

July 2024

An Interview with Current TTCF Chair: Janette Lebron

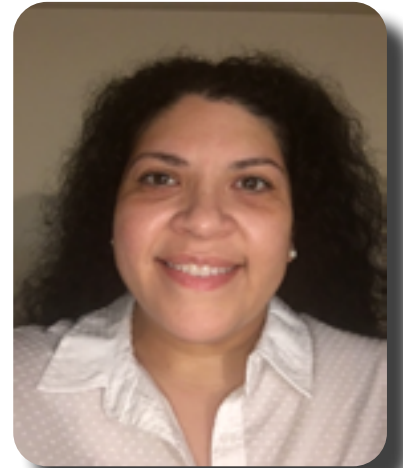
Richelle Holnick, OTT

Can you tell us about your background prior to NIH?

I was born and raised in New York. In 2005, I moved to Maryland to attend graduate school at Johns Hopkins. I left with my Master's at the end of my fourth year but didn't want to leave science completely. I pursued jobs on the administrative side which is how I ended up as a contractor in NIAID DIR.

What led you to a career in technology transfer?

I was first exposed to technology transfer at NIAID when I was supporting the Tuberculosis Research Section (TBRS). It was quite a dynamic group, and I was lucky to be brought into talks that led to a major TB consortium across the NIH, the Bill and Melinda Gates Foundation, academia, and industry. I carried my interest to NIDA IRP and part of my responsibilities was to help route MTAs for transgenic rats generated as part of a multi-IC collaboration. As I developed at NIDA IRP, I was set to take over as TDC after my supervisor retired. Her plans changed, so the TDC role opened much sooner. Of the many hats I wear at NIDA, being the TDC on behalf of the IC is one of my favorites.



Janette Lebron

What is your favorite part of working for the NIH?

You can be at the NIH for a long time and there will always be opportunities to either work with people in your office or NIH communities who inspire you to keep the NIH spirit alive and even reinvent yourself when the time is right.

What led you to volunteering as the TTCF chair?

To be very honest, I hesitated until the 11th hour. I was the NIDA TDC for only one year and convinced myself I was too green to throw my name in the hat for the TTCF Vice-Chair role. After a final plea was circulated and chatting with Sharon, I decided it was worth trying.

Is there anything you would like to change or institute during your tenure as TTCF chair?

Oh, the forever struggle of not having enough time to get ideas off the ground... Hopefully, I can revive a project started by Sidra Ahsan last year and we will hear about it by the end of the year.

In This Issue

An Interview with Current TTCF Chair: Janette Lebron	1
CRADA and License with Iovance Therapeutics Led to FDA Approval	3
Looking Back at FLC 2024!	4
The NCATS Focus at FLC	5
NIH Tech Transfer Speaks and Exhibits at BIO 2024.....	6
Success of Embedded Search: Now Running with 6 ICs.....	8
NIH Research Festival Preview	9
FLC Now Accepting Submissions for 2025 Planner	10
Data Quality is Community Driven	11
Documenting Lead Sources on License Agreements	12
Launching the Next Generation of Technology Transfer Professionals.....	13
SharePoint Modernization Guide	17
The Many Technology Transfer Contributions Of NHLBI's Dr. Yoichiro Ito 18	
NIH Tech Transfer Website Unveiling New National Awards Page	20
TechToons.....	21
Comings & Goings.....	22

TTCF Chair

What do you like to do in your free time?

I like to make plans when I have a bigger chunk of free time, like going back home to NY to see my family. Throughout the week and on the weekends, free time tends to be unstructured so I could watch a movie or take a walk in one of the local parks to see what the woodland creatures are up to.

Can you share a fun fact about yourself?

My favorite music genre is alternative rock. I guess that is more fun for me because most people don't see that coming.

Is there anything else you would like to share?

I tend to be private, so this was a nice opportunity to share some pieces of my journey through TT and the NIH for the last 14 years.



CRADA and License with Iovance Therapeutics Led to First FDA Approval of TIL Therapy for Solid Tumors

Michele Newton, NCI

On February 16, 2024, the Food and Drug Administration (FDA) approved lifileucel (Amtagvi®), the first treatment for cancer that uses immune cells called tumor-infiltrating lymphocytes, or TILs, for use in melanoma. Melanoma is the sixth leading cancer in both men and women. Metastatic melanoma has a poor prognosis with five-year survival of less than 5%. FDA-approved treatments for metastatic melanoma include aldesleukin (Interleukin-2), ipilimumab (a monoclonal antibody), and dacarbazine chemotherapy. Physicians now have a new treatment option for patients who have failed these other treatments. Lifileucel is the first cellular therapy to be approved for a solid tumor and it was developed under a clinical CRADA between the NCI Center for Cancer Research (CCR) Surgery Branch (SB) and Iovance Therapeutics. The CRADA was negotiated by Senior Technology Transfer Manager, Aida Cremesti, Ph.D., NCI TTC. The CRADA was negotiated by Aida Cremesti while the license agreement and its subsequent amendments and by Whitney Hastings and Andy Burke.



National Cancer Institute and
Frederick National Laboratory

TECHNOLOGY SHOWCASE

September 4, 2024

#CancerTechShow24

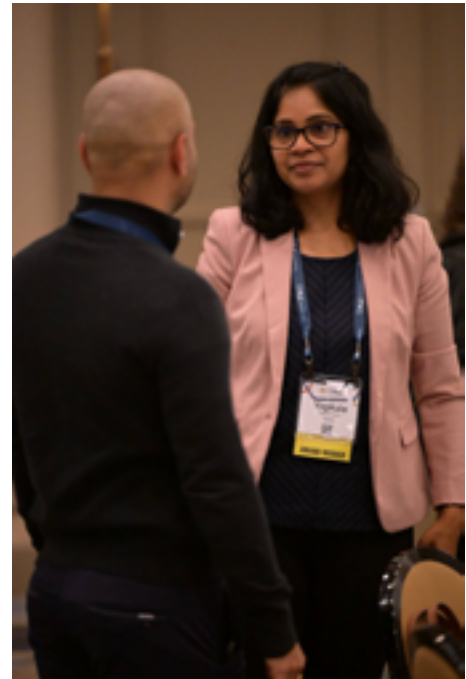
Looking Back at FLC 2024!

Steve Ferguson, OTT

April's Federal Laboratory Consortium for Technology Transfer (FLC) 2024 Annual Meeting in Dallas turned out to be perhaps one of the most active and productive in NIH history. Chaired by NCI's Whitney Hastings, the conference featured award winning technologies from NIAID and the NIH ETT Team as well as session presentations by: OTT's Tara Kirby & Steve Ferguson; NCAT's Balki Balakrishnan, Ami Gadhia, Jasmine Kalsi & Meena Rajagopal; and also a training day workshop from OTT's Steve Ferguson. The FLC photographer was able to capture the action:



FLC Awards



NIAID's Yogikala Prabhu



Steve Ferguson and Tara Kirby accepting an FLC award from Whitney Hastings



NIAID's Benjamin Hurley accepting an FLC award from Whitney Hastings



NIMH's Anton Dawson

The NCATS Focus at FLC

Jasmine Kalsi, NCATS

The National Center for Advancing Translational Sciences (NCATS) team delivered an insightful presentation at the Federal Laboratory Consortium (FLC) National Meeting in Dallas this April, focusing on the pivotal role collaborations play in driving translational efforts within the NCATS. The presentation commenced with a succinct overview of the center’s mission and highlighted its collaborative triumphs. Subsequently, it delved into the various extramural agreements, notably the Cooperative Agreements (CA) with U activity codes in NIH RePORTER, and intramural agreements that are instrumental in facilitating efforts to translate early-stage research from bench to bedside.



A highlight of the discussion was the NCATS 3D Bioprinting Program, presented as a compelling case study showcasing the synergies fostered by diverse collaborative mechanisms. This exemplified how partnerships enhance the translation of scientific discoveries into tangible benefits.



NCATS Advance Translational Research via Collaborations and the Synergistic Blending of Extramural and Intramural Programs

Krishna (Balki) Balakrishnan
National Center for Advancing Translational Sciences (NCATS)

Ami Gadhia
National Center for Advancing Translational Sciences (NCATS)

Jasmine Kalsi
NCATS Office of Strategic Alliances

Meena Rajagopal
NCATS Office of Strategic Alliances

The logo for the 50th anniversary of the Federal Laboratory Consortium (FLC). It features a stylized '50' followed by the letters 'FLC' and the tagline 'COLLABORATION IS THE POWER OF INNOVATION' below it.

NIH Tech Transfer Speaks and Exhibits at BIO 2024

Richelle Holnick, OTT

The Biotechnology Innovation Organization's (BIO) International Convention, the largest partnering biotech conference in the world, was held in San Diego during the first week of June. Many NIH technology transfer professionals attended the meeting to both expand their tech transfer knowledge and to work at the NIH Tech Transfer booth to meet with potential partners and spread awareness of our program.



NIH staff attendance at BIO was very fruitful.

They held many partnering meetings where they were able to sit down and talk to each prospective company in-depth about how to partner with NIH, the benefits of partnering with us, and which NIH opportunities were of further interest.

The NIH Tech Transfer booth was a part of a pavilion with the Federal Laboratory Consortium (FLC) and three other federal labs – the Frederick National Lab, the NIST tech transfer program, and the Veteran's Affairs' tech transfer program. This partnership allowed us to maximize our time, space, and budget. Badge scanner data collected showed that over 150 visitors registered at the NIH Tech Transfer booth over the course of the conference.



From left to right: Jen Dyer, Tara Kirby, Steve Ferguson, Joseph Conrad, Michael Salgaller, Annie Morgan, and Richelle Holnick

Additionally, NIH staff had multiple speaking engagements. Steve Ferguson, Special Advisor at the NIH Office of Technology Transfer (OTT) was again a part of the faculty for the BIO Professional Development Course - Become a Biotech or MedTech Entrepreneur that was given at the BIO 2024 Conference. The course, formerly known as the Biotechnology Entrepreneurship Boot Camp, is for those who are interested in becoming a biotech or MedTech entrepreneur and covers everything from starting a company to specific market tactics – including Bio Start-Ups: “Doing Business” With the NIH.

Tara Kirby, Director of the NIH OTT participated in the In and Out of This World: Partnering with Federal Labs panel. This panel, moderated by the Frederick National Lab's Vladimir Popov with Federal laboratory representatives from DoD, NASA, and HHS, showcased the versatility of federal

research and benefits of partnering with federal labs. This session discussed how to tap into the extensive expertise and unique capabilities within Federal labs and access advanced technologies,

innovative solutions, and specialized knowledge to foster accelerated development of their products, processes, and services.

Michael Salgaller, Unit Supervisor of the Technology Analysis and Marketing Unit of the National Cancer Institute's Technology Transfer Center moderated a panel that leveraged the learnings and outcomes of the NIH Public Health and Economic Impact Study to discuss how partners are Achieving Commercial Success Through the National Institutes of Health's Intramural Research Program. Since the 1970s, the Intramural Research Program (IRP) has served as the in-house research and clinical arm of the NIH. Despite success, many potential industry collaborators and licensees still see NIH solely as a basic research center funding academic research and publishing academic papers. This session provided case studies of what kinds of support — including indirect funding, core facilities, manufacturing, and regulatory assistance — helps companies cross the valley of death and build shareholder value. Company representatives provided best practices and personal stories of how they worked with the NIH to improve the quantity and quality of life.



Michael Salgaller moderating panel



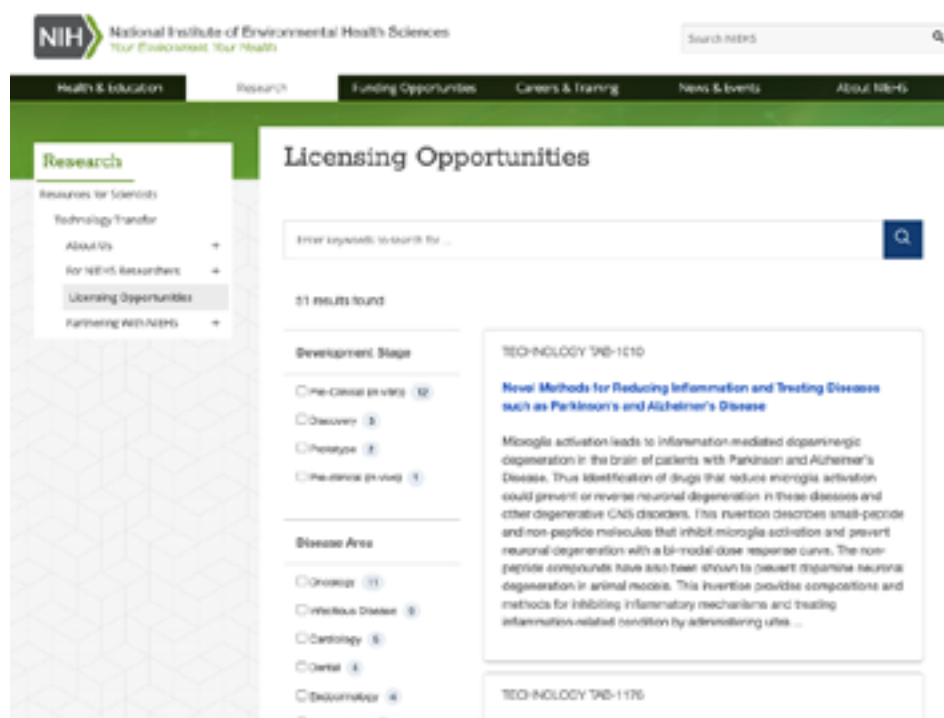
Success of Embedded Search: Now Running with 6 ICs

Richelle Holnick, OTT

The NIH Office of Technology Transfer (OTT) created a feature to offer all of the NIH ICs – an embedded search function to add the NIH technology transfer live search engine on any NIH TTO site. This process has been made as simple as possible: just add a few lines of code (which OTT will provide) to your web page!

Since mid-2022 when NCATS was the first IC to step up for the “new” function, we now have six ICs running the embedded search function. The most recent IC, The National Institute of Environmental Health Sciences (NIEHS), officially implemented the embedded search on their website in May. This has allowed them a quick way to receive automatic updates to their website of the available technologies out of ETT. It is configurable, meaning that NIEHS could match it their website’s look and feel to stay consistent with their site branding. Again, they are the sixth IC to implement this free feature from OTT. The others include NCI, CDC, NHLBI, NIAID, and NCATS.

There are no application programming interface (API) programming code or databases to create and maintain and no ongoing maintenance effort or cost. The embedded search is truly an easy and free way to display your ICs abstracts on your TTO site! Your ICs abstracts will remain searchable on the main NIH Technology Transfer Community website as well.



The embedded search is very flexible on functionality and styling and allows you to customize it to fit your needs. It is standard JavaScript that lives on your own website’s page with your styling. This is a great time saver over developing your own custom solution using with an API that each IC would have to write the code for and maintain.

The OTT embedded search gives visitors to your site a way to quickly search and filter your technology abstracts

using our powerful search engine. This feature allows potential licensees visiting your site to have a live feed of the technologies available from your IC and they will be able to drill down by keywords and categories including disease area, development stage, type of collaboration sought, inventor, and more. Additionally, only abstracts from your IC, or any service centers you oversee, will show on your site.

If your IC is interested in implementing this on your website, please reach out to Steve Ferguson or Richelle Holnick at any time.

NIH RESEARCH FESTIVAL

NIH TECH TRANSFER PARTICIPATION

PREVIEW



MONDAY, SEP. 23RD

- RESOURCE TABLE - OTT & NCI TTC

MONDAY, SEP. 23RD

- POSTER SESSIONS - ETT & FLC
- FROM PHD TO PAYCHECK WORKSHOP



WEDNESDAY, SEP. 25TH

- PHILIP S. CHEN JR., PH.D.,
DISTINGUISHED LECTURE ON
INNOVATION AND TECHNOLOGY
TRANSFER





FLC Now Accepting Submissions for 2025 Planner

Steve Ferguson, OTT

Each year the Federal Laboratory Consortium (FLC) collects photos from the labs that are a member and selects the best ones to make an eye-catching planner. It features a variety of images showcasing innovative research and development from federal labs. Last year an image from NIAID was selected for the planner, look for it in November 2024! Two other images from NIH were runners up for the planner and are used by the FLC in their bi-weekly newsletter.

Over 10,000 people receive a copy of the FLC planner every year, including members of Congress, scientists, tech transfer professionals, and industry representatives. You do not want to be left out!

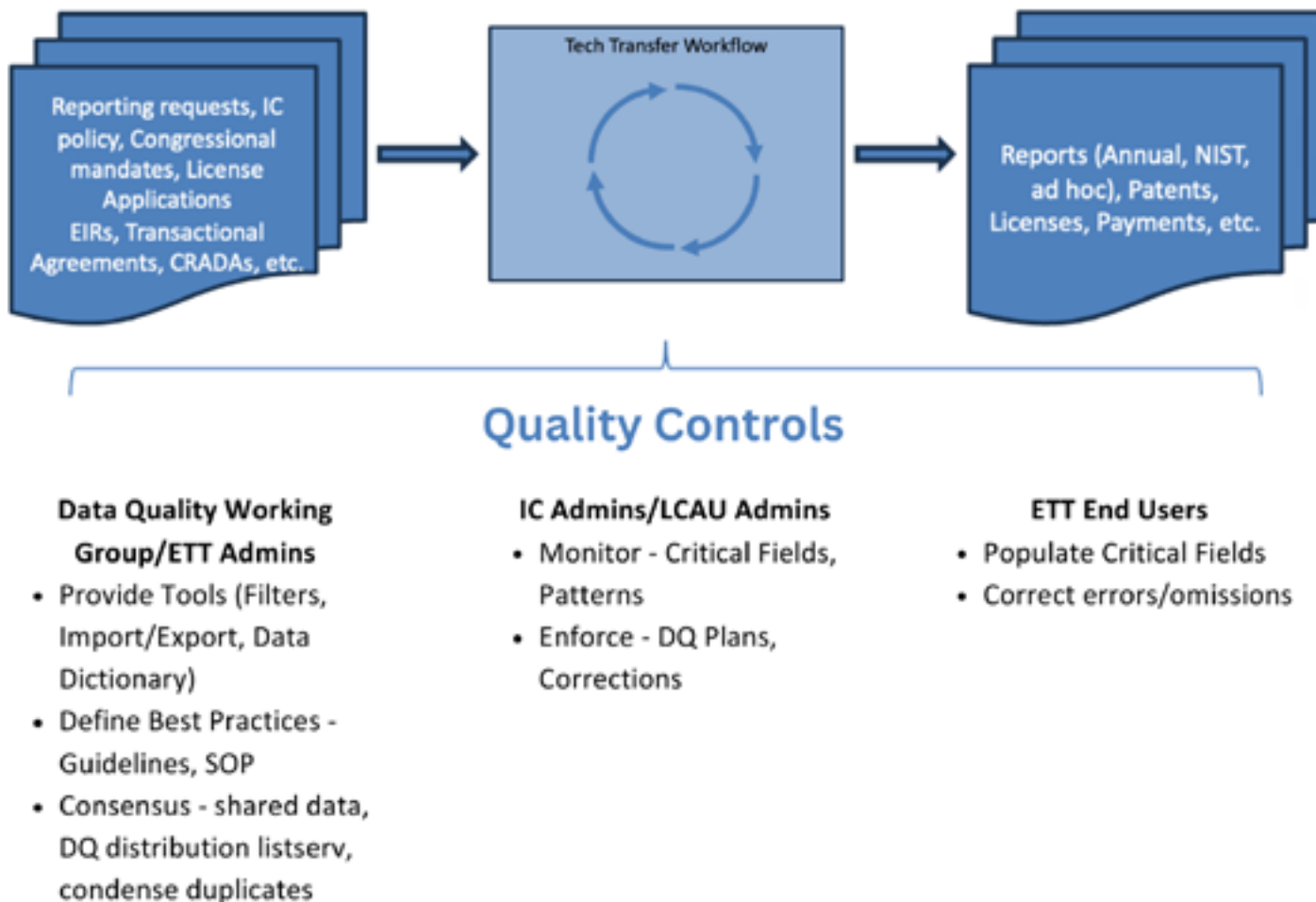
The call for submissions for the 2024 planner is currently open! Showcase your IC to the Federal technology transfer community and the world by submitting today! You can find further details and examples from prior years on the [FLC site](#).



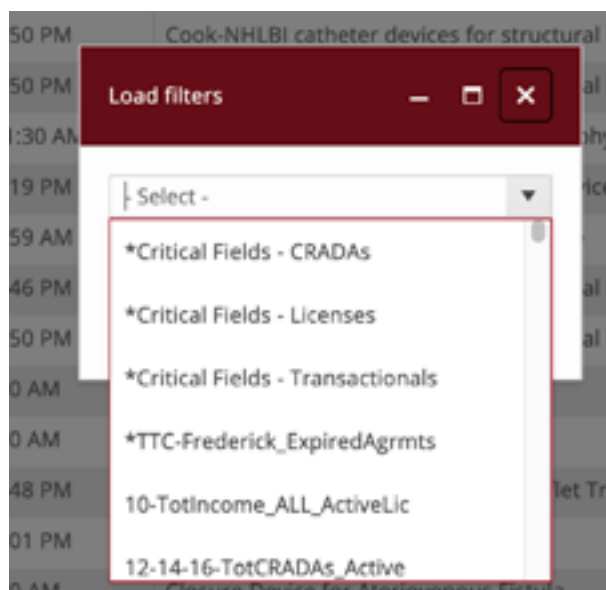
Data Quality is Community Driven

Amanda Wingo, OTT

Everyone plays a part in ensuring the integrity of the data in ETT.



To ensure completeness and accuracy of the data in reports/metrics generated from ETT, we ask that you ensure specific fields are filled in correctly. We refer to these fields as the ‘critical fields’ even though they are not necessarily mandatory fields at each point in the lifecycle. The [Data Dictionary](#) categorizes these fields for easy reference. You can also use the Critical Fields grid filter in most modules to double-check that records you are responsible for have their critical fields filled in.



Documenting Lead Sources on License Agreements

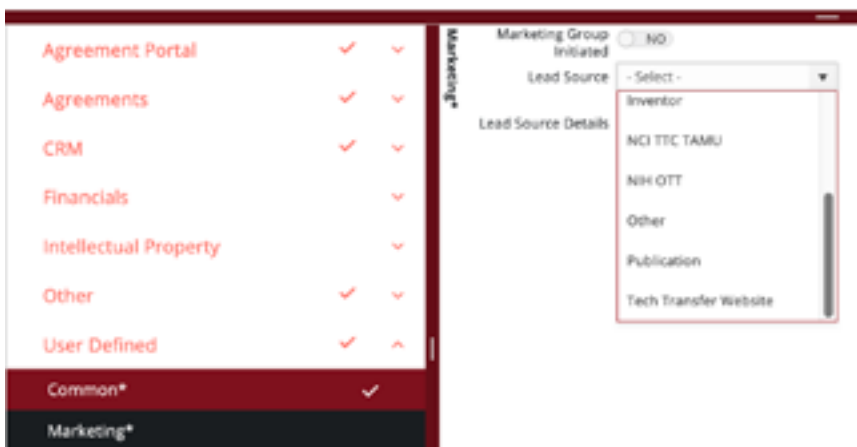
Richelle Holnick, OTT

Documenting lead sources on agreements benefits the whole program. The new 'lead source' field in ETT will allow for documentation of where the licensee or collaborator initially heard about the opportunity they have chosen to pursue. While this information is collected on the license agreement document, it was not documented in ETT prior to this year.

Utilizing this new field in ETT will allow your IC to run a report on where leads are coming from. This will allow new insights into what marketing strategies are effective and where time is best spent. OTT also does a substantial amount of marketing and promotion on individual technologies and would really appreciate being able to track the full life cycle of these efforts.

Within the Agreement record, under User Defined -> Marketing you will find a 'Lead Source' dropdown. You can also put any additional details in the 'Lead Source Details' free text field.

Please join us in utilizing this new field for the benefit of the entire program!



WHO'S GOING TO TELL HER WE HAVE A BETTER WAY TO FIGURE OUT HOW TO MARKET NOW?

Training for Tomorrow: Launching the Next Generation of Technology Transfer Professionals

Amy Petrik and Cosimo Fuda, NIAID

The [NIAID Technology Transfer Fellowship Program \(TTFP\)](#) invites talented scientists and other post-graduate professionals to launch a career in technology transfer. The program draws applicants from science, business, law, and trains selected fellows in skills and knowledge that readily transfer to a wide array of career paths. TTFP provides advanced training to 1) learn about the laws, regulations, and policies that govern technology transfer at the NIH, 2) gain hands-on technology transfer experience working with experienced mentors, and 3) develop the skills required for a successful career in technology transfer or a related field.

The NIAID Technology Transfer and Intellectual Property Office (TTIPO) established TTFP in 2010. As the program enters its fourteenth year, we are taking this opportunity to highlight the current cohort of NIAID TTIPO fellows and to share their experiences with the NIAID TTFP, in their own words. Representing diverse backgrounds, skills, and experiences, this talented group of fellows is learning the underlying skills to become the future of technology transfer.

We interviewed our fellows, each at a different stage in their fellowship program, and share their unique perspectives and differing career goals.



Lauren Simmons, Ph.D., 1st year ORISE fellow

- Ph.D. in biomedical science from Morehouse School of Medicine, where she studied the neuroprotective roles and regulation of inflammatory responses by Neuregulin -1 (NRG-1) in brain ischemia involved NF-kB signaling pathway
- B.S. in biology from Spelman College

Prior to TTIPO, Lauren was an associate professor of physiology at Life University for six years. She recently completed a technology transfer internship in the Office of Technology Transfer at Emory University.



Sabrina Hafiz, Ph.D., 1st year ORISE fellow

- Ph.D. in green chemistry from University of Massachusetts, Boston, where she studied liquid nanoparticle based targeted drug delivery for cancer therapy
- M.S. in analytical chemistry from University of North Texas
- B.S. in chemistry from University of Dhaka

Prior to TTIPO, Sabrina pursued a postdoctoral fellow at the Institute for Bioscience and Biotechnology Research, where she studied antibody-antigen binding mechanism through infrared spectroscopic measurements.



Nadia Peyravian, Ph.D., 2nd year ORISE fellow

- Ph.D. in biochemistry from the University of Miami
 - B.S. in biology & psychology from UNC Chapel Hill
- During Nadia’s doctoral studies, she wrote multiple first author publications and was an inventor on a patentable formulation. Nadia was also honored in University of Miami’s 30 Under 30 in 2023.



Logan Richards, Ph.D., 2nd year ORISE fellow

- Ph.D. in biological sciences from Vanderbilt University, where he studied the regulation of DNA replication in *Drosophila melanogaster*.
 - B.S. in biochemistry from Purdue University
- Prior to joining TTIPO, Logan spent time working at the Vanderbilt Center of Technology Transfer and Commercialization, serving as a life sciences tech transfer intern.



Franklin Bright, Ph.D., 3rd year ORISE fellow

- Ph.D. in molecular and cellular biology from the University of Iowa, studied rapid infectious disease diagnostics
 - M.S. in microbiology from Wagner University
 - M.S. in biology from Wagner University
- Prior to joining TTIPO, Franklin gained extensive experience leading teams in drug discovery, vaccine development, and executing preclinical studies for novel therapeutics.

Why did you choose the NIAID TTIPO Fellowship Program?

Sabrina- I had little to no technology transfer experience when I joined TTIPO as a fellow. Now after 10 months, I am using my educational background, technical expertise, and personal interests for impactful work that can benefit lives.

Lauren- NIAID conducts research to understand and treat/prevent allergies and infectious diseases and I was also looking for government experience. I was personally interested in NIAID because I have a rare allergy called exercise-induced anaphylaxis.

Nadia- I had experience as an inventor and was recommended to TTIPO's fellowship to further explore this trajectory by an NIH program director/alumnus of my graduate school.

Logan- I saw the fellowship program as an opportunity to transition from academic research to technology transfer, which I learned I was interested in towards the end of my graduate career.

Franklin- I chose the NIAID TTIPO fellowship program because of the extensive track record of success in training fellows to become successful technology transfer and intellectual property (IP) professionals.

What was the most important thing you have learned about technology transfer to date?

Sabrina- The hard work and dedication of technology transfer professionals is instrumental in facilitating the transition of inventions from the laboratory to the marketplace. Technology transfer demands a diverse skill set that encompasses a deep understanding of both the scientific and business aspects of a technology, as well as strong negotiation and communication skills to align the interests of all parties involved.

Lauren- I have learned that Technology Transfer Specialists play a critical role in translating the discoveries made in the lab into products that benefit humanity.

Nadia- Portfolio management! I thought juggling three Ph.D. projects was hard! Portfolio management at this (federal tech transfer) level is not easy, but once you 'master' it, it's a pretty awesome skill to have! Working with various collaborators, investigators, companies, and licensees, it is essential to have all your cases in order!

Logan- I feel the most important thing I have learned is what technology transfer is at a basic level. In other words, I've learned what goes into taking something bench to bedside as well as all of the day-to-day activities that make that happen.

Franklin- I have learned to navigate complex transactional agreements and get them to point where they are agreeable to all stakeholders involved.

Can you describe a particularly rewarding experience from this fellowship?

Sabrina- Successfully executing over 30 agreements between NIAID and partners in a very short period of time. These experiences deepened my understanding of the tech transfer process and strengthened my commitment to helping translate groundbreaking research into real-world applications.

Lauren- A rewarding experience so far would be shadowing my mentor and helping to negotiate the best possible contract terms.

Nadia- This fellowship allowed me to figure out my next moves! It gave me a platform to figure out what I like about intellectual property and tech transfer, and what I want more of. Grateful for this invaluable experience to have served my community, country, and for all that I have learned.

Logan- When I presented an invention at the Technology Evaluation Advisory Committee (TEAC) for the second time, and fielded questions from TEAC, that is when I started to feel confident in the tech transfer field. I felt that I was able to hold my own, answering questions appropriately, and advocate successfully why the technology I was presenting mattered.

Franklin- I have greatly appreciated the range of agreements that I have had the opportunity to work on. I have been able to experience everything from evaluating new inventions to the provisional patent filing process and everything in between.

What are your goals for the future? How has the fellowship program prepared you for or influenced your current career goals?

Sabrina- Working for the government alongside like-minded individuals who are passionate about translating research into practice. I have enjoyed collaborating with diverse teams and adapting to new challenges that use my experiences and skills to promote tech transfer initiatives.

Lauren- My professional goal is to help promote scientific innovations and contribute in the commercialization of the latest inventions to help society.

Nadia- Fingers crossed, law school! I plan on applying to law schools this fall... excited, humbled, and motivated for what this new chapter will bring.

Logan- My big picture career goal is somewhat nebulous now that I have transitioned out of the fellowship (the goal during the fellowship was to find a career). I think continuing to learn and grow in the field are my current goals, and the fellowship has served as an excellent foundation.

Franklin- I plan on continuing a career as a technology transfer and IP professional and supporting early-stage innovations to address unmet societal needs while also facilitating economic growth.

With incomparable hands-on experience and thoughtful mentorship from TTIPO’s professionals, the NIAID TTFP provides participants with an excellent foundation in agreement negotiation and intellectual property management. To date, the NIAID TTFP has an exceptional placement rate in technology transfer positions within NIH and federal government (see Figure 1). Excitingly, all NIAID TTFP fellows have gained employment upon completing the fellowship. NIAID TTFP is one significant way in which NIAID TTIPO is contributing to the technology transfer community across sectors by providing excellent training to aspiring technology transfer professionals.

If you know someone who might be interested in learning more about the NIAID Technology Transfer Fellowship Program, please share this article and [link](#) for more information.

Where Do TTIPO Fellows Go?

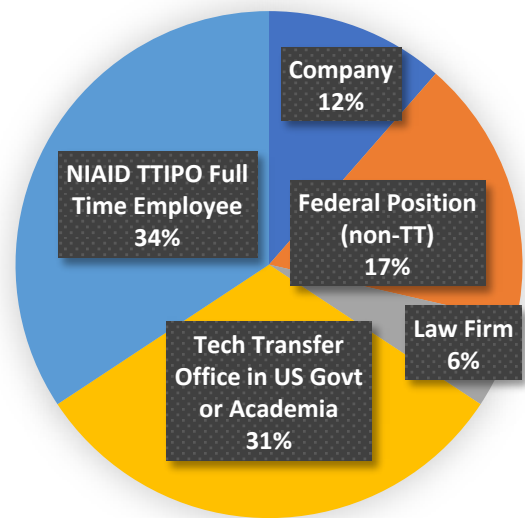


Figure 1. After completing their training, over 70% of NIAID TTFP Fellows started working in technology transfer positions or in a field related to technology transfer. [Data current as of 05/16/2024]

SharePoint Modernization Guide

Mitchell Ha, Sapien

As of July 2023, the OTT SharePoint site has been updated to a modernized look and feel. This change has created new ways of working with lists and document libraries. Adapting to new ways of working can be challenging, so as a refresher we have provided a [document on SharePoint](#) with examples of how the functionality works now compared to before the upgrade.

For training and reference, please consult the [SharePoint Training Page](#). The SharePoint Administration and Hosting team is available to assist you by providing guidance, training, and resources as needed. If you have questions or concerns, please contact the OTT SharePoint Administrator Mitchell Ha at mitchell.ha@nih.gov.

As always, if you have any OTT SharePoint-related service requests, please submit a [helpdesk ticket](#) referenced to OD-NIH-OTT SharePoint Support.

SharePoint Modernization

Looking for guidance on how to navigate SharePoint post-modernization? Helpful tips on how common workflows have changed are available on SharePoint.

Just click this graphic!



The Many Technology Transfer Contributions Of NHLBI's Dr. Yoichiro Ito (1928-2023)

Martha Knight, CC Biotech

Yoichiro Ito came to the NHLBI's Laboratory of Technical Development in the late 60's and developed the coil planet centrifuge (CPC) a flow-through elution device for the separation of molecules by partitioning in 2-phase solvent systems mixed by centrifugation. Early NIH patents came out, such as US 3,775,309 in 1973 as Dr Ito designed many orientations of the CPC devices with increasing efficiency and performance throughout his 54 years at the NIH. The aforementioned flow-through CPC with 2 counterbalancing coils, one with ~2 mm ID tubing (preparative on the gear side, wound in a single layer on long rods) and the other side with small ID analytical tubing moved by the pulley, US 4,228,950 in 1980, was commercially exploited by licensing and manufacturing by Kontes Co. (Vineland, NJ) and P.C. Inc. (Potomac, MD) and used at Peptide Technologies Corp (Gaithersburg, MD) in synthetic peptide purification, as well as in academic labs.

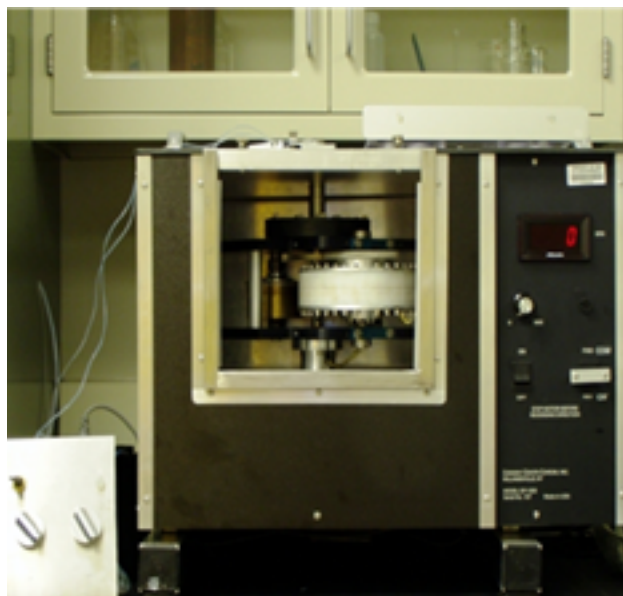


FIG. 1 Planetary centrifuge with spiral disk rotor (made of thick high density polyethylene plates) in a Conway Centrichrom instrument (Buffalo, NY)

In 1984, a series of patents came out with the separation coils made with compact spools of tubing coiled in multiple layers that could be centrifuged faster and later with multiple coils arrayed on planetary axes (US 4,430, 216 & 4,487,693 in 1984 and US 4,532,039 in 1985). Peptide Technologies and Varex Corp. (Rockville, MD) built the Multi-Coil Countercurrent Chromatograph (CCC) funded by a NIH SBIR grant in 1988. Importantly in the mid-1980s, two small businesses were established which successfully commercialized Dr. Ito's technology in the US. First, Peter Carmeci, who was formerly Dr. Ito's mechanic-assistant founded P.C., Inc. and made a simple bench-top single multi-layer CPC with no floor, called the 'Ito-Extractor Separator' and sold it to academic and industrial labs until the late 1990's. The center-axis rotation was



FIG. 2 Dr. Yoichiro Ito, Martha Knight, Tom Finn in front of a Sinterstation 2500 printing the STS rotor at Prototype Productions Inc. (PPI, Ashburn, VA) in 2007

horizontal such that other equipment could be placed on the strong flat top. Shortly, thereafter a chemist, Edward Chou founded Pharma-tech Research Corp. (Baltimore MD) and made a vertically rotated triple coil CPC and collaborated with Dr. Ito on later designs. This workhorse with smaller rotors sold in the US and overseas and was produced until the late 1990s, as well. Medicinal chemistry and natural products were the main applications at this time.

At the turn of the century, Ito developed a rotor of stacked disks which held the flow in spiral grooves with flow passing into the next disk



Dr. Ito

through a hole. He studied the problem of stationary phase retention that was poor in the multi-layered coils for polar solvent systems, preferred for larger molecules such as peptides and proteins. Four interweaved (interleaved) spirals were designed with maximized pitch between adjacent channels which seemed to cause the higher percent retention of the stationary phase of all solvent systems, hence better efficiency for separations. The peptide separations with n or sec-butanol-aq. solvent systems were improved and the aq.-aq. polyethylene glycol polymer 2-phase solvent systems could be used for proteins. The patent US 7,892,847 was issued in 2011. In 2006, CC Biotech LLC (Rockville, MD) was founded (by me) when it licensed from the NIH the multiple patents of Dr. Ito that were still in force. This patent was in application stage and shortly thereafter, Dr. Ito described that the tubing could be filled in to make the same interweaved looping, so he went to work and had a circular metal cylinder ground out with circular channels and 4 radial cross-channels which he called the spiral-tubing-support or STS-4 column (rotor). Practically at the same time we had the support built up by laser sintering in nylon co-polymer or 3D printing. The Teflon tubing could be wound and stuffed in with a shaped pushing tool also made by 3D printing. So, this became our first product that has sales to CCC users with instruments. Dr. Ito's patent for the STS rotor is US-9,028,693 in 2015. We patented the 3D printed rotor US 8,597,109 in 2013 and for biotechnology applications, US 9,713,778 in 2017.

In his last years, Dr. Ito was devising rotors with novel features for flow and chromatography, mostly built up by 3D printing. Dr. Ito remained in his laboratory well into his nineties, until the covid pandemic when he had to remain home. After the pandemic ended, he decided not to return to NIH and passed away in 2023. Moving forward, Dr. Ito's vision remains alive as there are a number of small companies around the world building the equipment for CCC. There are lots of scientists who have ideas to apply CCC to solve important problems in purifying the novel biotherapeutics, the macromolecules of interest in the semi-conductor industry, new natural products for drug discovery and not to be forgotten, some previous patents of Dr. Ito such as US 5,215,664, "Separation of rare earth elements by high-speed counter current chromatography" from 1993, remains applicable to today's environmental crisis and the need for the US to recover critical materials.



FIG. 3 Cross-section of spiral tubing support rotor with circular channels and 4 radial channels where tubing is guided in 4 loops per layer. Assembled rotor with top and tubing connected to flow tubing that enters shaft and out center axis.

NIH Tech Transfer Website: Unveiling New National Awards Page

Richelle Holnick, OTT

The NIH Technology Transfer Community has a long history of being recognized by outside organizations for our outstanding and innovative work. In prior years, there was a document on the NIH Tech Transfer website detailing the awardees, focused on awards from external organizations. We have now turned the document into a dynamic web page and are working on updating it with more recent awards.

We could use the TTO's help in updating the page with any awards won since 2016. This page is currently under construction and unpublished, so no one will be able to check the site in advance.

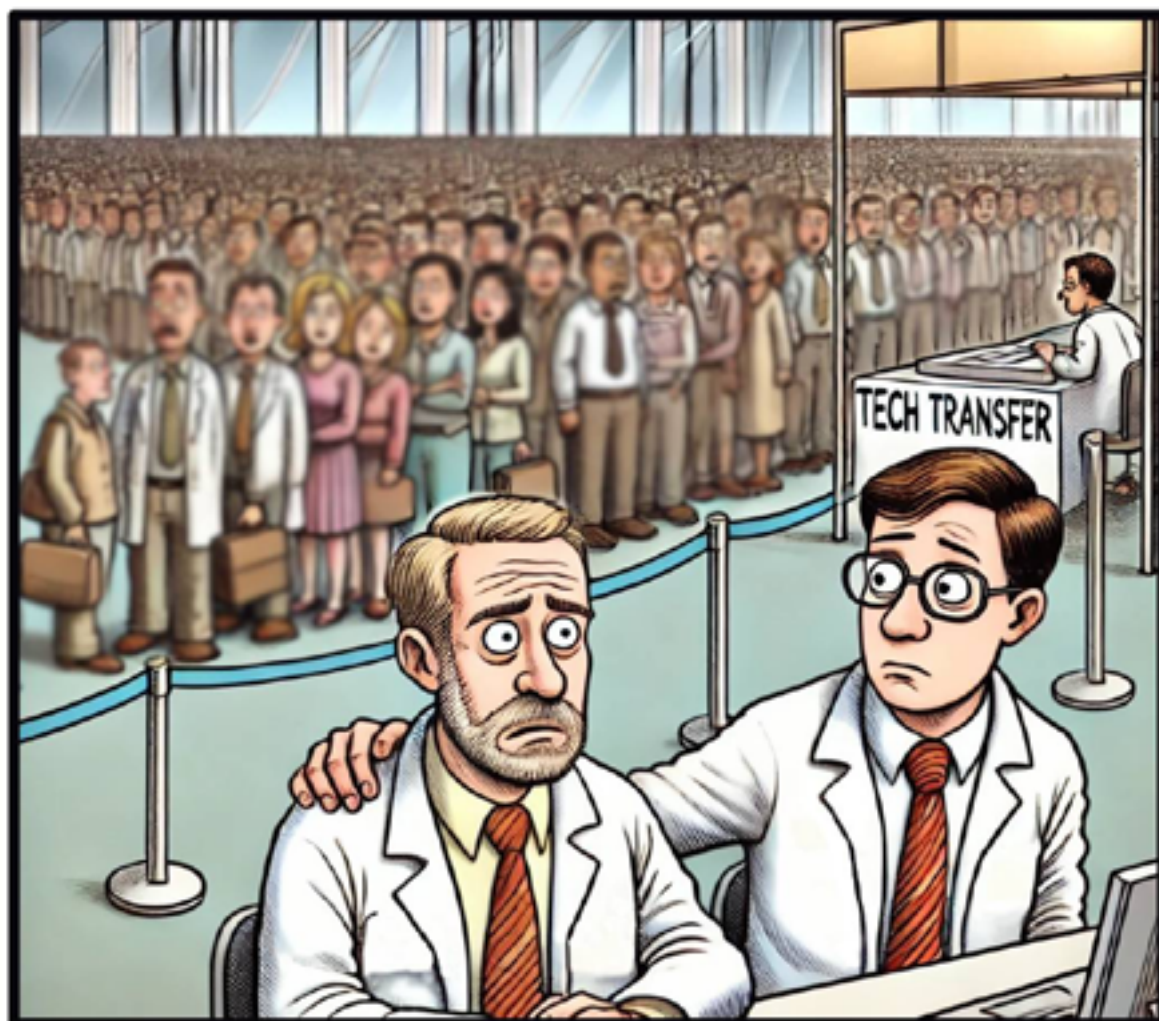
Our historical awards page was removed in 2016 so we currently have no website record of awards won since then.

If you have awards to include on this recognition page, please contact Steve Ferguson and Richelle Holnick. Please provide:

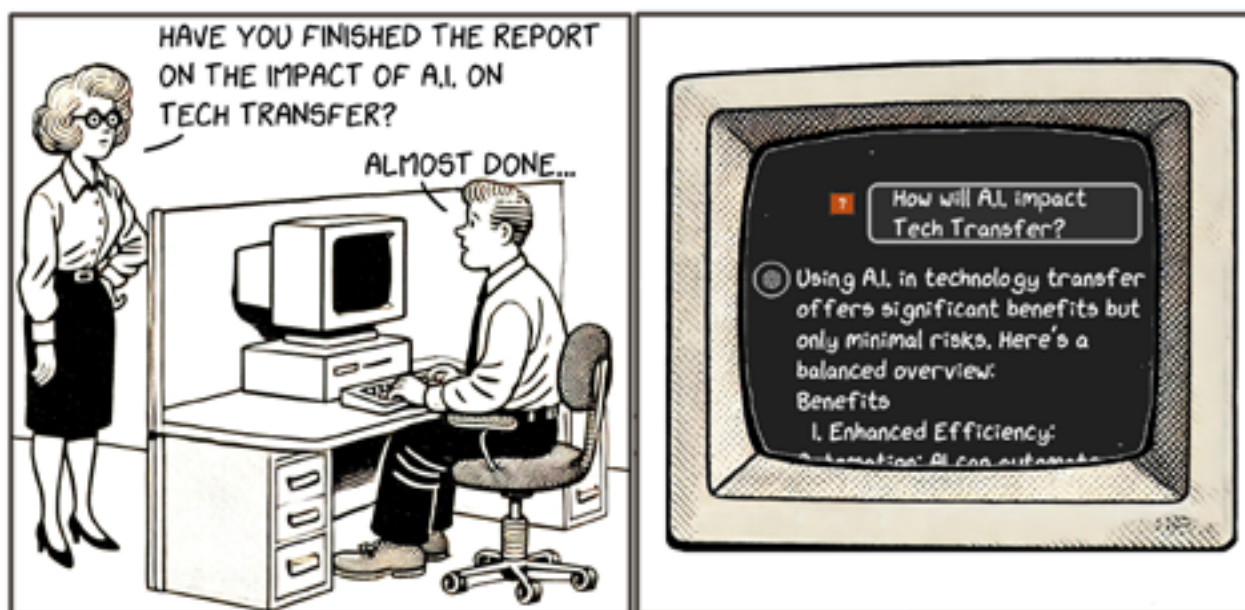
- Awardee Organization
- Name of Award
- Year Won
- Title of Submission
- Description
- Awardees and their respective ICs
- An image (if available)



AWARD FROM	CATEGORY	TYPE	AWARD	YEAR	CENTER(S)	APPLICATIONS	DESCRIPTION
 Federal Laboratory Consortium (FLC)	National Award	Excellence in Technology Transfer	Discovery to Commercialization: New Immunotherapy for Rare Childhood Cancer, Neuroblastoma	2016	NCI	Therapeutics	On March 30, 2015, the U.S. Food and Drug Administration (FDA) approved Unituxin™ (dinutuximab) as part of first-line therapy for pediatric patients with high-risk neuroblastoma, a rare cancer that most often occurs in young children. This approval was the result of a collaborative effort among the...
 Federal Laboratory Consortium (FLC)	National Award	Excellence in Technology Transfer	Development of First Immunotherapy to Treat Chordoma	2016	NCI	Vaccines	Cancer vaccines harness the immune system to identify and destroy cancer cells, and are a promising new approach to fighting cancer. In contrast to preventative vaccines, cancer vaccines identify antigens from cancer cells and immunize cancer patients against those antigens to stimulate the body's...



THE MOMENT TODD REALIZED HE WOULD HAVE TO GIVE THE SAME TALK TO 150 VISITORS AT BIO



LIKE ASKING A FOX IF THE CHICKENS ARE SAFE.

Comings & Goings



Komi Godo has joined NIAID TTIPO as a Travel and Training Coordinator in the administrative team. Komi has a rich background in administrative support with nearly a decade of experience, almost entirely in healthcare. He has worked at the NIH for the past 4+ years. Most recently, Komi served as a Patient Care Coordinator at NCI supporting the GMB/LTIB research branches. His journey in healthcare administration has been fueled by a passion for making a difference in people's lives and he is eager to continue this by facilitating the tremendous work of TTIPO and NIAID. Komi looks forward to getting a chance to meet and collaborate with his TTIPO colleagues.



Theodoric Mattes has been promoted to Senior Technology Transfer and Patent Specialist at NIAID. Ted joined the CDC Team, in Branch C of NIAID TTIPO in October 2019. He completed his Ph.D. in Microbiology from the University of Georgia in 2018, where he studied the biosynthesis of coenzyme B12 in bacteria and archaea under Dr. Jorge Escalante-Semerena, Ph.D. In the summer of 2019, he completed an internship with the University of Georgia's Innovation Gateway, their technology transfer and business development team. His training included helping startups develop business models and perform customer discovery, including serving as a volunteer entrepreneurial lead for a prospective start-up during a session of Georgia's NSF-funded I-Corps Site program.



Cecilia Pazman joined NCI TTC as Associate Director in May 2024. Most recently she served as a Team Lead at NIAID TTIPO. Prior to her tenure at TTIPO, Cecilia spent 12 years at NHLBI OTTAD where she assumed the role of Acting Director in 2019. During her time as Acting Director, she oversaw technology transfer, intellectual property, patenting, and licensing related functions for NHLBI and its six service institutes. Prior to transitioning into technology transfer, she was a postdoctoral fellow at the Uniformed Services University of the Health Sciences (USUHS) in Bethesda, MD, and at the NIH. She earned her Ph.D. in Genetics in Hungary.



Laura Prestia left NCI TTC on April 19th to pursue a new role as Associate Director of Commercialization Programs for the DOE National Labs. Laura joined NIH OTT in 2014 where she worked on the CDC docket. She joined TTC in 2016, working in Laurie Whitney's Unit and then the Technology Analysis and Marketing Unit (TAMU). In 2016, Laura co-developed the Technology Transfer Ambassadors Program (TTAP). Along with TTAP, Laura worked on significant initiatives to support the development of NIH technologies and early scientist's careers, such as NIH's intramural I-Corps® program (AIM) and NCI's Transition to Industry Fellowship (T2I). She was also Co-Chair of TTC's Communications Team, helping to develop TTC's Strategic Communications Plan, and served on committees across NCI, NIH, and the federal Lab to Market community. In 2021, Laura worked with TTC's Director to create the Innovation Fellowship that supports TTC's Innovation Programs (TTAP, T2I, AIM) and Communications efforts, while also taking on a part-time Negotiator Fellow role. Laura will be missed at TTC, as she is a great colleague and friend.



Logan Richards has joined NIAID TTIPO as a Technology Transfer Patent Specialist. He received a Bachelor of Science degree in Biochemistry from Purdue University, and his Ph.D. in Biological Sciences from Vanderbilt University, where his thesis work centered on studying the regulation of DNA replication in *Drosophila melanogaster*. At Vanderbilt, he received the Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (F31) from NIGMS. Upon receiving his Ph.D., he has served as an ORISE fellow in Tech Transfer in Branch C for the past year.



L Lauren Simmons has recently joined NIAID TTIPO. She received a Bachelor of Science degree in Biology from Spelman College. Subsequently, she received her Ph.D. in Biomedical Science from Morehouse School of Medicine where she focused on the neuroprotective roles and regulation of inflammatory responses by Neuregulin -1 (NRG-1) in brain ischemia involved NF-kB signaling pathway. She was an Associate Professor of Physiology at Life University for six years. She recently completed a Technology transfer internship in the Office of Technology Transfer at Emory University.