIN
The iGEM European Meetup is an annual gathering of iGEM teams across Europe designed for collaboration, feedback, and networking before the Grand Jamboree. The meetup format combines project presentations, expert speaker talks, workshops, and networking sessions. Although only a few members will be able to attend, this opportunity will allow us to work with European iGEM teams to build international connections.

More to come next month

What a month to kick things off. From the main stage at WebSummit to microplastic sampling along the Toronto waterfront, the team has been everywhere. Every competition, every collaboration, and every late night in the lab is a step closer to making PetaBite something that matters beyond the Jamboree.

If you've enjoyed this first issue, share it with someone who'd want to follow along. And as always, if you have any questions about the project or just want to say hi, we'd love to hear from you on any of our socials linked below!

EDITORIAL TEAM



Anastasia Butnariu



Zync Aggarao Infante

iGEM TORONTO

igem@skule.ca

Room #036, 55 St George St
M5S 1A4, Toronto, ON

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