

UNIVERSITY *of* WASHINGTON



Institute for Translational Immunology

ANNUAL REPORT

2024 – 2025



OVERVIEW

The Institute for Translational Immunology (ITI) supports scientific research and professional development to prepare trainees for careers in translational science.

Launched in 2023, the Institute for Translational Immunology (ITI) created a training program to provide financial and career support for biomedical postdoctoral fellows. For two years, the ITI Fellowship provides:

- access to career-relevant coursework via a Discovery (academia) or Entrepreneurial-track
- communication, leadership, and mentorship training
- funds for research, career development, travel, and stipend
- three-person mentorship team
- formal mentorship experience

Pillars of the ITI Postdoctoral Fellowship

Career Development

Discovery: Grant writing courses offered by Institute of Translational Health Sciences (ITHS)

Entrepreneurial: Entrepreneurship coursework offered by UW Foster School of Business and the Creative Destruction Lab

Communication

Leadership Communication Series in partnership with UW Department of Communication

Networking

Mentors from the UW Immunology Alumni Network & support to attend local networking events

Mentorship

Support from 3 different mentors, formal mentorship training (CIMER), and mentorship experience in PROPEL NW



2024-25 Program Highlights:

- 2024 Fellows made strides in their research and contributed to 2 publications
- 2024 Fellows presented their research at 8 different national & international conferences and seminars
- 2024 Fellows completed 3 career-specific courses and participated in 2 mentorship training courses
- 2024 Fellows won multiple awards for their research, amounting to ~\$3,900
- 2 ITI Fellows submitted grants, initiating a path to career independence
- 3 new Fellows were accepted into the Fellowship program for 2025
- Successful launch of PROPEL Northwest postbaccalaureate training program

The ITI thanks UW Medicine, Solving for Science, and donors like the Bezos Family for supporting scientist training and the future of biomedical research.

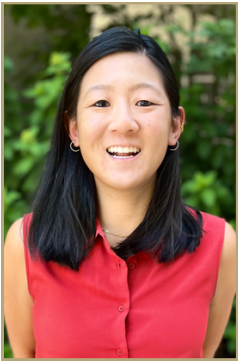


ITI Leadership (l-r): Dr. Alison Stanbery, Dr. Marion Pepper, Dr. Renee Ireton

YEAR 1 HIGHLIGHTS

The inaugural ITI Postdoctoral Fellows made exceptional strides in their research and professional development this year. Check out their achievements below!

Jaime Chao, Ph.D. – *Optimizing nanoparticles to enhance vaccine efficacy*



In Fall 2024, Dr. Chao strengthened her grant-writing skills by completing the *ITHS Grant Writing* course and submitted a grant in early 2025. In the lab, she collaborated with Dr. Neil King to design, produce, and test glycosylated nanoparticles for use in immunizations. Her work revealed that nanoparticle glycosylation influences which immune cells take-up the nanoparticles, underscoring the potential of nanoparticle design as a tool to modulate immune responses. To share her research, Dr. Chao presented at the B Cell Keystone Conference in Monaco. Dr. Chao also co-authored a manuscript published in *Arthritis & Rheumatology*.*

Victor Lui, Ph.D. – *Examining the therapeutic function of engineered T cells*



To build a foundation in entrepreneurship, Dr. Lui participated in the UW Buerk Center's *Health Innovation Practicum* course. In his research, he investigated how the strength of T cell receptor binding influences the function of engineered regulatory T cells (EngTreg) by comparing their gene activity to that of natural Tregs. He found that different binding strengths led to distinct patterns of gene expression, suggesting multiple ways EngTregs may function in therapeutic settings. Dr. Lui also participated in Nucleate's 2025 Activator program, gaining experience consulting with various Seattle-based startups, and completed the Research Mentor/People Manager Training series at UC-San Francisco. Additionally, he co-authored a new publication in *Cell Reports*.**

Thornton Thompson, Ph.D. – *Investigating immunity during co-infection*



Aiming to better understand how to translate his academic research into therapies, Dr. Thompson completed the *Pharmaceutical and Biotech Drugs Journey* course at UC-San Diego. To investigate how type 2 immune responses influence viral infections, he established a collaboration with Dr. Max Heeg and Dr. Anna Globig to analyze viral and parasitic worm interactions by spatial transcriptomics. Dr. Thompson presented his research as an invited speaker at the American Association of Immunologists (AAI) meeting in Hawaii, Midwinter Conference of Immunologists, Brigham Young University, and at the Allen Institute. He was recognized for his scientific accomplishments as an ExCEL Scholar by the Montefiore Einstein Comprehensive Cancer Center. In June, he submitted a NIH K99/R00 grant application.

*DOI: 10.1002/art.43108. ** DOI: 10.1016/j.celrep.2025.115902\

FEEDBACK ON THE ITI FELLOWSHIP

*"The research and career development opportunities afforded by the ITI fellowship through established mentors and trainings in science communication and mentorship have been and will continue to be **invaluable for my academic future.**"*

– Dr. Jaime Chao on her experience as a Discovery-track ITI Fellow



*"The ITI fellowship program has greatly benefited my research and enhanced my development as an aspiring independent scientist by **filling several major unmet needs in the postdoctoral experience.** In addition to the welcome salary support, the fellowship provides funds specifically earmarked for professional development. This has allowed me to receive 1-on-1 training in advanced bioinformatics analysis, a major gap in my scientific skill set."*

– Dr. Thornton Thompson on his experience as a Discovery-track ITI Fellow



*"The ITI Fellowship has been an incredibly valuable part of my postdoctoral experience. It has provided enriching training opportunities that support my broader career development. Thanks to their support, I've **gained exposure to life science entrepreneurship** and was able to participate in the UCSF Mentorship Training program. I truly appreciate ITI's commitment to empowering Fellows through new learning experiences."*

– Dr. Victor Lui on his experience as an Entrepreneurial-track ITI Fellow



YEAR 1 METRICS

2024-25 Fellows' Achievements by the numbers

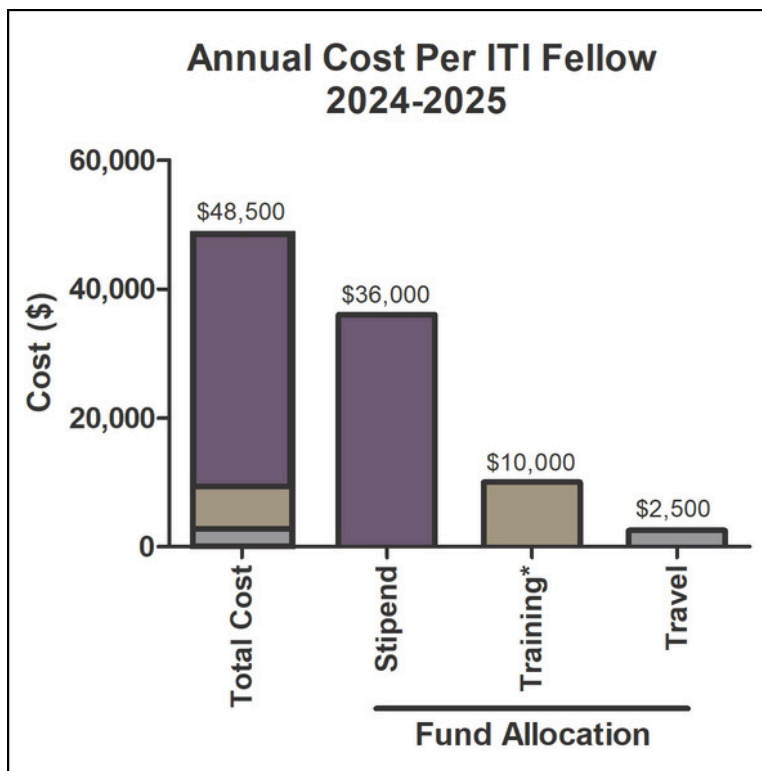
ITI Achievements & Awards

Completed coursework	5
Papers authored	2
Presentations given	8
Networking activities	2
Awards	4 (total of ~\$3,900)

Grants submitted by ITI Fellows

NIH grants submitted	1 (\$1,000,000/5yrs)
Early career grants submitted	1 (\$150,000/yr)
Potential net gain	\$1,150,000

How much does it cost to support an ITI Postdoctoral Fellow?



*Training includes research supplies and career development costs. Fellows are allowed to carry forward unspent funds into the next year, providing flexibility in how they use their funds to best support their training.

- The projected annual cost of one ITI Fellow is \$48,500.
- Training funds are used for course fees, research supplies, networking activities, and other non-specified costs associated with career development.
- In addition to their ITI funds, our 2024 ITI Fellows were awarded ~\$3,900 in conference-related awards.

In their first year, our Fellows collectively applied for more than \$1.15 million in funding, laying the groundwork for their future career independence.

WELCOMING THE 2025 ITI FELLOWS

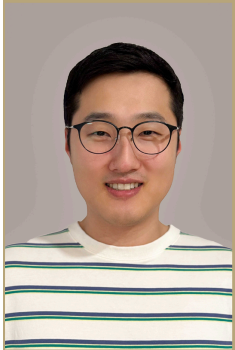
The ITI is excited to introduce the next cohort of Fellows starting in 2025.

Gargi Mishra, Ph.D. – *Bioinformatic analysis of interferon induction*



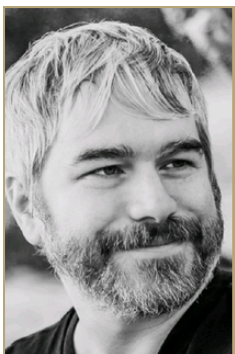
Dr. Mishra earned her Ph.D. in Bioengineering from IIT Kanpur by creating nanocarriers for medical applications with mentorship from Dr. Sri Sivakumar. For her postdoctoral fellowship, Dr. Mishra will focus on innate immunity research with Dr. Ram Savan in UW Immunology. Dr. Mishra uses her bioinformatics skills to investigate how interferons are elicited in different cell types during infections and in autoimmune diseases. Dr. Mishra enjoys mixing molecular biology, genomics, and data science to discover interesting stories hidden in biological datasets. As an ITI Fellow, she is looking forward to supporting others in science through mentoring while creating connections in the Seattle research community.

Teak Jung (TJ) Oh, Ph.D. – *Defining cell death mechanisms in respiratory disease*



Dr. Oh earned his Ph.D. in Biochemistry from the University of Illinois at Urbana-Champaign with mentor Dr. Kai Zhang by engineering light-activatable systems to understand the necroptosis pathway. As a postdoc in Dr. Andrew Oberst's lab in UW Immunology, Dr. Oh aims to define how cytokine signaling and lytic cell death shape type 1 and type 2 immune responses. As an ITI Fellow, Dr. Oh hopes to translate mechanistic insights into new approaches to control airway inflammation and improve respiratory health through collaborations with Dr. Mark Headley at the Fred Hutch Cancer Center and Dr. Teal Hallstrand at UW Medicine.

Ragan Pitner, Ph.D. – *Translating engineered B cells into autoimmune therapies*



Dr. Pitner earned his Ph.D. in Immunology from the University of Washington with mentor Dr. David Rawlings at Seattle Children's Research Institute by developing a B cell engineering approach to blunt the generation of antibody-derived drug inhibitors. For his postdoc, Dr. Pitner chose to remain in the Rawlings Lab to leverage the lab's expertise in B cell gene editing and to further develop the B cell "decoy" platform he conceived with Dr. Rawlings and Dr. Richard James. In collaboration with Dr. Jane Buckner at the Benaroya Research Institute, Dr. Pitner plans to use engineered regulatory B cells as a cell therapy to treat autoimmune diseases. Dr. Pitner is excited to use his time as an ITI Fellow to gain the entrepreneurial skills needed to bring engineered cell therapies into translation.

PROPEL NW LAUNCH

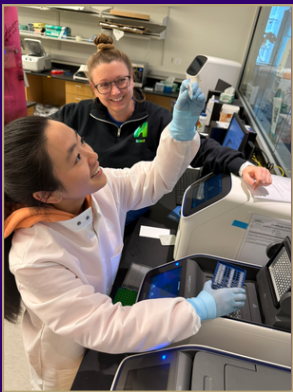


The ITI proudly launched the PROPEL Northwest postbaccalaureate program this year. The program offers participating postbaccalaureate trainees hands-on preparation for graduate school through a combination of workshops and 1-on-1 mentorship with postdoctoral fellows.

PROPEL NW was recently awarded a grant from Solving for Science and is partnered with Fred Hutch Cancer Center and National PROPEL.



PROPEL NW Scholars (l-r): Christina Gao, Kira Hoffman, Dylan Omelia, Charlie Rezanka, Sara Pierce-Lundgren, Olivia Dong, Aletta Li. PROPEL NW Scholars perform research in labs in several UW departments including Immunology, Microbiology, and Neurobiology and Biophysics.

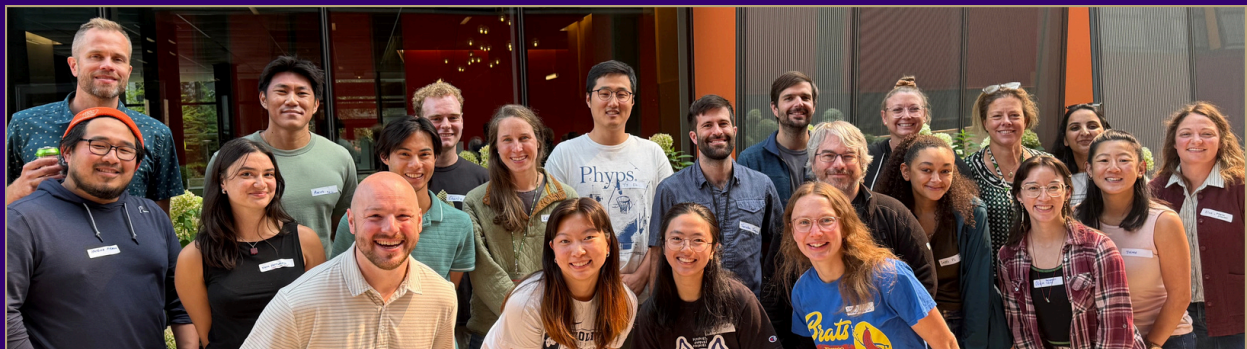


PROPEL NW Scholar, Aletta Li, working with faculty mentor, Dr. Autumn York.

For up to 2 years, PROPEL Scholars attend workshops featuring topics such as:

- how to choose a graduate program
- drafting applications & incorporating feedback
- what questions to ask during an interview & mock interviews
- reading & interpreting scientific literature
- presenting research effectively to colleagues & non-scientists

In addition to workshops, each PROPEL trainee is paired with a postdoctoral fellow who provides application feedback and expands the scientific network of the Scholar. All 2024 ITI Fellows completed their mentorship training in June 2025.



Launch of PROPEL NW on September 4, 2025. Scholars, mentors, and postdoc mentors gathered to celebrate the beginning of this postbaccalaureate training program.

If you'd like to learn more about the ITI or PROPEL NW, visit: itimmunology.uw.edu or propelnw.uw.edu.