Office of Education & Training (OET)

2024 Annual Report

Fred Hutch Cancer Center

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About Office of Education (OET)

The Office of Education and Training (OET) houses educational and professional development programs for high school students, undergraduates, postbaccalaureate scholars, graduate students, postdoctoral and medical fellows, staff scientists, and faculty.

Our programs include all biomedical disciplines pursued at Fred Hutch — basic, translational, clinical, and public health sciences research - addressing a range of cancers and infectious diseases. OET prioritizes increasing access to academic and professional pathways for trainees and faculty historically excluded in science.

OET leads the Cancer Research Training and Education (CRTEC) component of the Fred Hutch/University of Washington/Seattle Children's Cancer Consortium. Funded through a National Cancer Institute P30 grant, the purpose of the consortium is to bring together cancer-focused researchers from across its three participating institutions to promote collaboration and support research among its members. As the leader of the CRTEC component, OET plays a critical role in advancing the Cancer Consortium's mission by fostering and enhancing education and training programs for individuals at all career stages. CRTEC initiatives seek to promote and strengthen the broad range of education and training opportunities across our Consortium institutions.

FY24-26 Strategic Plan

Objective 1
Envision and build OET to fully serve the integrated Fred Hutch Cancer Center and all of its divisions.

Objective 4
Establish new, and expand existing, clinical connections across our education programs.

Objective 2
Enhance efforts related to the recruitment of faculty, trainees, research support and staff, especially from groups historically excluded in science.

Objective 5
Increase engagement with Fred Hutch/UW/Seattle Children's Cancer Consortium and external partners, with an emphasis on expanding efforts across the catchment area.

Objective 3
Strengthen support and retention efforts for Office of Education and Training faculty, participants and trainees.

From the Senior VP

Nina Salama, Ph.D.
Senior Vice President, Education, Professor Human Biology Division, Dr. Penny E. Peterson Memorial Chair for Lymphoma Research

Welcome to the 2024 OET annual report! I am incredibly proud of the work highlighted in the pages that follow, showcasing the contributions of our remarkable Staff, Faculty Leads and Mentors, who you will see pictured at the end of each section. We could not do what we do without the numerous volunteers from all corners of Fred Hutch who enrich the experiences of our interns and visitors. In 2024 we had over 244 volunteers participate in OET programing!

Throughout 2024 we focused a lot of energy on the renewal of the Fred Hutch/University of Washington/Seattle Children's Cancer Center Support Grant from the National Cancer Institute that has been ongoing since the center was founded. In developing our plans to support the Cancer Research Education and Training Coordination (CRTEC) component of this grant we initiated a new liaison program with the nine research programs that is already helping us connect with mentors in more diverse research areas and to think about new ways to bring students into the many careers needed to support cancer research and cancer care. Stay tuned!

We had many new activities or expansions of existing programs in 2024. Working with our Cancer Consortium Partners, we launched the Seattle DROP Postdoc recruiting event in May 2024 welcoming 116 senior graduate students from around the country to a virtual event highlighting resources and training programs at Fred Hutch, University of Washington and Seattle Children's. Funding from the Murdock Foundation allowed us to build on our successful Hutch Fellows High School Teacher Summer internship to launch Partners in Science 2.0@Fred Hutch so we could bring a total of five High School Teachers to Fred Hutch for two summers of hands-on research in Fred Hutch labs. Our Postbaccalaureate Program had its first nation-wide recruitment in spring 2024 and launched a new highly successful bootcamp to orient these scholars to Fred Hutch scientific and community resources as well as to jump start their bench and computational learning. Another new initiative I am super excited to highlight is the expansion of our professional development programs to Staff Scientists. This is an incredibly diverse group of scientists embedded in all of our Research Divisions that largely fly under the radar, while contributing greatly to our mission. Staff Scientists also serve as frontline mentors for many trainees.

Please read on to learn more about these and all the other programs in the OET portfolio!

Science Education (SciEd)

Educators | Primary & Secondary | Undergrad

Science Education (SciEd)

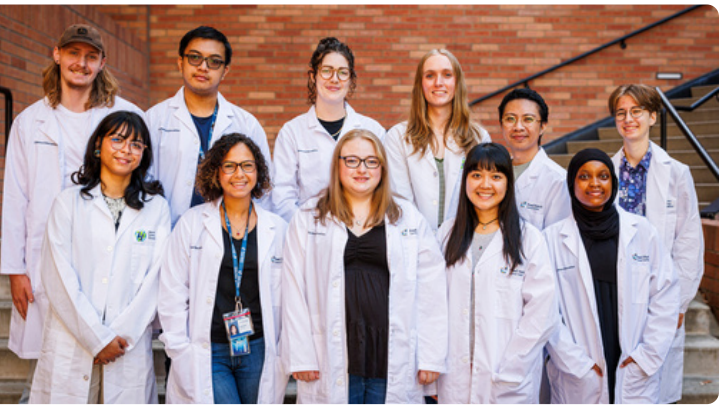
Educators | Primary & Secondary | Undergrad

Science Education (SciEd) directs a wide variety of programs that introduce teachers, high school students and undergraduates to the excitement and challenges of scientific research and the types of careers available at a major research center. The efforts of the SciEd team are directly aligned with the larger Fred Hutch strategic goals of educating and training the next generation of researchers and clinicians as well as ensuring such careers are accessible for all.

Above: LabLaunch intern Easton Young presenting their training in Boeckh lab which researches infectious diseases caused by cytomegalovirus and respiratory viruses in immunosuppressed patients. *Photo by Mary Grace Katusiime.*

Demographics

In 2024, SciEd had over 1,508 applicants and 241 participants across 16 programs that were either directly managed by SciEd or supported by us. These included six programs for high school students (n = 125) and seven for undergraduates (n = 100). For a complete listing of programs applicants and participants by audience, see Table 1: Overview of 2024 SciEd program applicants and participants by audience. Our programs are open to all students, with a special commitment to those furthest from opportunity. In 2024, 72% of participating students identified as belonging to a community underrepresented in science.



Above: (left) LabLaunch 2024 Cohort, (right) SURP 2024 Cohort. *Photos by Robert Hood.*

Table 1. Overview of 2024 SciEd program applicants and participants by audience

Program Name	Audience	Applicants	Participants
Science Education Partnership (SEP)	Teachers	14	11
Hutch Teacher Fellowship (HTF)	Teachers	5	4
Partners in Science 2.0 (PS2)	Teachers	3	1
	Teacher Total	**22**	**16**
Pathways Research Explorers	High School	241	32
Coding for Cancer (CfC)	High School	188	19
Explorers Virtual Internship	High School	14	14
Summer High School Internship Program (SHIP)	High School	415	24
HutchCAN	High School	14	14
Girls Who Code* (GWC)	High School	25	22
	High School Total	**897**	**125**
LabLaunch	Undergraduate	18	11
Pathways Undergraduate Research Program (PUR)	Undergraduate	141	21
Summer Undergraduate Research Program (SURP)	Undergraduate	280	19
Cancer Research Internship (NMSU)	Undergraduate	3	2
Research Equity Advancement for Cancer with HBCUs (REACH)*	Undergraduate	6	6
Program for Advancing Career Exploration (PACE)*	Undergraduate	55	20
Seattle StatGrows*	Undergraduate	86	21
	Undergraduate Total	**589**	**100**
*SciEd supported/adjacent	**Total All Age Groups**	**1508**	**241**

Personal, Professional, and Academic Programming

High school programs at Fred Hutch range from introductory experiences that introduce students to scientific research and career pathways (HutchCAN, Pathways Explorers) or computational biology (Girls Who Code, Coding for Cancer) to more immersive summer and school-year internships (Summer High School Internship Program, Explorers Virtual Internship).

Our undergraduate programs help provide career exploration opportunities in emerging scientific and technical fields (Program for Advancing Career Exploration) as well as traditional summer internship opportunities in research labs (Pathways Undergraduates, Summer Undergraduate Research Program, Cancer Research Internship with New Mexico State University) or technical or clinical labs (LabLaunch). Additional internships focus on biostatistics (SeattleStatGROWS) or computational biology and data science (Research Equity Advancement for Cancer with HBCUs).

> **“Being at Fred Hutch completely changed my life. I found my passion and I feel lucky that I got to find it early in life. I learned so much and it opened so many opportunities for me that otherwise I wouldn’t have been able to do. I am so thankful to Fred Hutch and everyone in Science Education.”**
>
> **— Explorers Virtual Intern participant**

Above: HutchCAN highs school students visiting an active construction site of a new lab in the Thomas Building. The session was led by the Facilities and Campus Operations team. *Photo by Mary Grace Katusiime.*

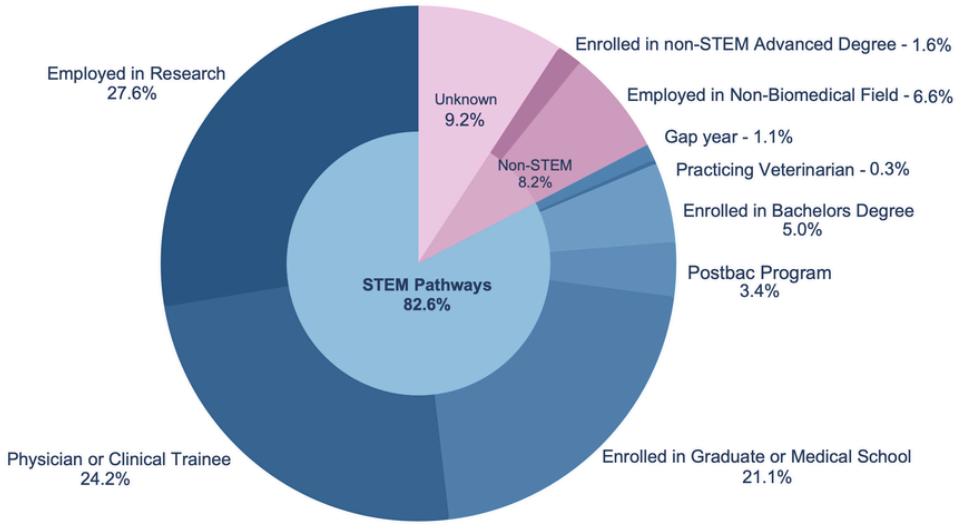
Outcomes and Impact

Long-Term Outcomes

Summer Undergraduate Research Program (SURP)

The SURP program has tracked outcomes since 2009. The program has successfully tracked the outcome of 91% of its 380 trainees, with only 9% (n = 35) having an unknown current status. Of those with a known status, 91% (n = 314) are either currently in a STEMM (Science, Technology, Engineering, Math or Medicine)-related career or education pathway. To date, 50 SURP interns have secured employment at Fred Hutch post participation in the program.

Figure 1. SURP Intern Outcomes 2009-2024 (n = 314)



Summer High School Internship Program (SHIP) and Pathways Undergrad Interns

Summer High School Internship Program (SHIP) and Pathways Undergrad Interns outcomes are detailed in Figure 2. Out of a total of 280 participants, including 11 who participated across multiple years, 11.8% (n = 33) have been currently or previously employed by Fred Hutch following their internship. Additionally, 75.3% (n = 211) are either pursuing or have attained a four-year STEM degree, and 8.6% (n = 24) are still in high school.

Figure 2. SHIP and Pathways undergrad interns outcomes 2019–2024 (n = 280)

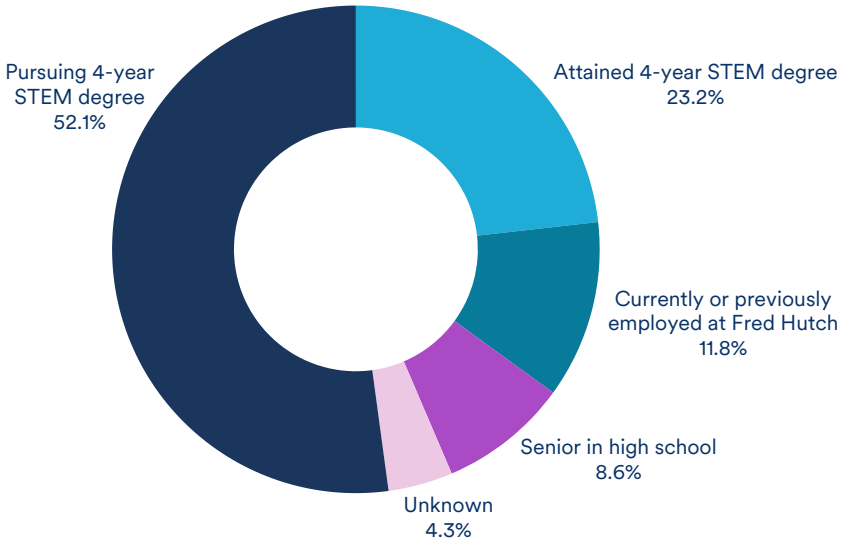
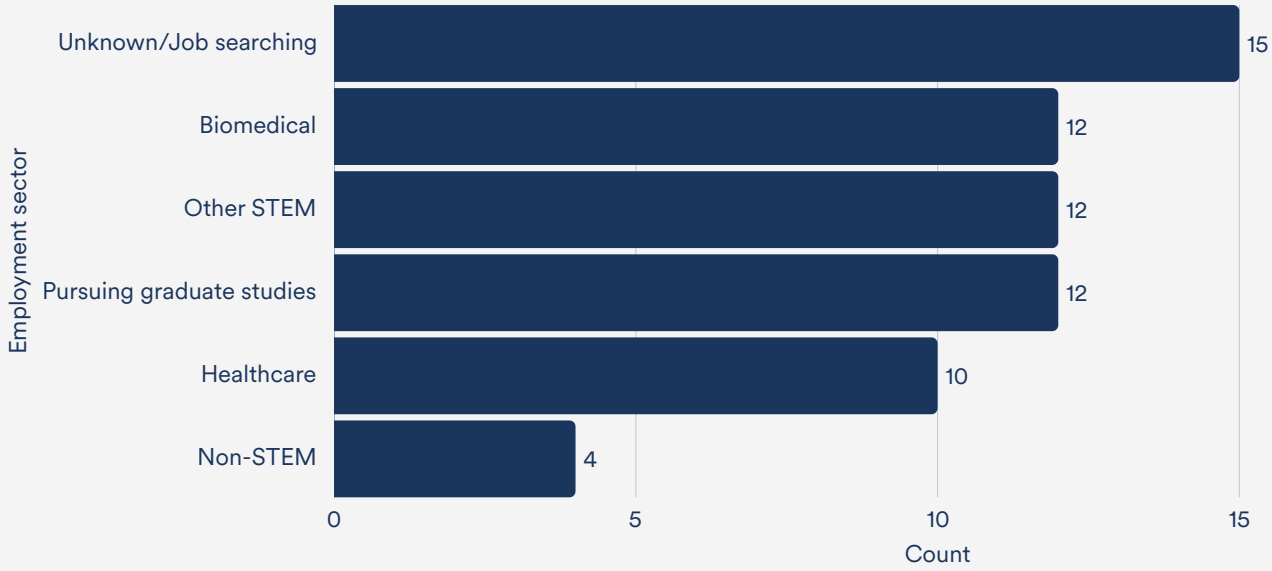


Figure 3. Employment Sectors of SHIP and Pathways Undergraduate Interns who attained 4-year STEM Degrees (n = 65)



Student Cross-Program Survey

Since 2023, SciEd gathered data on student experiences across our programs. In 2024, 143 students completed the survey (78% response rate). Retrospective pre-post outcomes show statistically significant ($p<.05$) changes in students' belief that they could succeed in a scientific career, their ability to identify STEM careers, and to see themselves as scientists. Students reported largest changes in their confidence in using scientific skills and techniques learned (+1.7 on a 7-point Likert scale) and their understanding of the role biomedical research plays in contributing to the prevention and treatment of disease (+1.8).

Cross program survey results indicate that 99% of students would recommend our programs to others, 95% felt supported at Fred Hutch, and the remainder were neutral in both cases. Additionally, 94% felt welcome to bring their whole self to Fred Hutch program that they were a part of (4% neutral). See Figure 19, Fred Hutch Cross-Program Survey Results Outcomes, (Appendix).

Secondary Science Teachers

The Science Education Partnership (SEP) is Fred Hutch's longest-standing pre-baccalaureate program and has been supported by the Center since 1991. Up to 20 teachers participate in a 3-week summer program annually, receiving professional development from scientists and staff and helping scientists with science communication and teaching strategies. During the school year, teachers have additional workshops, including a year-end follow-up reflecting on the program's impact. Teachers can borrow equipment and supplies to do hands-on modern molecular biology with their students. In 2024, SEP offered teachers 36 different types of kits (aligned to our lessons, units, or protocols), 110 kits, and 141 total crates (many kits consist of multiple crates).

Table 5, 2023-2024 SEP Kit Use Data (Appendix) provides additional details on kit usage. Last year, we had 19,071 student-uses of our materials (students may use different kits).

In 2024, we developed new kits related to Yeast Genetics and Evolution (yEVO, in collaboration with the University of Washington Genome Sciences) and to a new lesson series on Cancer Genetics (Elephants and Cancer).

Table 6, Teacher Applicants and Participants (Appendix) provides demographics. Teacher feedback is consistently positive. On our annual survey, teachers note especially that SEP has contributed to their professional growth (100% strongly agree or agree), help them be more effective in teaching science (100% strongly agree or agree), and help them incorporate more molecular tools and techniques (99% strongly agree or agree).

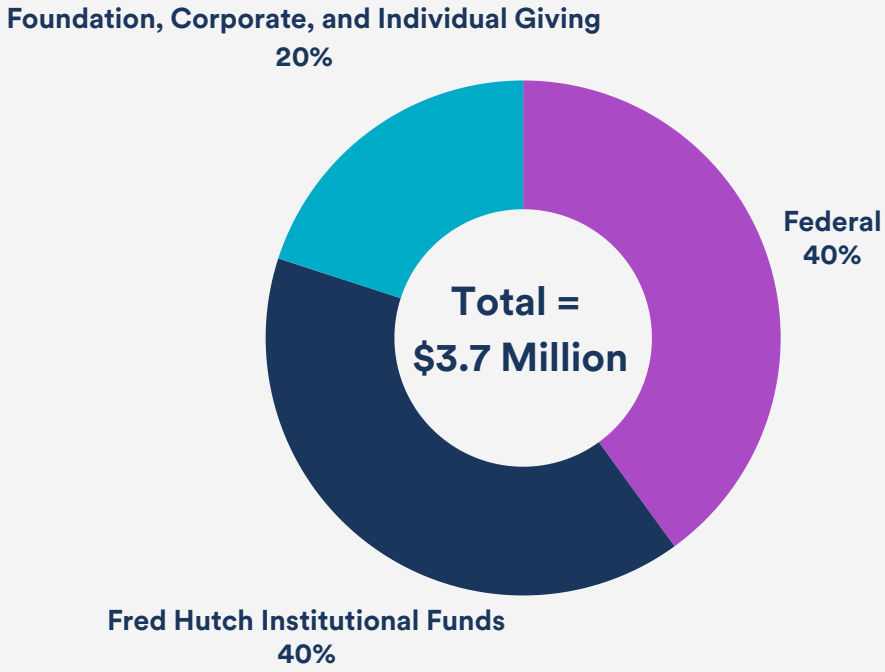
Teachers also consistently note the value of SEP for their own content knowledge (99% strongly agree or agree) and for the professional community it provides (98% strongly agree or agree). Tables 10. Student Kit Use Data and 11. Student Feedback Survey (Appendix) provide additional information about our kit loan program.

Tours and Visits

The SciEd team hosted 40 on-campus visits for 897 visitors in 2024. Visits included campus tours (36 groups) and hands-on activities in the dedicated student training lab (28 groups). See Table 8, 2024 Group Visits for additional information on our tours and visits (Appendix).

External Funding

Figure 4. SciEd funding source breakdown



Highlights

Coding for Cancer Received the 2024 GeekWire "Geeks Give Back" Award

The GeekWire "Geeks Give Back" category honors programs "leading the charge to make the world a better place through tech-driven initiatives". Over four weeks in the summer, Coding for Cancer helps students learn the R coding language and how computational tools are used in cancer research. This virtual program is open to rising 11th and 12th graders. It also provides access to research opportunities for students across our catchment area, with many students participating from outside the Seattle area.

Hanako Osuga, Program Manager, Coding for Cancer, RIPPLES Curriculum Design Lead, receives "Geeks Give Back" Award.

Hutch Advance: New Programs and Recognition

Hutch Advance, SciEd's suite of programs connecting student interests with workforce needs, expanded in 2024 with the launch of a new high school program: the Fred Hutch Career Awareness Network (HutchCAN). Fourteen students in grades 10–12, from partner organizations MESA (Math, Engineering, Science, Achievement) and El Centro de la Raza, explored diverse career paths at Fred Hutch through a series of eight weekly, two-hour sessions. Participating departments included Environmental Health and Safety, Facilities, Marketing & Communications, Philanthropy, the Office of Community Outreach and Engagement, Shared Resources, Research Administration, and the Prevention Center (Nutrition Lab and Exercise Physiology).

Hutch Advance also received recognition for Lab Launch, an accelerated Lab Tech Certificate Program introduced in 2023. Designed to equip students with essential lab skills and academic training for research and clinical lab roles, Lab Launch is a partnership with local two-year college biotechnology and molecular biology programs. It was officially endorsed as a WA Career Launch program and, in 2024, was featured in an Employer Spotlight by Career Connect WA and highlighted by the Puget Sound Business Journal as a model employer-driven workforce initiative. Since its inception, 11 students have participated in Lab Launch, with six securing positions at Fred Hutch—a testament to the programs' success in creating a clear education-to-career pathway that benefits both students and Fred Hutch.

Kevin Barry, PhD (left) mentored Dean Thompson (right) in PS2@FH.

Partners in Science 2.0 @ Fred Hutch (PS2@FH)

A New Intensive Teacher Research Program

The Murdock Trust Partners in Science program awarded SciEd a multi-year grant to establish Partners in Science 2.0 @ Fred Hutch (PS2@FH), a new research and professional development opportunity for teachers. We were one of five institutions across four states—and the only non-university site—to receive this pilot grant funding. Each year, PS2@FH pairs up to three secondary science teachers with mentor scientists in Fred Hutch laboratories. Teachers engage in two paid summers of biomedical research, gaining hands-on experience that enriches their teaching and strengthens their scientific identities.

The program also includes travel and participation in two Partners in Science conferences annually. In addition to conducting research, teachers develop scientific communication skills by producing a scientific poster and delivering a research talk. In the program's initial pilot, teacher Dean Thompson (Bellevue School District, Bellevue, WA) was mentored by Dr. Kevin Barry, Assistant Professor in the Public Health Sciences Division. Mr. Thompson will return to the Barry Lab in Summer 2025 to continue his research on "Investigating the Regulation of Flt3L Isoforms in Cancer."

SciEd Team Page

Jeanne Chowning, Ph.D.
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Regina Wu
Associate Director, Science Education Partnership

Gennifer Goode, Ph.D.
Program Manager, High School Explorers, Explorers Virtual Interns and Tour Visits

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Program Manager, Hutch Advance

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Kristen Bergsman, Ph.D.
Sr. Program Manager, Hutch Teacher Fellowship

Vanessa Knutson, Ph.D.
Laboratory Manager/Program Manager, Science Education Partnership

Heather Osterstock
Laboratory Technician, Science Education Partnership

Ruth Maldanado
Laboratory Technician, Science Education Partnership

Violet Ettie
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Johnnie Jose Orozco, M.D., Ph.D.
Faculty Program Director, Summer High School Internship Program and Pathways Undergraduate Researchers Program

Dave Vannier, Ph.D.
Sr. Staff Scientist, Summer High School Internship Program and Pathways Undergraduate Researchers Program

Lori Blake
Project Manager, Summer High School Internship Program and Pathways Undergraduate Researchers Program

Julian Simon, Ph.D.
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Marilyn Drennan
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Megan Shippen
Program Assistant, Summer Undergraduate Research Program and Cancer Undergraduate Internship for NMSU Graduate Students

Tanushri Kumar, M.S.
Program Assistant, Summer Undergraduate Research Program and Cancer Undergraduate Internship for NMSU Graduate Students

Postbaccalaureate Scholars Program

Postbac

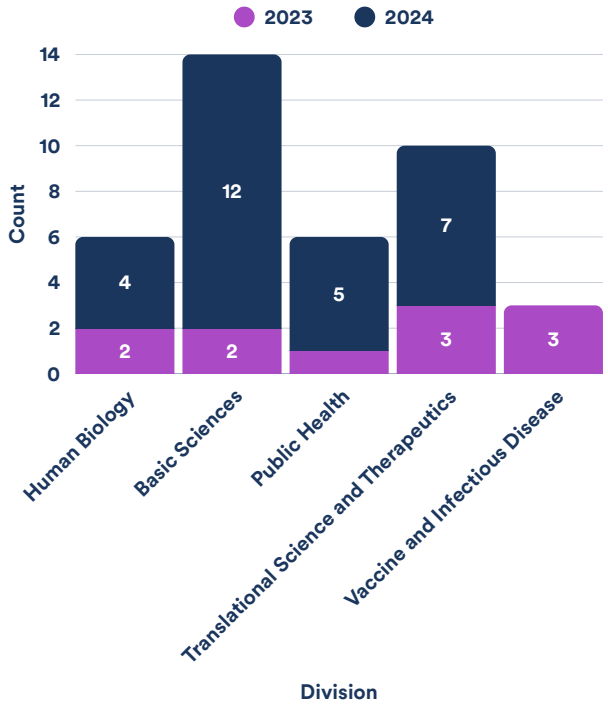
Postbaccalaureate Scholars Program

Postbac

The Fred Hutch Postbaccalaureate (Postbac) Scholar Program, launched in 2023, provides research experience and training to strengthen candidates' competitiveness for biomedical PhD programs while equipping them for success in the lab. This flexible two-year program combines hands-on research with academic development as scholars work as research technicians on dedicated projects while engaging in a curriculum designed to build a strong foundation for graduate studies and a research career.

Demographics

Figure 5. Current postbac scholars by division and year (n = 39)



Personal, Professional, and Academic Programming

Bootcamp

To welcome the 2024 cohort, we launched our first Fred Hutch Bootcamp, designed to introduce scholars to the fundamentals of scientific research, refine essential laboratory skills and foster a strong sense of community. Throughout the week, scholars engaged in workshops covering science communication, the core questions driving research, Shared Resource tours, Environmental Health and Safety training, time management strategies and effective email communication. Scholars also received instruction in PCR techniques, lab protocols and workflows, data management, lab math and coding with Python and R.

2024 Postbac Scholar Symposium

In June 2024, the Postbac Program hosted its inaugural Postbac Scholar Symposium. This event marked the culmination of our first year, celebrating our scholars' achievements and recognizing those transitioning to graduate school in the fall. The symposium featured oral presentations from six scholars, highlighting their research from the past year, while the remaining 13 scholars shared their work through poster presentations. We are thrilled to establish this symposium as an annual tradition, honoring the dedication and accomplishments of our scholars.

Mock Interviews

In 2023, we introduced a PhD application workshop series that included an overview of the application process, a writing workshop and a panel discussion featuring faculty and recent interviewees sharing their experiences. In January 2025, we expanded this series by incorporating mock interviews for scholars preparing for their upcoming interviews. Scholars identified their research areas, and we coordinated with current Postbac Scholar Program faculty to conduct these mock interviews. This addition was highly successful, and we look forward to scaling this initiative to support more scholars as our program continues to grow.

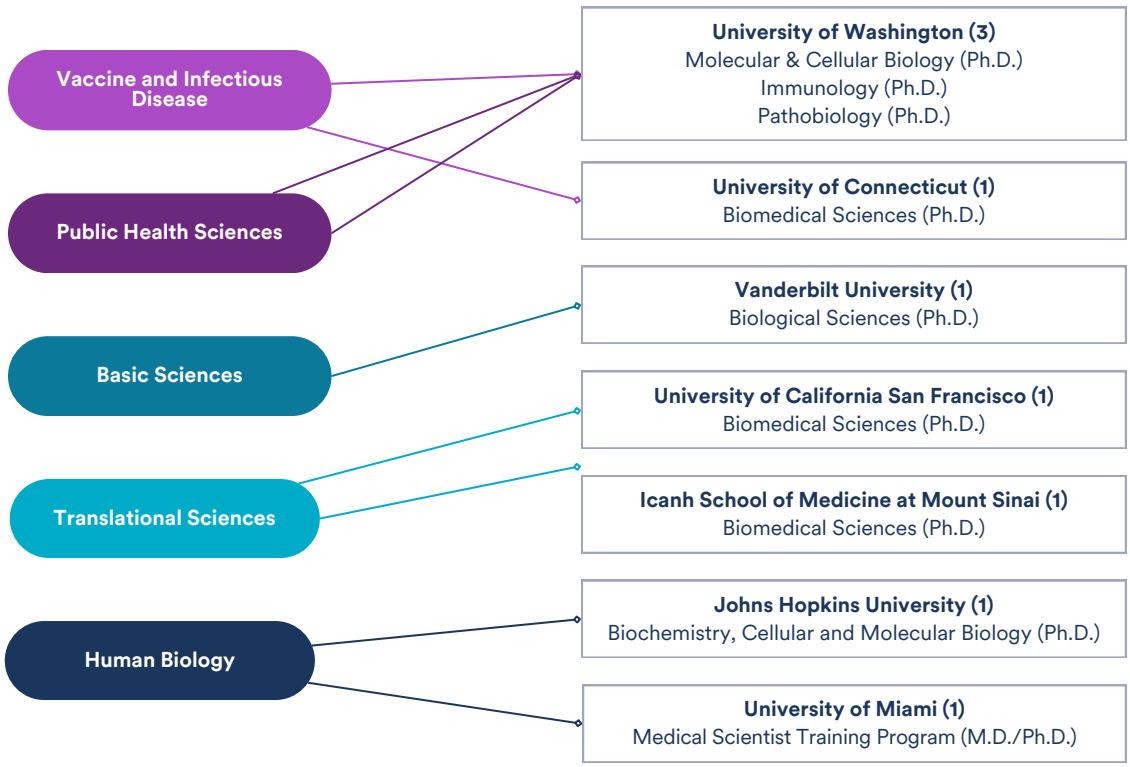
Finalizing Our Two-Year Curriculum

Now in our second year, we aimed to structure the curriculum in a way that provides predictability while increasing opportunities for scholars to present their work. We established a quarterly schedule featuring multiple professional development series each term. A key addition is our Research in Progress Seminar (RiPS) series, which is held in the fall, winter and spring quarters. These weekly seminars feature two scholars presenting their research every Monday. As we continue to evaluate and refine this curriculum, we anticipate making incremental adjustments based on scholars' needs, enabling us to enhance the curriculum efficiently and responsively.

Outcomes

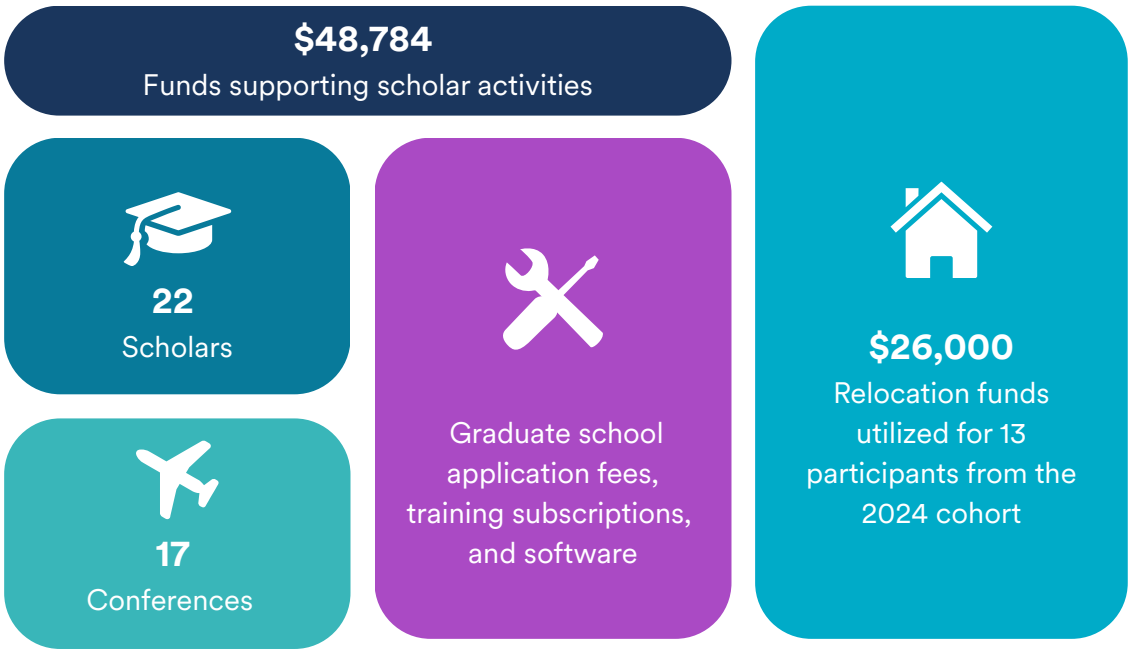
Graduated Scholar Information

Figure 6. Graduated scholar information (n = 9)



External Funding

The Postbac Program has been fortunate to receive philanthropic support to help our scholars develop as scientists outside of the lab. These funds have been instrumental in providing scholar stipends, relocation assistance, and support for educational opportunities beyond the Hutch. See Figure 16, Global conference participation and OET Support, (page 41) for specific conferences attended.



Future Initiatives

Currently, our graduate application series does not include tailored guidance for MD or MD/PhD pathways. To address this, we plan to launch an MD/PhD application series in spring 2025, aligning with the opening of applications for the 2026–2027 medical school cohort. We will collaborate with our colleagues in the Summer Undergraduate Research Program (SURP) to learn best practices for supporting scholars pursuing these routes.

As our program gains recognition, our collaborative opportunities are becoming clearer. One key partnership is with the Postbaccalaureate Research Opportunities to Promote Equity in Learning (PROPEL) program at the University of California, San Francisco (UCSF). PROPEL is a 1–2-year postbac program dedicated to supporting scholars from underrepresented backgrounds in science. Here in Seattle, the Institute for Translational Immunology at the University of Washington has been exploring the creation of its own PROPEL initiative. Our plan is to establish a PROPEL Northwest program to support postbacs in the Seattle area. We are excited to further develop this collaboration in 2025.

Postbac Team Page

James Alvarez, Ph.D.
Director, Postbac Program

Kyle Shea, M.Ed.
Director, Postbac Program

Office of Graduate Education (OGE)

Graduate

Office of Graduate Education (OGE)

Graduate

Fred Hutch is home to approximately 150 graduate students from 15 departments and interdisciplinary graduate programs at the University of Washington (UW), including the UW-Fred Hutch jointly administered Molecular and Cellular Biology (MCB) PhD Program. The Office of Graduate Education (OGE) team provides professional and wellness development resources for graduate students and business administration support to students, research administrative staff and faculty, including all compensation processing and data reporting. OGE also partners with the UW MCB Program Office to manage graduate program operations, including coordinating five MCB courses taught on Fred Hutch's campus this year.

Demographics

Graduate Student Academic Year Participation

UW School of Medicine graduate students join Fred Hutch labs on a rotational basis quarterly during their first year to determine the lab where they will complete their thesis work. At the end of their first year, they join a permanent lab, where they will spend the remainder of their graduate student tenure.

UW graduate students from other departments in the School of Public Health, College of Arts & Sciences and the College of Engineering join Fred Hutch labs and groups to complete dissertation and project-based work.

Figure 7. Academic year 2023–2024 graduate student labs/groups by Fred Hutch division

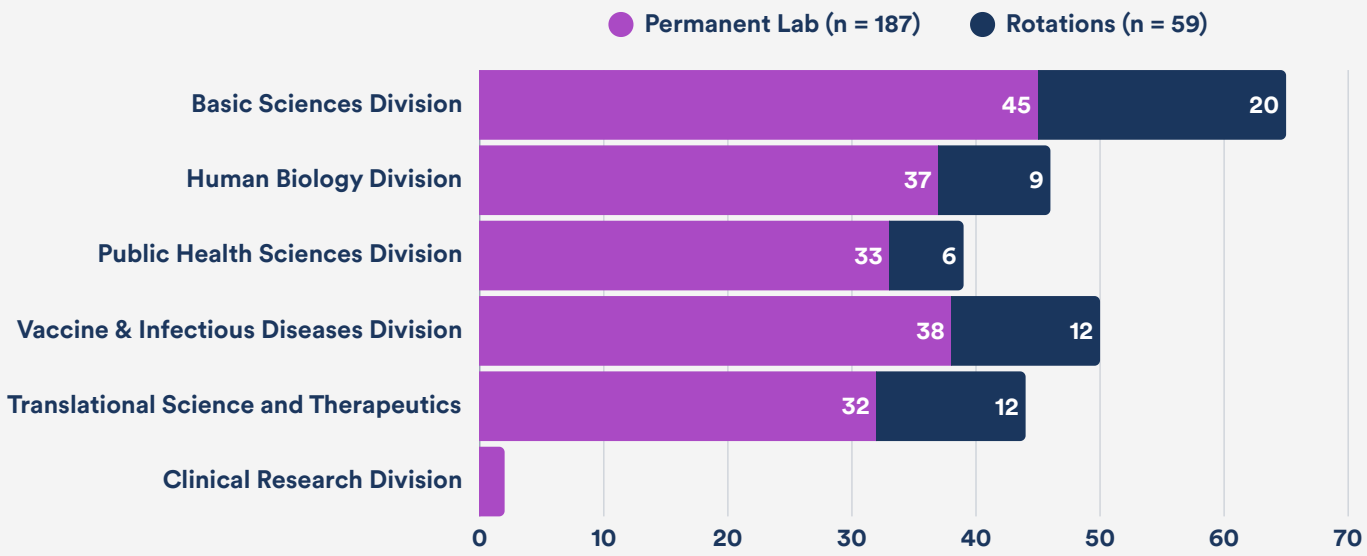
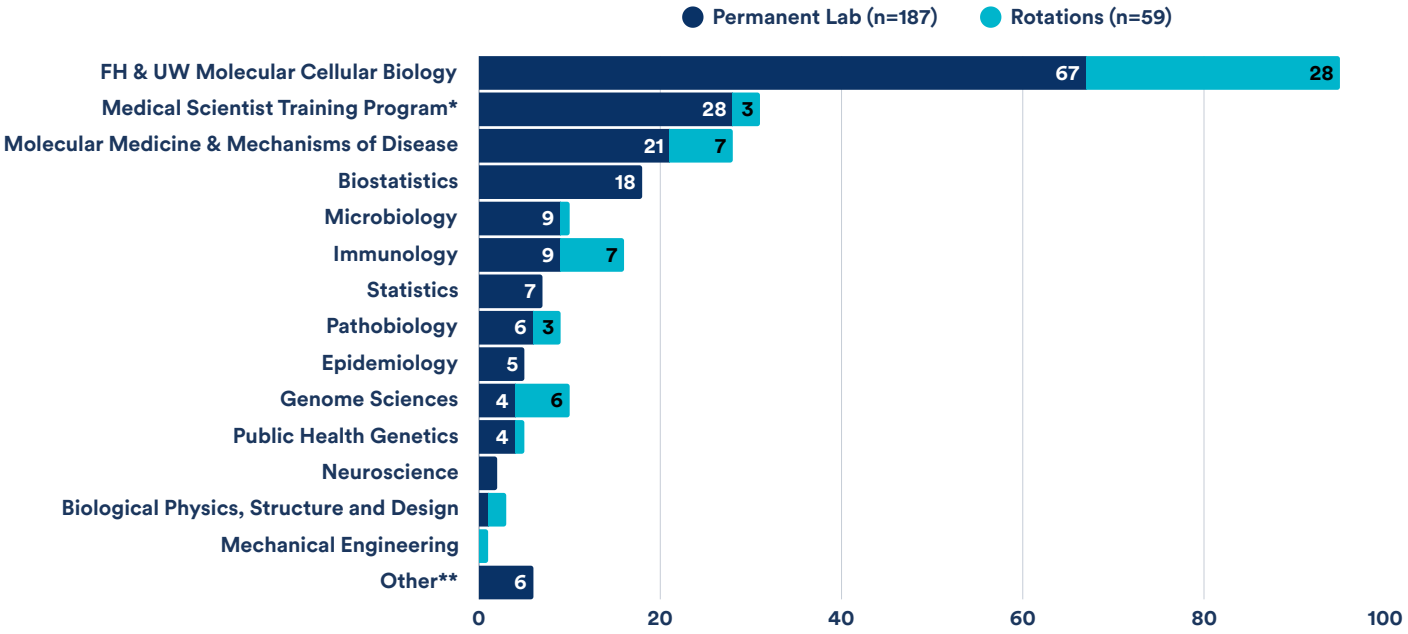


Figure 8. Academic year 2023–2024 graduate students by UW graduate program



*The total of 187 Permanent Lab students excludes 28 MSTP students who co-join another UW program.
**Includes one of each program: Applied Mathematics, Bioengineering, Global Health, Oral Health Sciences, Pharmacy, Duke University

Personal, Professional, and Academic Programming

F Award Training Program

The F Award Training Program was developed in 2018 to provide resources for graduate students and postdocs interested in applying to NIH individual fellowships (F). The program includes a secure SharePoint site with successful NIH applications, a panel discussion with F awardee trainees and faculty who have served on study sections, and mock study sections. In 2024, eight submission drafts were reviewed by 17 reviewing participants and two faculty leads. These meetings provide trainees the opportunity to receive feedback about their applications, while reviewer trainees receive guidance from an experienced faculty member on successful applications.

Dr. Paul Neiman Outstanding Graduate Student Award

Since 2018, the Dr. Paul Neiman Outstanding Graduate Student Award has recognized highly motivated graduate students in the biological sciences who demonstrate clear potential for success. The award supports scholarship for a Molecular and Cellular Biology (MCB) graduate student training in the lab of a junior faculty member at Fred Hutch, providing a student stipend and tuition-related costs for one year. In 2024, David Sokolov from the Sullivan Lab received this prestigious award.

Dr. Alison Greenlaw is hooded by mentor, Dr. Harmit Malik at hooding ceremony. *Photo by Angela Carlyle*.

Interdisciplinary Biomedical PhD Hooding Ceremony

To celebrate the hard work of our graduate students, OGE partners with UW biomedical graduate programs to host the Interdisciplinary Biomedical PhD Hooding Ceremony. On June 11, 2024, 43 graduate students from 10 biomedical research departments and programs were hooded.

Other Graduate Student Support

In 2024, OGE supported community building and academic growth for graduate students in various ways. This included organizing biweekly meetings where students could practice presentations and engage in social activities, as well as hosting events during Graduate Student Appreciation Week in April. Additionally, OGE offered administrative support, holding a welcome event for students and weekly office hours to address questions related to funding opportunities and resources at Fred Hutch.

UW-Fred Hutch Molecular & Cellular Biology (MCB) PhD Program

The Molecular and Cellular Biology (MCB) program is an interdisciplinary graduate program jointly offered by Fred Hutch and the UW, encompassing more than 200 laboratories including Fred Hutch, the UW, Pacific Northwest Research Institute, Seattle Children's and the Benaroya Institute. In winter 2024, 59% of MCB second-year and higher students were training in Fred Hutch labs.

Recruitment

In January and February 2024, MCB hosted 56 potential students on campus at Fred Hutch and UW for two 3-day visits. These visits allow recruits to meet with faculty and current students to learn more about pursuing an MCB PhD in Seattle. We provide an extensive overview of the MCB program and the Seattle area and include activities such as faculty interviews, student panels, faculty poster sessions, faculty lightning talks and sightseeing around Seattle. Of the 56 recruits, 17 joined the program for academic year 2024–2025.

2	56	30%
3-Day Visits	Recruits	Accepted

MCB Courses & Curriculum Committee

MCB graduate courses held at Fred Hutch are managed by OGE in collaboration with the UW MCB office. OGE partners with the MCB Curriculum Committee to recruit faculty instructors and teaching assistants, provides guidance creating and running new courses, and oversees tasks associated with graduate course administration. The committee is chaired by Cecilia Moens and comprised of UW, Fred Hutch and partner institute faculty.

Table 2. 2023–2024 MCB courses taught at Fred Hutch

Quarter	Lead Instructor(s)	Course
Autumn	Michael Emerman, PhD	MCB 532 - Human Pathogenic Viruses
Autumn	Rasi Subramaniam, PhD	MCB 536 - Tools for Computational Biology
Winter	Julian Simon, PhD Celeste Berg, PhD	MCB 515 - Molecular & Cellular Biology Literature Review
Winter	Cecilia Moens, PhD	MCB 522 - Developmental Basis of Human Disease
Spring	David MacPherson, PhD Bob Eisenman, PhD	MCB 539 - Biological Basis of Neoplasia

MCB Student Success Strategic Plan

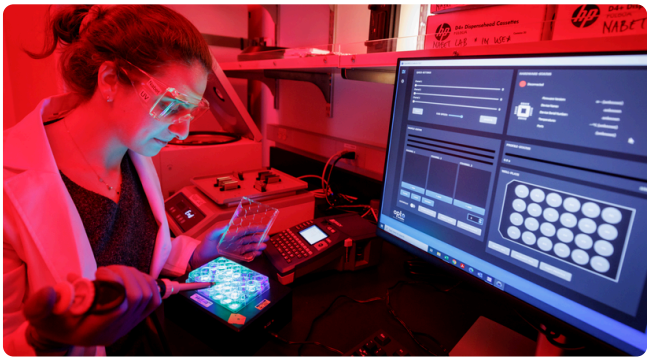
In 2023, OGE and the MCB program initiated a strategic planning process that ensures the program proactively responds to the emerging needs of an increasingly diverse student population. The program's approach was informed by student, faculty and staff feedback Black, Indigenous and other students of color (BIPOC), members of the LGBTQ community and members of the faculty and staff.

A strategic planning committee comprised of faculty, students and staff partnered with an external consultant, Integrated Strategy, LLC. The committee reviewed internal data, engaged with the MCB community through focus groups and conducted a survey on the desired future for the program.

The identified goals and objectives fall under four categories: curricular and academic experience, student support, community and belonging, and program administration.

Graduate Student Fellowship and Training Grant Appointments

Graduate students in Fred Hutch labs and groups are highly competitive when applying for fellowships and training grants. Table 12, (Appendix) indicates the number of students newly appointed in 2024, as well as those continuing their appointments.



Graduate student Jennifer Crainic, works in the Nabet Lab at the Fred Hutch Cancer Center. *Photo by Robert Hood.*

Outcomes and Impact

Coalition for Next Generation Life Science

In 2017, along with nine research universities, Fred Hutch became a founding member of the Coalition for Next Generation Life Science (CNGLS). The coalition currently includes 39 institutions dedicated to demographics and outcomes transparency for graduate students and postdocs, empowering them to make informed decisions about their training and careers.

Figure 9. First position type for 2023-2024 UW School of Medicine PhD graduates (n = 30)

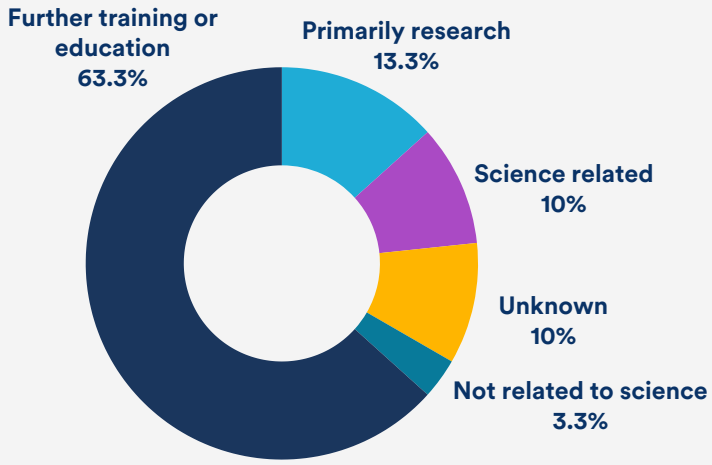
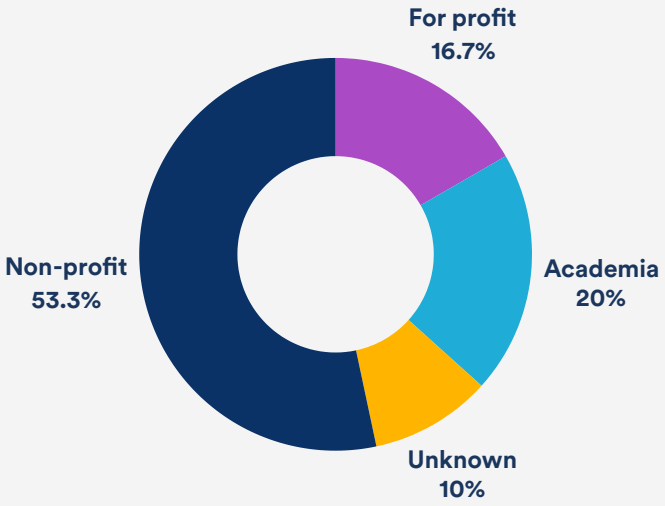


Figure 10. First position sector for 2023-2024 UW School of Medicine PhD graduates (n = 30)



Office of Graduate Education Team

Andrea Brocato, M.A.
Director, Office of Graduate Education

Bao-Han Nguyen
Program Coordinator, Office of Graduate Education

Mel Leavens, M.A.
Program Manager, Office of Graduate Education

Office of Scientific Career Development (OSCD)

Graduate | Postdoc

Office of Scientific Career Development (OSCD)

Graduate | Postdoc

The Office of Scientific Career Development (OSCD) helps graduate students, postdoctoral fellows (postdocs) and medical fellows to identify and achieve their career goals and to develop aspects of the core competencies of a successful scientist while overseeing key Fred Hutch federal compliance programs that include Responsible Conduct of Research (RCR) training and Rigor and Reproducibility Training (RRT). We also advance Fred Hutch/University of Washington/Seattle Children's Cancer Consortium-wide postdoc recruitment. OSCD works closely with the Student-Postdoc Advisory Committee (SPAC) to administer many SPAC programs and ensure good communication and understanding of the needs of graduate students and postdoctoral fellows at the Fred Hutch.

Figure 11. OSCD programs and 2024 participation

Personal, Professional, and Academic Programming

OSCD consists of three programmatic sections: professional development, program management and federal compliance programs. Professional development programs help Fred Hutch scientists-in-training gain skills and knowledge to obtain permanent jobs. Additionally, OSCD manages several programs that are designed to increase the career success of our graduate students and postdoctoral fellows.

Career Counseling and Coaching

One of our most impactful activities is career counseling/coaching for PhD/MD-level scientists. OSCD has developed international networks of Fred Hutch alumni who have pursued a diverse range of careers that are relevant to current trainees. Ninety-nine postdocs and graduate students received career counseling in 2024 through weekly office hours and individual meetings, see Table 14, (Appendix). About 30% of participants request multiple meetings. This work includes:

- Brainstorming career options
- Connecting with former trainees for informational interviews
- Reviewing CVs/resumes and cover letters
- Preparing for interviews and negotiations

Ivory Tower Quest

This program prepares postdocs for the academic job market by guiding faculty applications, interviews, and job offer negotiations. Through a peer cohort model, participants applying for faculty roles meet twice monthly to refine applications, learn from alumni and junior faculty and practice interviews. OSCD facilitates sessions, provides individual feedback, shares successful application examples to R1 universities and Primarily Undergraduate Institutions (PUIs) and assists with strategizing job offer negotiations.

K Award Grant Writing Program

The K Award Grant Writing Program offers programmatic and individual K award assistance, including:

- Resources to understand the basics of K award proposal writing.
- Examples of successful K award proposals
- K award individual questions and expert advice available by appointment with Chris Li, MD, PhD, Johanna Lampe, PhD, RD, Taran Gujral, PhD, Alice Berger, PhD, Jarrod Dudakov, PhD, Andrew Hsieh, MD, and Sita Kugel, PhD
- Mock study sections three times per year, co-facilitated by Jarrod Dudakov, PhD, coincident with NCI first submission K award deadlines

K Award Mock Study Sections

Of the two K award drafts submitted to the mock study section in 2024, see Table 15 (Appendix), none have been awarded so far; however, all were first submissions, and many will not have heard back yet. Outcomes will be available in late 2025.

Approximately once every three cycles, no proposals are submitted. OSCD is currently developing an alternative process for reviewers during these periods.

Exploration Program for Industry Careers (EPIC)

EPIC educates postdocs and graduate students about industry career paths and provides networking opportunities with scientists. In 2024, 54 postdocs and graduate students visited local biotech companies and attended career seminars and speed networking events. See Table 16, 2024 EPIC events (Appendix).

OSCD Orientation

OSCD Orientation is intended to help Fred Hutch graduate students and postdocs learn about career and professional development resources as well as resources available for international postdocs.

Leadership Academy

In the Leadership Academy, postdocs and senior graduate students learn and explore different aspects of leadership and how to leverage their unique qualities to lead effectively. Eight sessions are led by OSCD staff, HR Learning and Development staff and invited panelists and speakers.

Training Inclusive Research Mentors

Established in 2023, this mentorship program seeks to provide foundational skills, strategies and awareness that will help participants be better mentors and managers. Graduate students and postdocs receive mentorship training and then have the opportunity to continue growing their skills by mentoring at Fred Hutch.

Becoming a Resilient Scientist Training

In 2024, eight trainees participated in the Becoming a Resilient Scientist Series for graduate students and postdocs focused on resilience and wellness. Fred Hutch collaborates with the NIH Office of Intramural Training & Education to help trainees navigate challenging situations in research environments, school and life. See Figure 11, professional development programs and 2024 participation.

Postdoc Candidate Recruitment

OSCD staff are available to meet with postdoc candidates during their on-site interview to inform them about OSCD/Student/Postdoc Advisory Committee (SPAC) programs as a recruitment mechanism. This is especially helpful for junior faculty who may have challenges recruiting high- quality postdocs. In 2024, OSCD staff met with 10 postdoc candidates applying to faculty groups.

SPAC Course and Conference Scholarship

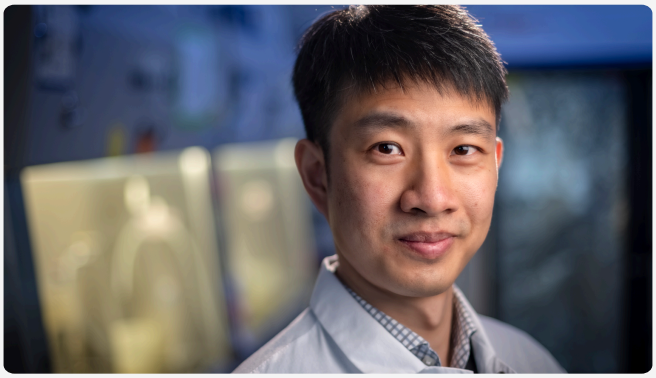
This program provides up to $1,500 to attend a course or conference. See Figure 16, Global conference participation and OET support, (page 41) for specific conferences attended. More information on course scholarship recipients available in Table 17, 2024 SPAC course award recipients, (Appendix). Awards are offered twice annually in January and July. The 2024 selection committee members were three postdoctoral fellows and two graduate students.

2024 Hutchison Award: Martine Aubert

This award acknowledges excellent mentoring by a non-faculty employee/trainee. The award is named after Dr. Nancy Hutchison, who was highly regarded for her excellent mentorship prior to retiring from Fred Hutch. The award, presented at the SPAC holiday party, consists of a custom bobblehead figurine, a bottle of wine and a book donated by Nancy Hutchison, PhD. The selection committee members were three postdoctoral fellows.

Martine Aubert, PhD, receives the 2024 Hutchison Award. Photo by Robert Hood.

> **"Martine is an inspiration, a true force of nature as a scientist, but also a wonderful human being whom I am grateful to call a friend and colleague."**
>
> **— Dr. Pavitra Roychoudhury, assistant professor at UW – collaborator and mentored as a postdoctoral fellow and associate in VIDD**



Stanley Lee, PhD, receives the 2024 McDougall Award. *Photo by Robert Hood.*

2024 McDougall Award: Stanley Lee

The McDougall Award honors outstanding faculty mentorship and is named after Dr. Jim McDougall, a former Fred Hutch faculty member known for his exceptional mentoring. Nominated by their trainees, the award is presented at the SPAC holiday party and includes a bottle of scotch donated by Denise Galloway, PhD, (McDougall's widow) and a custom bobblehead figurine. This year's selection committee included Pralaksha Gurung and Sarah Tomlin.

> **"Stanley's unwavering support and guidance have been instrumental in my scientific and personal growth. He has been an exceptional mentor, providing guidance when necessary while allowing me to grow as a scientist by exploring new ideas and learning from my mistakes."**
>
> **— Rasika Venkataraman, PhD candidate, Stanley Lee Lab**

Training in the Responsible Conduct of Research (RCR)

For approximately the past 20 years, Fred Hutch RCR training has been organized in collaboration with the University of Washington. The training fulfills our National Institutes of Health (NIH), National Science Foundation (NSF), (National Institute of Food and Agriculture, NIFA, USDA) and Fred Hutch RCR training obligations. The Research Ethics Training Certificate is conferred upon those who complete the six training sessions required of all Fred Hutch graduate students and postdoctoral fellows.

In 2024, Fred Hutch transitioned to an independent year-round RCR education program with potential plans to expand the scientist populations we train. Fred Hutch graduate students can receive Fred Hutch RCR credit for attending UW RCR training. The Fred Hutch RCR advisory committee includes representation from Fred Hutch, OET and NIH Training Program (T32) senior leaders, as well as staff from the Office of Compliance, Ethics and Conflict of Interest (COI)and the Fred Hutch Data Science Lab (DaSL). See Table 18, RCR advisory committee, (Appendix).

2024 Research Ethics Education Events

2024 was our transition year to an independent program. In-person trainings were provided to Fred Hutch graduate students and postdocs. See Table 21, Research ethics case study discussion groups and seminars (Appendix).

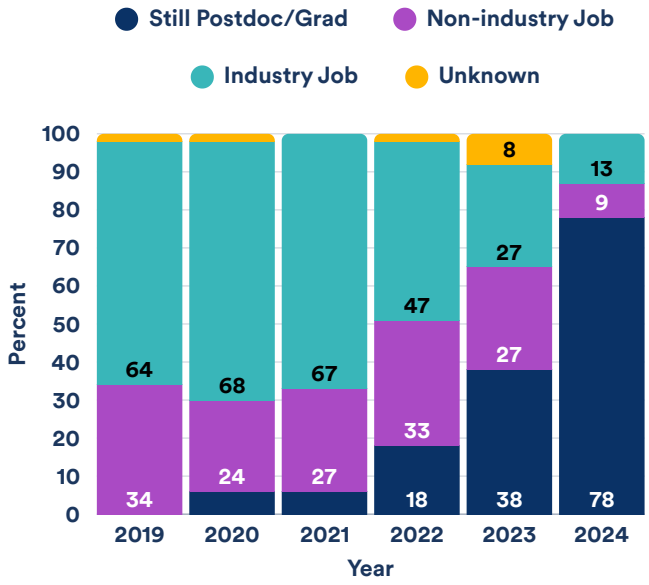
Rigor and Reproducibility Seminar Series

This seminar series is a joint effort between Fred Hutch and UW to provide NIH-required training for T32, F and K awardees in best practices to ensure rigor and reproducibility in research. This joint effort broadens and enriches the topics and fields of research that we can cover in this series, which presents five virtual seminars each year.

Outcomes and Impact

EPIC has an application process so we can identify the career outcomes of EPIC participants. This is a self-selected group, and we have no control group to compare it to. Therefore, we measure the success rate of a group that is thinking of pursuing a career in an industry vs. whether or not they end up working in the industry.

Figure 12. EPIC outcomes (n = 295)



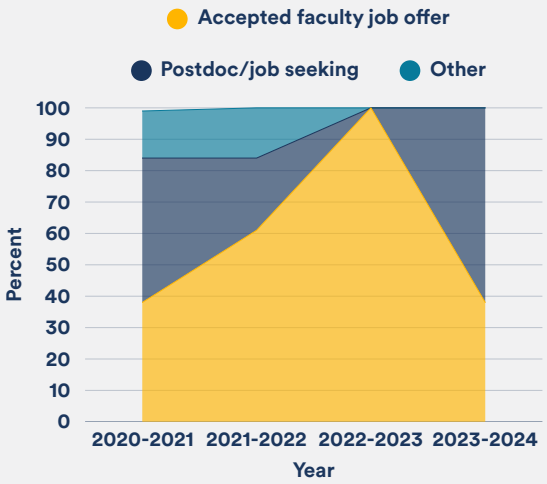
Coalition for Next Generation Life Science

Fred Hutch is a founding member of the Coalition for Next Generation Life Science (CNGLS), which is dedicated to outcome transparency for graduate students and postdocs. OSCD is responsible for reporting the postdoc outcomes data.

Ivory Tower Quest

We helped approximately six postdocs strategize negotiating a faculty job offer in 2024, with eight participants in the 2023–2024 cohort. The accepted institutions include Oregon State University, Ohio State University and Nagoya University. The 2024–2025 cohort outcomes will be available in summer 2025.

Figure 13. Ivory Tower Quest outcomes (n = 40)



Graduate Student Outcome: Biotech Industry

Dr. Terry Hafer,
Senior Research Associate, Outpace Bio

Terry Hafer, PhD earned his doctorate degree in Michael Emerman's lab and participated in EPIC. In 2024, he obtained a senior research associate position on a lentivirus production team at Outpace Bio. He's excited to be working with other Fred Hutch alumni on the same team.

Postdoc Outcome: Tenure-Track Faculty

Dr. Xiaochen Zhang,
The Ohio State University

Xiaochen Zhang, PhD, MPH, was a postdoc in the Public Health Sciences Division with Marian Neuhouser, PhD. She participated in Ivory Tower Quest to develop her faculty application. In 2024, she accepted a position as assistant professor in the Department of Internal Medicine-Cancer Prevention and Control at The Ohio State University.

Postdoc Outcome: Research-Related Career

"

After my PhD, I was at a crossroads. "Do I want to be faculty? Do I want to be a scientist in industry? Do I want to do something more administrative?" Sue Biggins — who I've known since 2015 and is one of my favorite people — said, "Amanda, just do a postdoc and at least that door will remain open." So I decided to join Alice Berger's lab here at Fred Hutch. During my postdoc, even though I loved science and I loved interacting with trainees, I knew I didn't want to run my own lab. It was like, "OK, then let's figure out what's next." What I found in this career transition was that it was actually pretty challenging to make the leap. That's something that they don't tell you. But I feel like it was incredibly worthwhile because I'm still science-adjacent, I still have access to scientific talks and the environment of academia, but I really am on the side of trainee education. Now I'm the program manager of responsible conduct of research programs at Fred Hutch, and I will be running the Responsible Conduct of Research and the Rigor, Reproducibility and Transparency programs. I'm really excited about it, because this position really melds all the things that I'm good at and passionate about. No day is the same, and I think a lot of bench scientists will tell you that's why they like it — it's not predictable. And Fred Hutch is just a great place to work.

Dr. Amanda Bradley,
Program Manager of Responsible Conduct of Research Programs

Postdoc Recruitment Efforts

Seattle DROP (Discover Research Opportunities for Postdocs)

A virtual recruitment event organized by Consortium partners was held in May 2024 and was open to all graduate students and postdocs. We encourage candidates from all communities to apply, and 40% of attendees identified as underrepresented per NIH criteria. The event drew 240 registrants and 116 attendees. Seattle DROP biosketches provide candidates with increased visibility, opening doors to employment opportunities and further career development programs within the Consortium institutions. The next Seattle DROP will occur in May 2025.

President's Postdoctoral Fellowship Program (PPFP)

Fred Hutch is a member of the President's Postdoctoral Fellowship Program (PPFP), a consortium of approximately 17 research institutions and universities who are dedicated to recruiting diverse faculty-bound postdocs. This program is managed by the Office of Faculty Development and collaborates with OSCD to select fellows and set policies. This program gives Fred Hutch access to exceptional underrepresented postdoc applicants as well as Fred Hutch exposure to postdocs who are on the faculty job market. It will also give our PPFP postdocs access to specific underrepresented faculty recruitment mechanisms at participating institutions. Two postdocs were accepted in 2024.

Future Initiatives

The RCR Advisory Committee will meet in early 2025 to consider potential expansion of RCR training. This potential expansion includes new programs and the types of scientists to train. We propose to expand our training offerings to include Research Ethics Peers (REP), who would be composed of staff scientists and senior postdocs who lead discussion groups and organize an annual research ethics symposium. In addition to REP, the collaboration will also include different groups within OET to expand the populations of scientists who receive research ethics training. Advanced training for non-supervisory staff scientists, who could join in the current training we provide for graduate students and postdocs

Research Ethics Book Club

We plan to create a once or twice per year book club focused on research ethic topics. One example of a book for the club is Rebecca Skloot's *The Immortal Life of Henrietta Lacks*. This book club will be facilitated by Amanda Bradley.

Office of Scientific Career Development Team

Karen Peterson, Ph.D.
Director, Office of Scientific Career Development and Scientific Ombuds

Amanda Bradley, Ph.D.
Program Manager, Responsible Conduct of Research Programs

Amber Ismael, Ph.D.
Sr. Program Manager, Office of Scientific Career Development

Faculty Development

Faculty & Staff Scientists

Faculty Development

Faculty & Staff Scientists

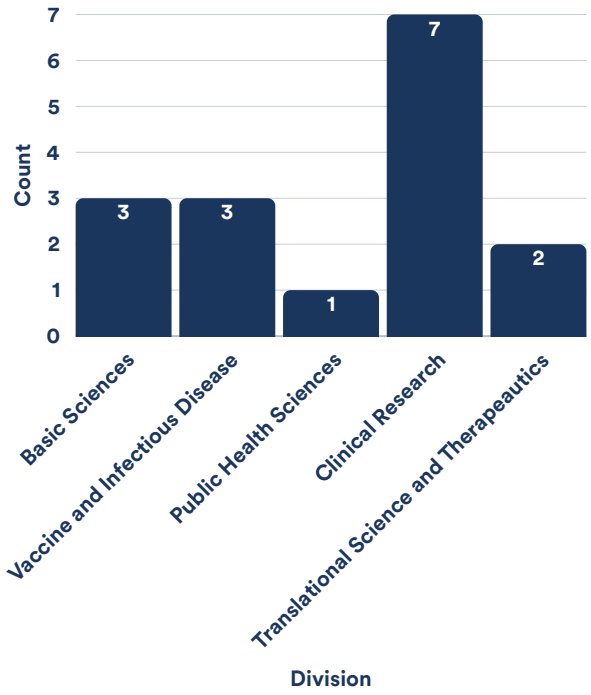
The Faculty Development Program helps support faculty at all stages of their careers to establish and maintain productive research programs by providing cross-division professional development programs and resources. Faculty Development works closely with staff from OSCD, the Consortium, and Fred Hutch Human Resources to develop new programs for Fred Hutch faculty, and staff scientists. In 2024, new efforts were underway to enhance clinical research programs through specific programming for clinical research faculty.

Personal, Professional, and Academic Programming

Faculty Leadership Incubator (FLI)

The Faculty Leadership Incubator (FLI) program is a year-long series of monthly sessions for new faculty during their first year at Fred Hutch. This cohort-based program brings together faculty across Fred Hutch divisions for interactive sessions with associate and full professors on topics including building a successful and collaborative team, mentoring, time management, navigating promotion, managing conflict and more. The goals of this program are not only to provide new faculty with resources to support them during their first year, but also to connect them to each other and to more senior faculty across divisions that they may not otherwise meet or regularly interact with.

Figure 14. 2024 FLI Cohort Participation by Division



Leadership Enhancement for All Professors (LEAP)

This workshop series invites Fred Hutch faculty of all ranks and across all divisions to engage in workshops and seminars focused on leadership, career advancement, mentoring, management, science culture and other relevant topics. The goals of this series include providing resources to support career development and leadership skills, creating connections and building community between Fred Hutch faculty across divisions. The topics covered to date, faculty panelists and number of attendees are noted in Table 23, 2024 LEAP sessions (Appendix).

Professional Development for Clinical Research Faculty

Clinical Leadership and Research Excellence (CLEARE)

The Faculty Development team continued to develop a series of workshops (similar to FLI) with topics that are specifically relevant to clinical research faculty, including the clinician-scholar and clinician-clinician tracks.

Starting in 2025, quarterly meetings will cover topics including: navigating a clinical research path at Fred Hutch, balancing clinical duties with building a research program, forming collaborations, and advice on writing clinical trial protocols.

Funding for courses for Clinical Researchers:

In 2024, we funded 2 clinical fellows and faculty to attend the inaugural course developed by Stephanie Lee, MD, MPH, called Clinical Research Intensive Summer Program (CRISP).

Application-Based Funding for External Professional Development Activities

This program provides funding for individual faculty to attend an external leadership course, faculty development program or individual leadership coaching. Suggested programs include those available through the National Center for Faculty Development and Diversity (NCDD), the Association of American Medical Colleges (AAMC), the Linton-Poodry SACNAS Leadership Institute and others. A call for applications went out in November 2024, a peer-review committee of past awardees was formed and four awards were granted in January 2025.

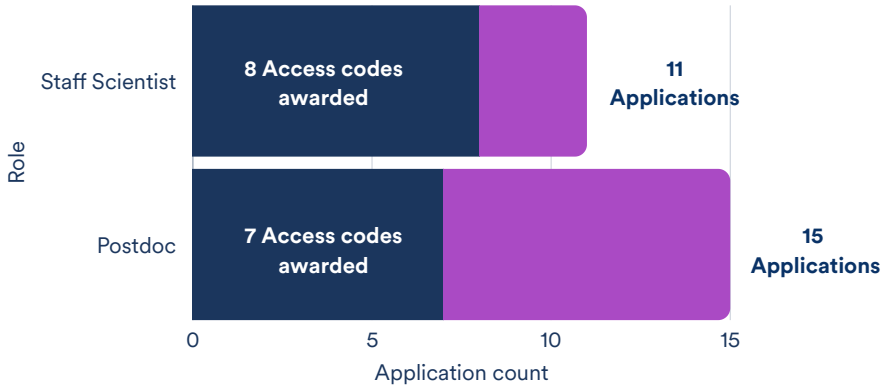
Table 3. Recipients of external professional development funding

Recipient	Funding used for
Cecilia Yeung, MD	Laboratory Medical Director Leadership Program
Denise McCulloch, MD, MPH	WSMA Physician Leadership Course
Vidhya Nair, DO	Individual Professional Development Coaching
Xuequiu Lin, PhD	SCI-Foundry Leadership Program

Nature Masterclass online professional development courses

Nature Masterclasses is a subscription-based series of online professional development courses for scientific researchers: https://masterclasses.nature.com/catalogue/24073606. We renewed our subscription for 15 researchers per year and access was again offered to Staff Scientists and Postdocs through an application-based process. Applications were reviewed by the Faculty Development Team.

Figure 15. Masterclass Subscriptions Breakdown



RME: Research Mentor Education

In 2023, OET and the UW School of Medicine Offices of Research & Graduate Education (RGE) and Faculty Affairs partnered to create the Research Mentor Education (RME) program. The RME program was built on the Center for Improvement of Mentored Experiences in Research (CIMER) Entering Mentoring curricula, which is theoretically grounded, evidence-based, and culturally responsive. The program provides a flexible, interactive training program for research mentors in clinical research and biomedical research environments. Elia Tait-Wojno, PhD, associate professor in UW Immunology, leads the RME program as Director of Mentor Education in RGE. Faculty and education staff across Fred Hutch, UW, and Seattle Children's have been trained as facilitators for the program, which was officially launched in September 2024 with multiple, quarterly in-person and virtual trainings that will be held throughout the academic year.

The RME program fulfills new NIH mentor training expectations for T32 applications beginning in January 2025, and prioritizes registration for T32 mentors who are actively mentoring and new mentors (59 participants since its inception).

Professional Development for Staff Scientists:

All Staff Scientist Education Team (ASSET)

The Faculty Development program is continuing to enhance and develop programs to support the professional development of Staff Scientists. The All Staff Scientist Education Team (ASSET), which advises on needs and resources for Staff Scientists at Fred Hutch, currently consists of the following Staff Scientists:

- Basic Sciences Division
  - Janet Young, PhD
- Human Biology Division
  - Dara Lehman, PhD
- Translational Science and Therapeutics
  - George Laszlo, PhD
  - Sandi Navarro, PhD
  - Tom Paulson, PhD
- Vaccine and Infectious Disease Division:
  - Michele Andrasik, PhD
  - John Huddleston, PhD
  - Dan Reeves, PhD
- Shared Resources
  - Lena Schroeder, PhD
- Office of Scientific Career Development
  - Karen Peterson, PhD
- Science Education
  - Dave Vannier, PhD

The ASSET team met in 2024 to help develop new resources for Staff Scientist as described here.

Staff Scientist resources – current and in development:

- New website on CenterNet with links to external and internal professional development opportunities.
- All staff scientist listserv to enable communication about professional development opportunities
- Subscription to Nature Masterclasses (see above)
- The 1st annual All Staff Scientist Lunch was held on June 20, 2024. The objective was to enable networking and build community. 71 staff scientists attended this lunch and provided feedback about how much they appreciated being able to connect with other staff scientists across the center.
- Application-based funding for meeting and course scholarships. We received 13 applications and a review committee of 3 ASSET members reviewed the applications, and selected 7 for funding. Table 22, Staff scientist awarded funds to attend conferences scheduled in 2025 (Appendix), is a list of those awarded funds and the registered conferences to attend.

Faculty Development Team

Dara Lehman, Ph.D.
Faculty Consultant

Wendy Law, Ph.D.
Associate Vice President of Cancer Consortium Programs

Karen Peterson, Ph.D.
Director, Office of Scientific Career Development and Scientific Ombuds

Kim Wells
Director, Organization Development and Learning

Manoj Menon, M.D., M.P.H.
Deputy Director, Clinical Education, Office of Education and Training

OET/CRTEC Resources

Conference Support

Conference support plays a vital role in fostering professional and academic growth. OET has contributed various forms of support, including application assistance and coordination of OET or other external funding contributions to help trainees attend a diverse range of conferences. Figure 16, highlights the breadth of the conferences attended in 2024, reflecting our commitment to advancing career development and networking opportunities.

Figure 16. Global conference participation and OET support.

Postbac

2024 Society for Epidemiologic Research (SER) Conference
Austin, TX, United States

Aegeon Conference on Innate Immunity
Loutraki, Greece

American Association for Cancer Research Conference
San Diego, CA, United States
Chicago, IL, United States

American Association for Cancer Research Immuno-Oncology Conference
Los Angeles, CA, United States

American Society for Biochemistry and Molecular Biology Conference
Chicago, IL, United States

American Society for Cell Bio and European Molecular Biology Org Conference
San Diego, CA, United States

American Society for Virology 2024 conference
Columbus, OH, United States

American Society of Hematology Annual Conference
San Diego, CA, United States

Conference on Retroviruses and Opportunistic Infections
San Francisco, CA, United States

European Association for Cancer Research Conference
Lyon, France

European Molecular Biology Laboratory Chromatin and Epigenetics Conference
Heidelberg, Germany

Facioscapulohumeral muscular dystrophy International Research Conference
Amsterdam, Netherlands

International Conference on Multimodal Interaction Conference
Copenhagen, Denmark

Metastatic Research Society: 20th Biennial Congress
London, England

Minflux microscope demo at Scripps
La Jolla, CA, United States

Society for Molecular Biology and Evolution Conference
Puerto Vallarta, Mexico

University of Nairobi STD/HIV/SRH Collaborative Research Group Meeting
Nairobi, Kenya

OSCD

American Association for Cancer Research Special Conference: Tumor-body Interactions: The Roles of Micro- and Macroenvironment in Cancer
Boston, MA, United States

American Society of Hematology Annual Conference
San Diego, CA, United States

Cold Spring Harbor Epigenetics and Chromatin
Cold Spring, NY, United States

Eastern North American Region 2025 Spring Meeting
New Orleans, LA, United States

European Society for Blood and Marrow Transplantation (EBMT) Annual Meeting
Glasgow, Ireland

International Association for Dental Research Conference
New Orleans, LA, United States

International Congress of Mucosal Immunology
Copenhagen, Denmark

International Dynamics & Evolution of Human Viruses
Squamish, B.C. Canada

Keystone Symposia – B Cells: Multifaceted Functions and Dysfunctions
Monte Carlo, Monaco

Mucins in Health and Disease (17th International Meeting)
Gothenburg, Sweden

Systems Biology: Global Regulation of Gene Expression
Cold Spring, NY

The International Symposium on EBV & KSHV
Boston, MA, United States

OET

3rd Translational Research Conference: Immune & Cellular Therapies: Focus on Advanced Gene-Engineered Immune Cells
Dublin, Ireland

European Society of Gene & Cell Therapy
Rome, Italy

Histiocyte Society Annual Meeting
Goa, India

CRTEC

American Society of Clinical Oncology (ASCO) Annual Meeting 2024
Chicago, IL, United States

C elegans Topic Meeting: Neuronal Development
Madison, WI, United States

Cellular Mechanisms Driven by Phase Separation
Heidelberg, Germany

Drug Discovery Chemistry and American Association of Cancer Research
San Diego, CA, United States

Systems and Engineering Immunology: Advancing Immunological Insights in Health and Disease
Alberta, B.C. Canada

Fred Hutch/UW/Seattle Children's Cancer Consortium Trainee Travel Award

The Consortium offers a Trainee Travel award, providing up to $1,500 for graduate students, postdoctoral fellows, and medical fellows whose faculty advisor is a member of the Consortium. Awards are offered annually in January. The 2024 selection committee members were CRTEC Liaisons Amanda Phipps, PhD, MPH, (associate professor, Public Health Sciences), Gordon Roble, DVM, MBA, (AVP Shared Resources, Comparative Medicine) and Julian Simon, PhD, (associate professor, Translational Science and Therapeutics).

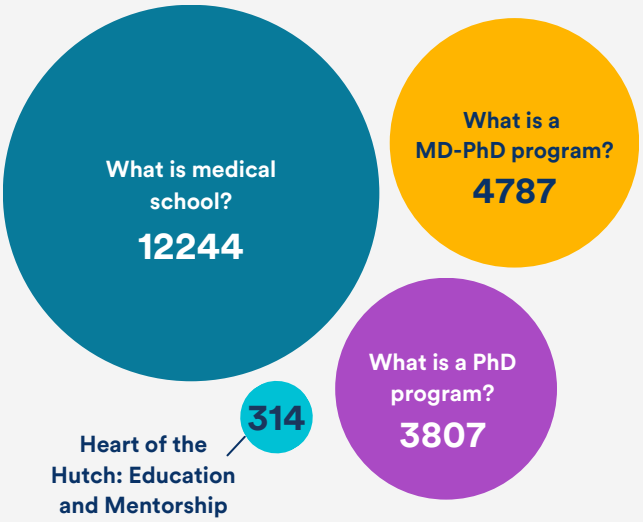
OET Travel Award

OET offers a conference travel award, providing up to $1,500 for Fred Hutch graduate students, postdoctoral fellows, medical fellows and research technicians to attend a conference, making this the only award open to research technicians at Fred Hutch. Awards are offered annually in July. The 2024 selection committee members were Cassie Sather (associate operations director, Shared Resources), Gennifer Goode, PhD, (student programs manager, OET), Kimberly Louis (community outreach and operations manager, Vaccine Trial Unit) and Rachel Werther (research technician).

Between 2 Flasks

The Between Two Flasks videos are a comprehensive educational series for students navigating biomedical research training and careers to answer the questions most commonly asked by early-stage trainees. By the end of 2024, four new videos were added, bringing the total collection to 22 short YouTube videos and TikTok reels. This initiative is a collaboration effort between OET, Science Education, the Postbaccalaureate program, and the University of Washington Neuroscience and Molecular & Cellular Biology PhD programs and continues to leverage the expert advice and humor of faculty, staff and trainees.

Figure 17. Between 2 Flasks 2024 videos with current number of views



Monthly Black Indigenous and People of Color (BIPOC) Facilitated Wellness Group

OET created and managed the Monthly BIPOC Facilitated Wellness Group tailored for Black, Indigenous and People of Color (BIPOC) postdoctoral fellows, graduate students, and postbaccalaureate scholars affiliated with the Consortium. Led by experienced facilitator Rian Roberson, MA LMHC, guided discussions delved into topics such as work/life balance, racial/cultural representation, and interpersonal relationships. These gatherings provided a dedicated space for BIPOC individuals to prioritize their health and well-being.

Research After Dark (RAD) Networking Group

The RAD Networking Group, established in 2023, continues to gain traction as a valuable platform connecting Seattle-area trainees with local research and biomedical professionals. Through quarterly networking events, RAD fosters career development and community building across the Consortium. Growing interest in the program has expanded the planning committee to 19 members (See Table 24, 2024 RAD Committee members, Appendix), including representatives from OET, Office of Scientific Career Development, Seattle Children's Research Institute education staff and graduate students and postdocs from Fred Hutch, UW, and Seattle Children's. In 2024, RAD hosted five events; see Table 4. Events were highly rated by attendees, with an average score of 4.57 out of 5 stars, reinforcing its impact in strengthening professional networks and community.

> "The events by RAD have been great given that Seattle is relatively a smaller biotech hub. The opportunity to meet those who work in industry in Seattle has provided valuable information. Thank you!"
>
> — RAD Participant

Table 4, RAD Events 2024

January	April	May	August	November
Happy Hour with Seattle Life Science Happy Hour	**Science Pitch Workshop with UW Engage Program:** A two-hour workshop for postdocs and grad students to refine their pitch and improve science communication skills	**Science Pitch Night with UW Engage Program:** Showcase their research and why it matters in rapid-fire presentations	**Happy Hour**	**Industry Careers Talk & Recent Hire Panel** Industry specific resume talk with Amber Ismael, OSCD, Fred Hutch **Recent Hire Panel** Ami Yamamoto, PhD, Scientist, Omeros Davis Goodnight, PhD, Scientist II, A-Alpha Bio Claire Williams, PhD, Bruker Spatial Biology	**Happy Hour** with Seattle Life Science Happy Hour

2024 survey of participants who attended previous RAD events rated their experience an average of 4.57 out of 5 stars.

Science Spotlight

Science Spotlight is a monthly, electronic newsletter that highlights and summarizes the most recent Fred Hutch-authored publications. To reach a broad readership, many of the research summaries are available on the Fred Hutch website and translated into Spanish. Each issue is developed, written and edited by a team of graduate student and postdoc writer-editors representing each Fred Hutch division as well as the Consortium in collaboration with a faculty advisor (see Table 25, 2024 Science Spotlight writers, Appendix).

Consortium Liaison Program

Launched in 2023, the Consortium Liaison Program fosters two-way communication between OET and the Consortium research programs (see Table 26, 2024 CRTEC liaisons, Appendix) and components. This collaboration quickly led to the ideation of the ASCEND (Accelerated Support for Clinical Excellence and New Development) program organized by the Breast & Ovary Cancers program and Science Education's Hutch Advance. This two-year paid professional development program will train recent graduates as clinical research coordinators (CRCs) at Fred Hutch. Participants will gain hands-on experience, earn an industry-recognized credential and receive career and educational support.

Liaisons also contributed to developing an annual report on mentor involvement across Consortium research programs and the various outreach and career development training programs, such as summer internships and F and K development awards. Liaisons meet three times annually and continue to serve on the review committee for the Fred Hutch/UW/Seattle Children's Cancer Consortium Trainee Travel Award.

Dr. Thomas Lynch gives opening remarks during the Consortium Liaison Program Retreat. *Photo by Robert Hood.*.

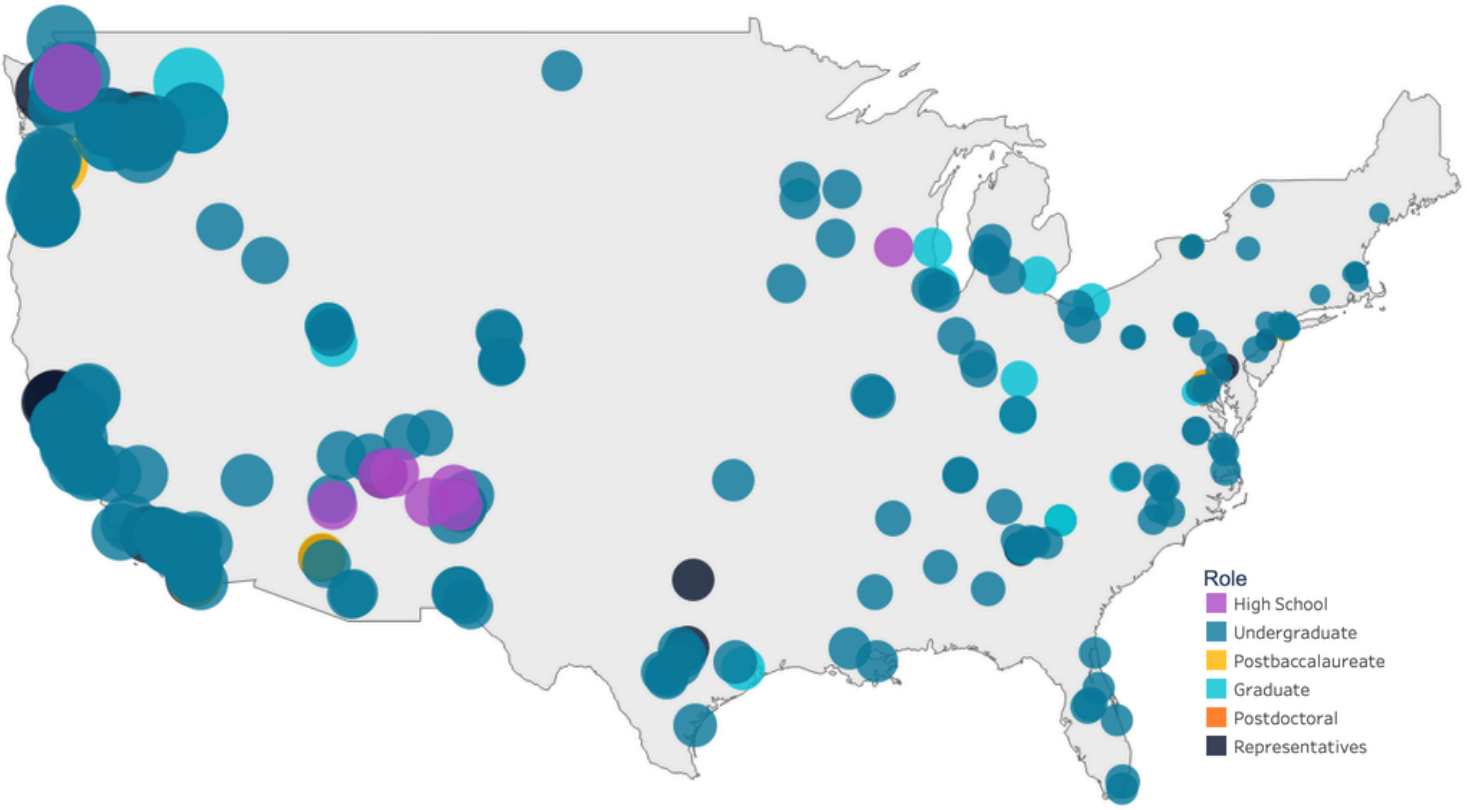
National Science, Technology, Engineering, and Mathematics (STEM) Conferences

By supporting students, faculty and staff in representing Fred Hutch at national STEM conferences focused on educational and professional development for individuals who have lower-than-average ability to access services, we engaged over 370 participants directly in 2024. This large effort spanned across OET's offices (Science Education, Postbaccalaureate, and organized by Office of Graduate Education), Fred Hutch Human Resources and DEI Core and the Fred Hutch-University of Washington Molecular Cellular Biology PhD program. Conferences attended in 2024 include the American Indian Science and Engineering Society, the Society for the Advancement of Chicanos/Hispanics and Native Americans in Science and the Annual Biomedical Research Conference for Minoritized Scientist.

Attending these conferences attracted interest from across the U.S. and provided direct engagement with 13 high school students, 291 undergraduate students, 12 postbacs, 29 graduate students, two postdocs and 23 representatives. Figure 18, focuses on the tracked data.

Dissemination of program information and resources were shared with the National Association for Research in Science Teaching, National Association of Biology Teachers and National Science Teaching Association Conference on Science Education. These efforts are not captured in the figure referenced below.

Figure 18. 2024 Conference recruitment leads by role



OET/CRTEC Team

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Andrea Brocato, M.A.
Assistant Director, Office of Education and Training

Zalika Tilmo
Data Coordinator, Office of Education and Training

Appendix

SciEd

Table 5. 2023-2024 SEP kit use data

Number of teachers requesting kits	93
Number of kit requests	240
Number of supplies only	156
Total number of requests	396
Kit students use (using Lab Request data)	19071
Supplies-only student use (using Lab Request data)	27477
Total student use (using Lab Request data)	45548

Table 6. Teacher applicant and participant demographics

	Applicants	Participants
Race		
American Indian/Alaska Native	0	0
Asian	5	3
Black/African	0	0
Native Hawaiian/Pacific Islander	0	0
White	14	11
Two or more races	1	1
Prefer not to answer/NA	2	1
Ethnicity		
Hispanic or Latinx	1	0
Not Hispanic or Latinx	21	16
Prefer not to answer/NA	0	0
Total Counts	**22**	**16**

Table 7. Student applicant and participant demographics

	Applicants	Participants
Race		
American Indian/Alaska Native	4	2
Asian	629	62
Black/African	155	54
Native Hawaiian/Pacific ISlander	5	1
White	341	49
Two or more races	126	21
Prefer not to answer/NA	226	36
Ethnicity		
Hispanic or Latinx	158	48
Not Hispanic or Latinx	1093	155
Prefer not to answer/NA	235	22
Total Counts	**1486**	**225**

Table 8. 2024 group visits

Completed community visits	January - December 2024
On-campus	40 (897)
Off-campus	5 (136)
Total # of groups (# of visitors)	45 (1033)

Table 8. 2024 group visits continue

Type of request fulfilled	January - December 2024
Campus tour	36
Lab tour	5
Training lab activity	28
Career panel	11
Scientific presentation/guest lecture	5
Lunch with scientist	5
Speed networking	1
Non-lab hands-on experience	1
Program informational	1

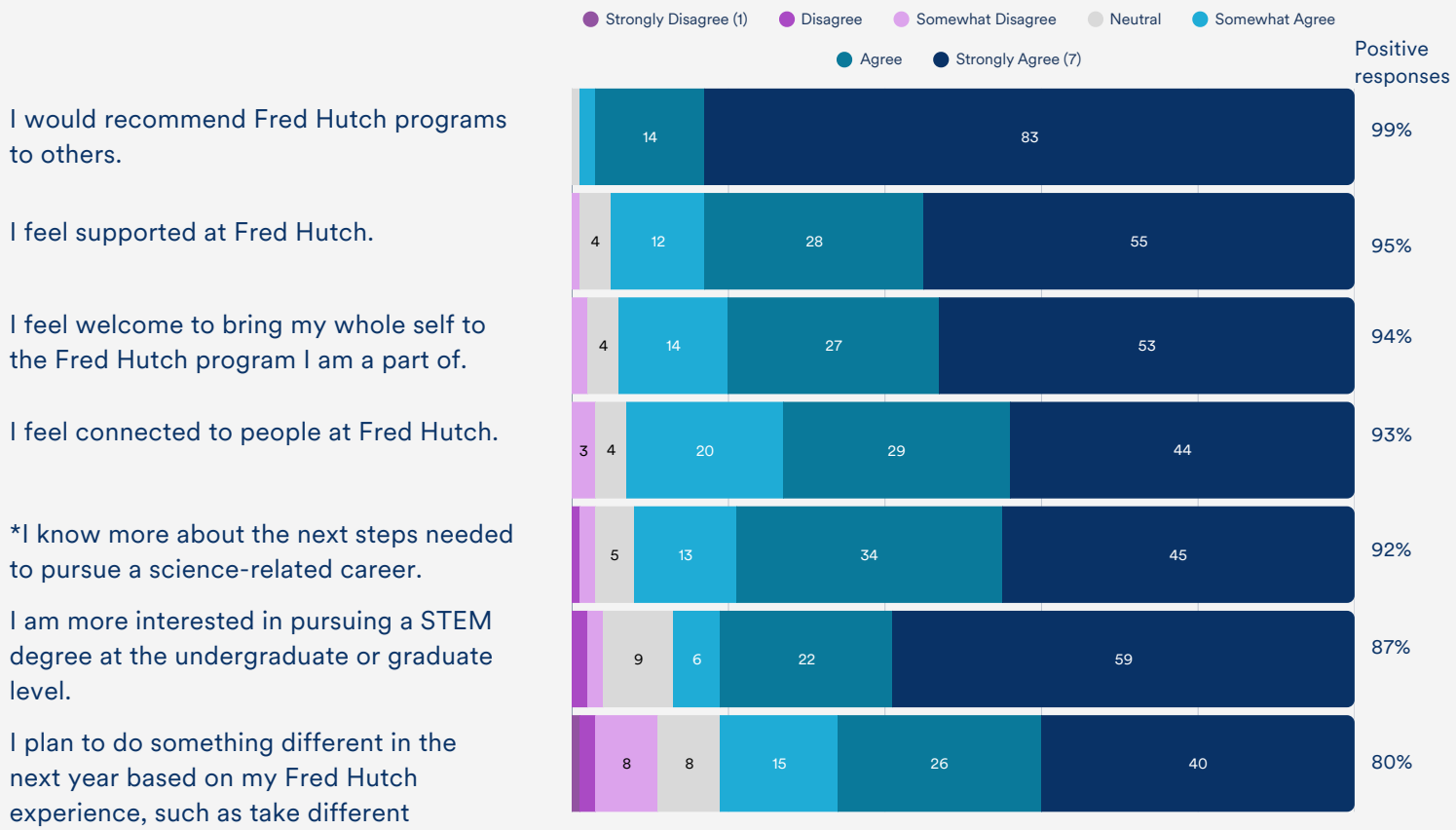
Training lab usage type	January - December 2024
Community (external)	25 (514)
Philanthropy (internal)	3 (36)
Comms & Marketing	0 (0)
EH&S (internal)	0 (0)
Summer programming * (internal)	4 (96)
Total # of Groups (# of visitors)	32 (646)

*Summer programs can include Pathways Explorers, SHIP, PUR, and SURP

Table 9. Student cross-program survey

Outcomes	Before	After	Change over time
I had a good understanding of the role biomedical research plays in contributing to the prevention and treatment of diseases.	4.3	6.1	+1.8
I was confident in using scientific skills and techniques learned during the program.	4.1	5.8	+1.7
I saw myself as a scientist.	3.9	5.5	+1.6
I was able to identify STEM careers or opportunities in STEM.	4.5	5.9	+1.4
I believed I could succeed in a scientific career.	4.7	5.9	+1.2

Figure 19. Fred Hutch cross-program survey results outcomes



*This item has fewer responses than others due to an error in survey administration. Calculations have been adjusted accordingly (n=128)

Sum of Strongly Agree +Agree +Somewhat Agree responses

Table 10. Student Kit Use Data from 2024-2025 demographics survey provided to teachers (n=85)

Number of students (from Demographics Survey)	N
Total underrepresented students	33% (n=3187)
Schools over Title 1 threshold	36.47% (n=31)
Teachers with over 50% underrepresented minority in STEM classrooms	20% (n=17)
Public School Teachers	92.86% (n=78)

Table 11. The number of student responses who strongly agree or agree with the following statements (n=283)

2024-2025 Student Feedback Survey	N
This kit/lab activity provided me with hands-on experience that enhanced my learning	92.93% (n=263)
This kit/lab activity provided me with experiences that increased my interest in science careers	63.93% (n=179)
This kit/lab activity provided me with experiences that increased my confidence in scientific thinking or practice	82.5% (n=231)

OGE

Table 12. Academic year 2023-2024 graduate student training grant and fellowship appointments

Award	Students
Newly appointed to NIH training grant (T32, TL 1)	4
Continuing appointment on NIH training grant (T32, TL1, T90)	5
Newly appointed to NIH fellowship (F30, F31, F99)	4
Continuing appointment on NIH fellowship (F30, F31, F99)	3
Newly appointed to other fellowship (UW Curci, Go-Map, NSF)	3
Continuing appointment on other fellowship (UW Curci, HHMI Gilliam, NSF)	5

OSCD

Table 13. Faculty Advisory Committee

Faculty	Division
Alice Berger, PhD	Human Biology
Johanna Lampe, PhD, RD	Public Health Sciences
Wendy Law, PhD	Research Administration
Jennifer Lund, PhD	Vaccine and Infectious Disease
Harmit Malik, PhD	Basic Sciences
Manoj, Menon, MD, MPH	Clinical Research
Nina Salama, PhD	Human Biology
Julian Simon, PhD	Translational Science and Therapeutics

Table 14. Fred Hutch postdocs or grad students career counseling participation

Year	Hutch postdocs or grad students who sought career counseling
2014	43
2015	84
2016	77
2017	105
2018	108
2019	102
2020	104 (Karen) and 8 (Amber) = 112
2021	105 (Karen) and 13 (Amber) = 118
2022	88 (Karen) and 17 (Amber) = 105
2023	96 (Karen) and 24 (Amber) = 120
2024	80 (Karen) and 19 (Amber) = 99

Table 15. 2024 K award mock study sections events

Date	Title	Events/participants	Attendance
1/23/24	Mock study section	Canceled - no proposals submitted	n/a
5/22/24	Mock study section	Two proposals reviewed	4
9/23/24	Mock study section	Canceled - no proposals submitted	n/a

Table 16. 2024 EPIC events

Date	Title	Speaker	Approx. attendance
1/5/24	CV, Resume, Cover Letter, Biosketch Seminar	Karen Peterson, PhD	40
2/7/24	Interviewing for Industry Jobs	Karen Peterson, PhD	20
2/28/24	Negotiating Industry Job Offers	Karen Peterson, PhD	12
3/27/24	LinkedIn for Scientists Workshop	Amber Ismael, PhD	20
4/25/24	Pfizer/Seagen		28
5/29/24	Umoja Biopharma		21
6/10/24	Allen Institute for Immunology site visit		24
6/12/24	Adaptive Biotechnologies site visit		18
7/11/24	Speed Networking		50
7/17/24	Bristol Myers Squibb site visit		18

Table 17. 2024 SPAC Course Award recipients

Recipient	Course
Carly Gray	Foundations of Project Management
Erin Barnett	Marine Biological Laboratory Workshop on Molecular Evolution
Joselyn Landazuri Vinueza	Catalyzing Advocacy in Science and Engineering Workshop
Jenny Waters	R for the Rest of Us: R in 3 Months
Taylor Oeschger	Quality Basics for Cell and Gene Therapy Products
Trevor Thomson	Joint Statistical Meetings — Continuing Education Courses and Computer Technology Workshops
Boya Guo	American Association for Cancer Research — Integrative Molecular Epidemiology Workshop
Indrila Ganguly	Decompositions of Model Comparison Criteria for Quantifying Importance and Contribution of Longitudinal Biomarkers to the Fit of Survival Data: Theory, Methods and Applications

Table 18. RCR Advisory Committee members

Name	Division	Title
Nina Salama, PhD	Human Biology	Professor and SVP of Education
Dara Lehman, MHS, PhD	Human Biology	Research Assoc. Professor and OET Faculty Consultant
Andrea Brocato, MA	OET	Assistant Director OET and Director OGE
Amber Ismael, PhD	OSCD	Sr. Program Manager
Amanda Bradley, PhD	OSCD	Program Manager
Jennifer Lund, PhD	Vaccine and Infectious Disease	Professor
Amanda Phipps, PhD, MPH	Public Health Sciences	Associate Professor
Michael Boeckh, MD, PhD	Vaccine and Infectious Disease	Professor and Head of Infectious Disease Sciences Program
Sue Biggins, PhD	Basic Sciences	Director
James Alvarez, PhD	Public Health Sciences	Assoc. Professor and Postbac Program Director
Julian Simon, PhD	Translational Science and Therapeutics	Assoc. Professor and Fred Hutch MCB Program Director
Fred Applebaum, MD	Director's Office	Executive Vice President, Fred Hutch
Gerianne Sands	General Counsel	Vice President
Marcia Gonzales, JD	Compliance, Ethics and COI	VP and Chief Compliance Officer, Privacy Officer
Julie DeVoe, JD	Compliance, Ethics and COI	Sr. Compliance Prog. Mgr. And Research Integrity Officer
Amy Sandlin	Compliance, Ethics and COI	Executive Assistant to Chief Compliance Officer
Malia Fullerton, PhD	Bioethics and Humanities, UW	Professor
Amy Paguirigan, PhD	Data Science Lab	AVP, Deputy Chief Data Officer

Table 18. RCR Advisory Committee members continue

Effie Petersdorf, MD	Translational Science and Therapeutics	Professor
Johanna Lampe, PhD, RD	Public Health Sciences	Professor and Associate Director
Ryan Lynch, MD	Clinical Research Division	Associate Professor
Wendy Law, PhD	Research Administration	AVP, Cancer Consortium Programs

Table 19. Rigor and Reproducibility Seminar Series Advisory Committee members

Name	Institution
William Atkins, PhD	UW
Thomas Hawn, MD, PhD	UW
Marshall Horwitz, MD, PhD	UW
Justin Kollman, PhD	UW
Conrad Liles, MD, PhD	UW
Andrew Oberst, PhD	UW
Barry Stoddard, PhD	Fred Hutch
Charles Asbury, PhD	UW
Larry Zweifel, PhD	UW

Table 20. Rigor and Reproducibility Seminar Series

Date	Seminar Title	Speaker
2/20/24	How I Ensure Rigor, Reproducibility and Transparency in My Research	Oscar Vivas, PhD, UW
4/2/24	Rigorously Assessing Rigor in X-ray Crystallography	Roland Strong, PhD, Fred Hutch
6/4/24	Evaluating and Distinguishing Claims from Evidence in Your Research	Matt Akamatsu, PhD, UW
9/10/24	How Biostatistics Can Enhance Rigor, Reproducibility and Transparency in Your Research	Leila Zelnick, PhD, UW
11/5/24	The Many Melodies of Protein NMR	Peter Brzovic, PhD, UW

Table 21. Research ethics case study discussion groups 9/5/24

Discussion group leader	NIH-required case study topics
Jihong Bai, PhD	Mentor and trainee relationships
Toshio Tsukiyama, PhD, DVM	Mentor and trainee relationships
Lucas Sullivan, PhD	Collaboration
Jaimee Heffner, PhD	Collaboration
Steve Schwartz, PhD, MPH	Peer review
Nina Salama, PhD	Peer review
Neel Dey, MD	Authorship
Holly Janes, PhD	Authorship
Kevin Barry, PhD	Research misconduct
Peter Gilbert, PhD	Research misconduct

Research ethics seminars

1. 10/17/24, Mark Barnes, JD and Barbara Bierer, MD — Publications: “Taking Credit, Accepting Responsibility and Preserving Data”
2. 12/11/24, Marcia Gonzales, JD: Conflict of Interest

Faculty Development

Table 22. Staff scientist awarded funds to attend conferences scheduled in 2025

Recipient	Funding to attend conferences in 2025
Anca Mihalas	Society for Neuro-Oncology Conference
Anne-Sophie Kuhlmann	ASGCT Annual Conference
Ava Hoffman	The Posit Conference
Chris Miller	The Keystone Symposia on Cancer Immunotherapy: Clinical Lessons to New Modalities
Daniel Stone	ASGCT Annual Conference
Sinéad Kinsella	The Keystone Symposia on Tumor Microenvironment: Metastasis and the Host
Tzu-Jung Huang	Joint Statistical Meetings (JSM)

Table 23. 2024 LEAP sessions

Date	Topic	Faculty Panelists	# in person	# on Zoom
Jan 11, 2024	Navigating the Changing Landscape of Funding and Finding Talent	Alice Berger, PhD, Human Biology Michael Boeckh, MD, PhD, Vaccine and Infectious Disease Andrew Hsieh, MD, Human Biology Chris Li, MD, PhD, Public Health Sciences Jennifer Lund, Vaccine and Infectious Disease Toshi Tsukiyama, PhD, DVM, Basic Sciences	20	30
October 17, 2024	Faculty Strategies for Ensuring Integrity of Your Lab's Publications	**Barbara Bierer,** MD, professor of medicine, Harvard Medical School. Director of the Regulatory Foundations, Law and Ethics Program, Harvard. **Mark Barnes,** JD, partner at Ropes & Gray LLP. Visiting lecturer, Yale Law School.	30	30

OET

Table 24. 2024 RAD planning Committee members

Name	Institution	Title	Lab
Amber Ismael, PhD	Fred Hutch	Sr. Program Mgr., Office of Scientific Career Development	
Andrea Brocato, MA	Fred Hutch	Director of Graduate Education	
Avery Angell Swearer	UW	Graduate Student	Wills Lab
Claire Thomas	Fred Hutch	Postdoc	Peters Lab
Dickson Chen	Seattle Children's Research Institute	Graduate Student	Shih Lab
Elizabeth Bonner	Fred Hutch	Graduate Student	Stan Lee Lab
Heather Borror	Fred Hutch	Graduate Student	Subramaniam Lab
Iris Luk	Fred Hutch	Postdoc	Haolong Li Lab
Iris Jia	UW	Graduate Student	Feder Lab
Jonathan Lagos Orellana	Seattle Children's Research Institute	Postdoc	Acharya Lab
KC Cruz	Fred Hutch	Project Mgr., Office of Education and Training	
Kritika Bhalla	Seattle Children's Research Institute	Postdoc	Gallo Lab
Luyao Ren	UW	Postdoc	Eichler Lab
Peter Dietzen	Fred Hutch	Graduate Student	Malik Lab
Riti Biswas	UW	Graduate Student	Baker Lab
Shantanu Shukla	Fred Hutch	Postdoc	Pancera Lab
Sujin Byeon	UW	Graduate Student	Yadav Lab
Whitney Alton	Seattle Children's Research Institute	Program Mgr., Science Education	
Xiaodi Wang	UW	Postdoc	Riffell Lab

Table 25. 2024 Science Spotlight writers

Writer	Position
Allie Donlan	Postdoctoral Fellow
Joselyn Landazuri Vinueza	Graduate Student
Hannah Lewis	Postdoctoral Fellow
Rachel Lex	Postdoctoral Fellow
Darya Moosavi	Postdoctoral Fellow
Annabel Olson	Postdoctoral Fellow
Nick Salisbury	Postdoctoral Fellow
David Sokolov	Graduate Student
Jenny Waters	Postdoctoral Fellow
Kelsey Woodruff	Graduate Student

Table 26. 2024 CRTEC liaisons members

CCSG research program component	CRTEC liaison
Biostatistics & Computational Biology (BCB)	Megan Othus, PhD
Breast & Ovary Cancers (BOC)	Natasha Hunter, MD
Cancer Basic Biology (CBB)	Julian Simon, PhD
Cancer Epidemiology, Prevention & Control (CEPC)	Amanda Phipps, PhD, MPH
Cancer Immunology (CI)	Evan Newell, PhD
Hematologic Malignancies (HM)	Soheil Meshinchi, MD, PhD
Lung Cancer (LC)	Alice Berger, PhD
Pathogen-Associated Malignancies (PAM)	David Fredricks, MD Andrew McGuire, PhD (Inactive Oct. 24)
Prostate Cancer (PC)	Andrew Hsieh, MD
Enabling functions	**CRTEC liaison**
Clinical Research Support (CRS)	
Shared Resources	Gordon Roble, DVM, MBA
Office of Translational Research (OTR)/(STTR)	Snehal Joshi

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