# TECHNOLOGY TRANSFER COMMUNITY NEWSLETTER

October 2021

## NIH Tech Transfer Wins "Deals of Distinction" Award A Record 6th Time!

*Steven Ferguson, OTT*

What do the Pittsburgh Steelers, the New England Patriots and NIH Technology Transfer now all have in common? Each team has now won the top award in their respective fields a record six times!

For NIH the recognition came again this September with the Licensing Executives Society (LES) announcing at its annual meeting that the NIH had again been selected as one of winners of the 2021 "Deals of Distinction" Award. The Deals of Distinction Awards are given each year to recognize major business transactions involving licensing that exemplify best practices and creativity to achieve strategic business objectives that have a significant impact on advancing innovation.

During a year of unprecedented reliance on intellectual property rights to solve massive global challenges through business collaborations, namely the ongoing pandemic of COVID-19 and its profound disruptions of personal and business lives, the LES awards this year focused on COVID-19 vaccines. Vaccine agreements negotiated this past year by Amy Petrik, Ph.D. of NIAID's Technology Transfer Intellectual Property Office (TTIPO) were recognized by LES for one this year's top awards in licensing.

The award also spotlights the key role that technology transfer played in responding to the pandemic. The path towards developing the first FDA-approved COVID-19 vaccine was cleared by a research collaboration between scientists at the NIAID's Vaccine Research Center, the Scripps Research Institute, Dartmouth College and the University of Texas-Austin – all subject to inter-institutional agreements (IIAs) completed by NIAID. The nonexclusive patent license of the stabilized spike protein discovery from those collaborations to BioNTech and with that company's subsequent partnership with Pfizer produced an mRNA-based vaccine launched in 2020 that has been administered over 233 million times in the United States.

# In This Issue



## Seeing Double

*Karen Rogers, OTT*

The Royalties Administration Unit and Office of Financial Management (OFM) would like to remind technology transfer staff that data integrity of inventor records is crucial. A slight difference in an inventor name when being entered in our system can be a critical error that will impact inventor payout calculations for years to come. Duplicate entries for inventors could cause other co-inventors on a license to receive the incorrect amount. Duplicate entries for the same inventor could create a situation in the OFM RoManSys database where the system doesn't know that an inventor has capped out and would inadvertently pay them more than the $150,000 cap in annual royalties.

How can you avoid duplicate records?

- Enter variations in inventor names to identify if a record already exists before entering in a new record. Relate Technologies and co-inventors in TechTracS to see if you can identify a duplicate.
- Double-check your entry before you save the record for any typos.
- If in doubt, ask the staff in the Royalties Administration Unit for help.

# Off Campus: NIEHS

*Richelle Holnick, OTT*

In 1965 there was a budding new environmental health sciences center that set out to discover how the environment affects people in order to prevent disease. This center would eventually become the National Institute of Environmental Health Sciences (NIEHS) and they were in search of a home. There was a congressional mandate to locate this new center at least 50 miles from the Washington-Baltimore Corridor. Research Triangle Park, North Carolina was selected after a land donation in September of 1967 and NIEHS has been there ever since.

NIEHS was founded 55 years ago and officially became an institute on January 12, 1969, becoming the 10th institute of NIH. NIEHS has done incredibly important research throughout its time, including linking asbestos exposure to lung tumors and mesothelioma, and showing the correlation that lead exposure has to behavioral and neurological disorders. Their ongoing research of the link between environmental factors and health has saved many lives through learning what is safe and unsafe to have in our homes and products.

While there are many NIH labs located places other than Bethesda, Maryland, NIEHS is the only NIH institute not based in Bethesda. The campus sits on 509 acres and shares the space with the U.S. Environmental Protection Agency (EPA). It is only fitting that an Institute focused on human's relationship with the environment is located on a park like campus with beautiful scenery and wildlife. The center of the campus is a lake, named Discovery Lake by NIEHS and the EPA in 2012, surrounded by a two-mile walking trail. There is also a memorial garden to remember former employees who have passed. This campus houses 1,200 NIEHS staff.

NIEHS has had many successful technology transfer initiatives. A predictive test for risk of breast and ovarian cancer was licensed to Myriad Genetics Laboratories in 2001. NIEHS' contribution to this diagnostic was the isolation and cloning of human breast cancer 1 gene (BRCA-1). It is on the market as BRACAnalysis. Another product that came from NIEHS is the Kunkel site-directed mutagenesis kit. This is a research reagent kit developed by Bio-Rad and other reagent companies. It is used as a research tool my pharma and biotech firms.

NIEHS might be geographically separated from the other NIH institutes, but it as just as important. If you are interested in reading about all of the work that NIEHS does, visit here.

National Cancer Institute and Frederick National Laboratory
TECHNOLOGY SHOWCASE

# 2021 NCI/FNL Technology Showcase

*Michele Newton, NCI*

The 5th annual Technology Showcase on September 1 proved to be another successful event. It attracted over 300 attendees from biotech, investors/angels, economic development, scientists, foundations/philanthropies and technology transfer professionals. The event is organized under a co-sponsorship agreement by the NCI Technology Transfer Center, the Frederick National Laboratory, the City of Frederick Department of Economic Development, the County of Frederick Department of Economic Development, TEDCO and the Federal Laboratory Consortium.

The program features included:

- **Keynote addresses** by Mark Stewart, VP of Science Policy for the Friends of Cancer Research, and Dr. James Cherry, on detail as NCI Scientific Program Director (SeroNet).
- **Technology Opportunity Pitches** from NCI and FNL inventors.
- **Panel Sessions:**
  - Panel 1: "How collaborators can tap into laboratory resources at the Frederick National Laboratory".
  - Panel 2: "Foundations and philanthropies as strategic partners".
  - Panel 3: "How to work with the National Cancer Institute and the Frederick National Laboratory".
  - Panel 4: "Funding and resources for startups".
- **A Lightning Pitch and Poster Session** organized by the NCI Technology Transfer Ambassadors Program (TTAP).

The 2021 event was held virtually and featured 23 technologies presented by nine NCI and FNL inventors and 14 presenters from TTAP. For the first time, the panel sessions included a cancer survivor/ patient advocate; the success story panel included the CEO of Precigen, an NCI CRADA partner. The full agenda can be viewed here.


TTC Staff on The Tech Showcase Planning Committee included Michele Newton, Laura Prestia and Michael Salgaller. OTT's Steve Ferguson also served as the moderator for Panel 3. TTC's Invention Development and Marketing Unit is responding to multiple follow-up requests for more information.

# The Road to Launching ETT

*Tim Leahy, OTT*

The Enterprise Technology Transfer system (ETT) team has been hard at work for some years now. You may be wondering, what are some milestones that have been hit? Since work began, the ETT team has:

- Installed the STAGE environment to allow testing and tweaking of the system.
- Validated the design for the five primary modules of the user interface.
- Migrated in all of the data from the nine legacy systems.
- Created an Application Programming Interface (API) with Computer Packages, Inc. (CPI) to exchange data for certain workflows.
- Created a custom data set for reporting.

So, what is the ETT team working on currently? Right now, the largest task is to get all of the data fields cleaned up. This task is largely dependent on the collaboration and cooperation of the entire group of stakeholders from our technology transfer user group (TTUG) members to our subject matter experts, we are relying on their feedback and effort to get this task marked as "complete". The first step is to assign priority to each one to form a plan of attack. Certain fields need to be completely correct before roll-out as they link to existing functionality in ETT. Others, such as the title field e.g., "Mr. Mrs. Dr." can be completed quickly. The rest will be cleaned as time permits. In order to move through this task as quickly as possible, the TTUG and supporting working groups will be meeting more frequently than usual and completing homework between meetings. The team is hoping to have this completed over the course of the fall. The large "list" fields that display every value that is stored in those fields are being done first, and then the team will move on to less complex cleanup tasks. We know that this data cleanup is a large and complex task in some cases but with your help we are committed to completing it. We thank you in advance for your support in getting this across the finish line.

Now that you understand where we currently are, you may be wondering, what's next? The team is:

- Setting up a DEMO environment for testing and training.
- Completing the development of the new law firm portal.
  - Finalizing the validation of law firm invoicing process.
- Validating the ETT user interface.
  - Completing mapping data fields for legacy metrics and reporting.
  - Completing validation of transactional agreement workflow and customer relationship management (CRM) workflow with ICs.
- Developing software-centric training.

All of that is well and good, however you may be wondering, how will this impact or improve your work? How will this bring benefit to you? The new system will:

- **Automate processes, data validation and approval workflows** – across the entire NIH technology transfer community. For example, an API is being set up with CPI to exchange data between the systems to allow CPI to automatically send a file that will identify all costs associated with a patent.

# The Road to ETT

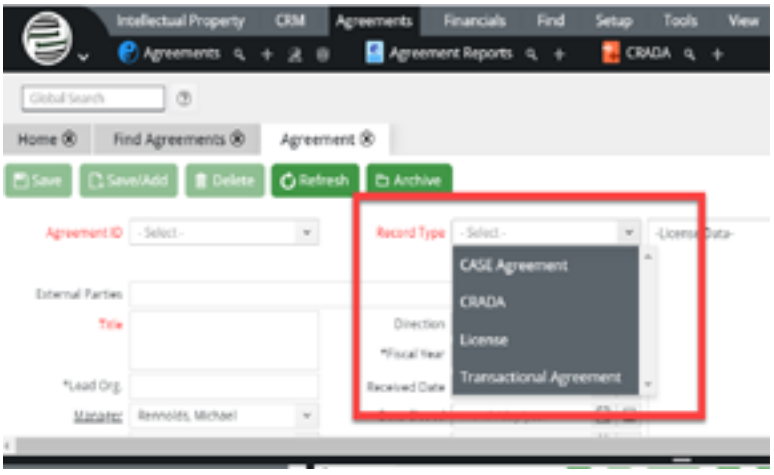

- **Enable traceability** by allowing stakeholders to view all data and relationships between patents, licenses, inventions, and expenses in a single application. As an example, if Royalties Administration Unit (RAU) logs that a payment was missed, an alert will go to Monitoring and Enforcement Unit (MEU) and they will be able to see all of the information needed without relying on RAU to give them access to the files.

- **Improve efficiency** by eliminating duplication of effort to replicate data across multiple systems. Previously, when adding a new technology, an Employee Invention Report (EIR) would need to be filled out and sent via email to be uploaded to TechTracS. Now all information will be put directly into ETT only.

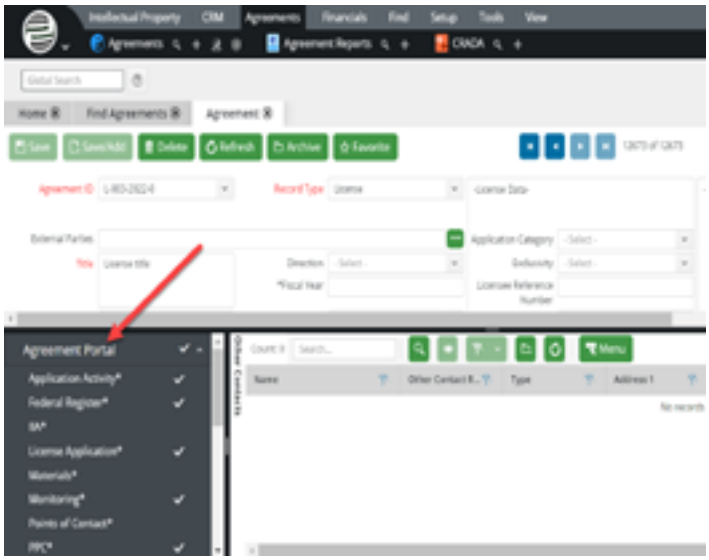
- **Help support full compliance** with all current security and policy guidelines. One example is the how ETT will track inventorship and ownership of technologies in order to properly distribute royalties to the ICs, IIA institutions, and inventors in compliance with Chapter 700 of the United States Public Health Service Technology Transfer Policy Manual.

- **Exhibit transparency** by providing real-time visibility into the status of objects such as patent submissions and license applications. All users have access to view records which will reduce or eliminate the need to wait on someone to find out the status of an item.

- **Provide flexibility and support unique processes** by enabling customized solutions when necessary. The unique way the NIH is using the agreement module and the 'Agreement Portal' templates is an example. They have custom fields and interfaces for the four separate agreement types (License, Transactional, CRADA, and CASE).




Pictured to the left is the general template for all agreement types. Depending on the record type that you select, the Agreement Portal group will be created and will support the data required for the selected Record Type, pictured below.




If you have any questions, please reach out to ETT Support at ett_support@nih.gov.

# A T2 Book Review AND Pop Quiz!

*Steven Ferguson, OTT*

***Intellectual Property in Government Contracts***
By James G. McEwen, David S. Bloch and Richard M. Gray
Oxford University Press, ISBN 978-0-19-533856-0

Let's start things off with a short quiz to test your knowledge of the subject of intellectual property (IP) in government contracts! No, these won't be part of your next PMAP (we think) but may be a guide for you as to whether or not this book could be a good addition to your reference library.

**Question Number 1:** Your company is currently negotiating a Cooperative Research & Development Agreement (CRADA) for a joint research project with a federal lab. Prior to signing the agreement, your boss asks you if the IP generated under this agreement would be subject to government "march-in" rights. Do you answer "yes" or "no"?

**Question Number 2:** You receive a telephone call from a state employee at the University of North Dakota about an invention that she has made at the university. The technology is of keen interest to your firm, and you are offered an attractive deal directly by this inventor. Should you sign?

**Question Number 3:** Your company has made an invention during the course of working on a federal government contract and you are considering a patent application as this invention could have important commercial applications for your organization. However, since your project was government-funded, the question has come up as to whether this invention owned by the government or does the government have a license or perhaps neither?

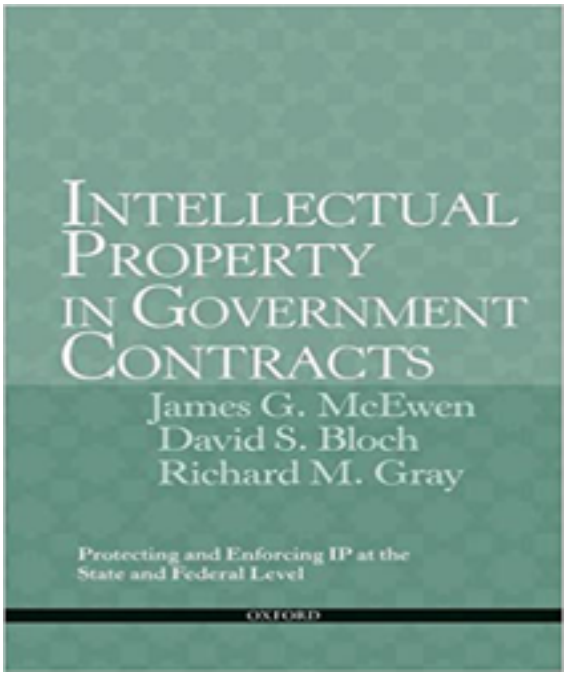
Go ahead and check the accuracy of your responses on page 20. How did you do?

**Public Sector IP Interface**

As you can see from the answers to these questions, the authors of this book have put together a very comprehensive guide to a subject that at first glance to some in the licensing field might seem to be a bit arcane: the intellectual property environment that exists between the interface of the private and public sector technology communities. However, the IP from these interactions cannot be seen just as agreement boilerplate as they represent issues that have real meaning and financial impact given the spending behind them.

The concept for this book is to lay out in some detail the key efforts by government to acquire and protect IP and explore contractor rights compared to those of the government at both the state and federal levels. The strength of the book is its first four chapters that deal with the key issues for federal IP matters while the fifth deals with the corresponding matters in some detail in each of the fifty states and DC.

Although these first four chapters are less than half the size of the state chapter, they represent the heart of the book and are the sections that a practioners will find to be most useful on a day to day basis. The initial chapter begins with "Introduction to Government Contracts and Intellectual Property" and gives an overview of the differences between public and private contracts, continues with the practical mechanics of contracting and concludes with a quick primer on the types of intellectual property rights. The second chapter provides an explanation of IP practices as they relate to the federal procurement system, covering a wide range of topics relating to this primary and often not well understood mechanisms that the government uses to fund private-sector research & development. The third chapter takes up how IP practices are handled by the government for "non-procurement" transactions – which more specifically relate to a wide variety of agreement and transaction mechanisms that can vary from licensing or collaborations with the governments own internal R&D laboratories to assistance and partnering mechanisms such as grants and cooperative agreements. The fourth chapter in this key section of the book deals with enforcement issues for IP in federal contracts, including actions and remedies for infringement allegations against the government or its contractors.




**The Authors**

One of the strengths for this book is the varied backgrounds of the authors and the different experiences that they have had in working with government-related IP rights, in essence combining both their private and public sector backgrounds. The lead author, James G. McEwen is a partner of Stein McEwen LLP and has prepared and prosecuted patent applications in computer hardware and software, control systems, semiconductor manufacturing along with various mechanical and optical devices. David S. Bloch is a partner with the law firm of Winston & Strawn, LLP in their San Francisco office and specializes in intellectual property matters that involve aspects of antitrust law and government contracts. Richard M. Gray is Associate General (Acquisition & Logistics) in the Department of Defense Office of General Counsel.

**Recommendation**

Although (hopefully) not a volume that you would take on holiday, it nevertheless provides a very good introduction and references for a very broad range of topics relating to IP issues at both the federal and state level. Included is a fairly good index and a listing of relevant cases for those practioners needing to do a more in-depth study of an issue of a topic that comes up in day-to-day licensing practice – it's a definite buy!

***Check page 20 for the answers!***

# Unusual NIH Inventions: Hot Bird Seed

*Richelle Holnick, OTT*

Would you like Blazing Hot, Cajun Blend, or Hot Meats? No, those are not names of hot sauces, they are the names of birdseeds using the science that an NIH lab discovered to keep squirrels from steeling bird food.

The NIH has a history of accidentally inventing or discovering technologies that do not fall under the biomedical umbrella throughout the course of their research. Many great inventions have come from scientists following a lead down a road that ended somewhere very unexpected! One unusual invention from the NIH is an anti-squirrel birdseed.

In the 1980s, Dr. Peter M. Blumberg was leading a team at NCI's Laboratory of Cellular Carcinogenesis and Tumor Promotion. They were researching natural irritants and their effect on tumor formation and growth. One of the chemicals being studied was capsaicin, which is what creates the "hot" sensation when eating hot chili peppers. His team found that this reaction happens when the capsaicin binds to high affinity "capsaicinoid" receptors on nerve fibers that then release the neurotransmitter Substance P which creates the "hot" or "pain" response in mammals. This made the team curious if all species of animals have capsaicin sensitive receptors, since they knew that many species of birds could eat chili pepper seeds. The team concluded that birds either do not have these receptors or their receptors are insensitive to capsaicin.

Dr. Blumberg knew that this information would be relevant to the bird community because he lives on a farm where all of his neighbors feed birds, and they have long struggled with trying to feed birds without letting squirrels steal all of the food. It was decided that they would coat wild birdseed with capsaicin since birds can easily eat it, but the squirrels will have an aversion since they feel the "heat" of it.

The NIH filed for and received U.S. Patents entitled "Treated Bird Seed Preferentially Palatable to Birds but Unpalatable to Animals Having Capsaicin Sensitive Receptors". Due to squirrel's affinity for birdseed, and bird lovers hatred of squirrels, this has been a popular invention! The NIH received royalties from Snyder Seed's license, however the patent has since expired and many companies are using similar formulas in their birdseeds.


While the NIH studies human health, that does not necessarily mean it is the sector where every technology will go to market!

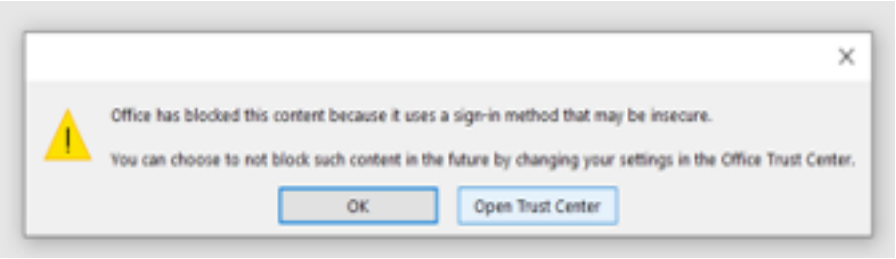
# SharePoint Tip: Trust Center Microsoft Problems

*Mitchell Ha, Sapient*

Some of you have experienced difficulties accessing Microsoft Office documents under the OTT SharePoint site.

You might have seen the following message box come up when trying to access a document.

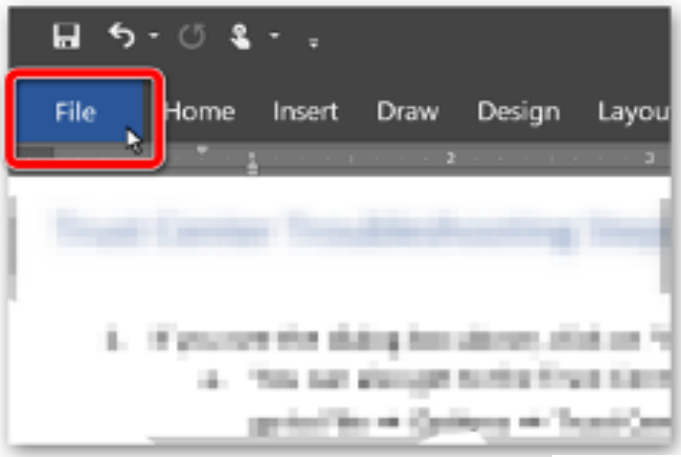
This was an unintended consequence from a Microsoft software patch released out of schedule.

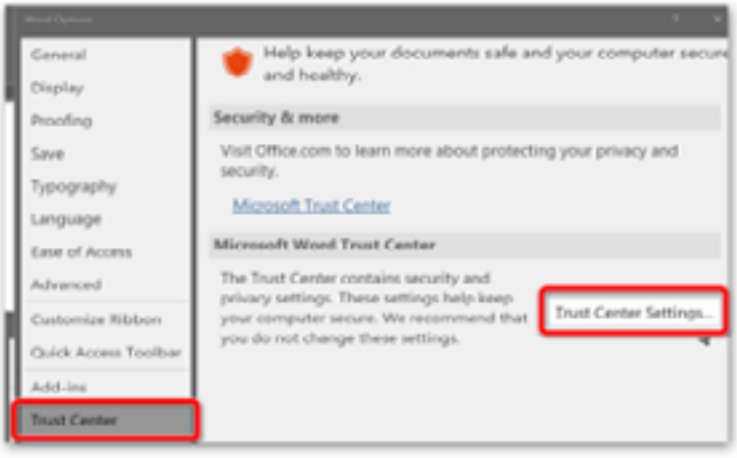



We are working with OIT and CIT to determine the root cause and possible preventative measures. Meanwhile, if you experience this issue, please follow the instructions below as a work-around.

**Trust Center Troubleshooting Steps**

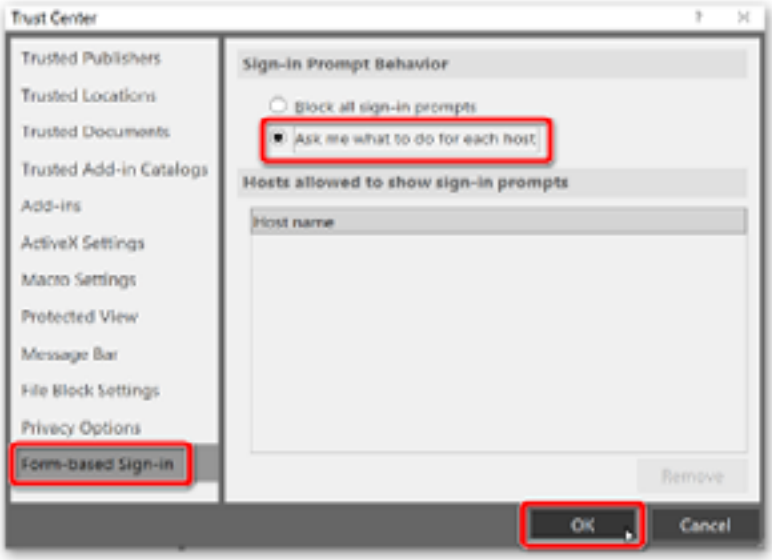
1. If you see the dialog box above, click on "Open Trust Center"
    a. You can also get to the Trust Center by opening any blank Microsoft Office document (such as Word, Excel, and PowerPoint.) and go to File --> Options --> Trust Center



SharePoint Tip

2. Then go to Trust Center Settings --> Form-based sign-in.




3. Click on "Ask me what to do for each host" then OK

This setting in Trust Center will prevent blocking of sign-in prompts. As you access safe sites within the NIH network, the list of safe hosts will be auto-populated depending on your interactions with the sites.

For further information, consult the link Updated Feature Restricting Form Based Authentication In Office Apps

You are our priority, and we are working to preserve the continuity of your business processes. If you experience a sudden loss of access to the SharePoint site or documents, please submit a helpdesk ticket referenced to *OD-NIH-OTT SharePoint Support*.

# Federal Laboratory Consortium Selects NCI for Two Mid-Atlantic Region Awards

*Michele Newton, NCI*

**The FLC MAR selected NCI TTC's Suna Gulay French, Ph.D. for the 2021 Rookie of the Year award.** "The FLC MAR Rookie of the Year Award recognizes the efforts of an FLC laboratory technology transfer professional (or technology transfer fellow) in the region who has demonstrated outstanding work in the field of technology transfer in a manner significantly over and above what was called for in the normal course of their work during the past year. The nominee must be new to technology transfer, with three years (or less) experience in a technology transfer position." The FLC MAR only selects one Rookie of the Year winner each year. Congratulations Suna on an outstanding accomplishment!

**The FLC MAR selected "PRGN-2012, FDA Orphan Drug Designation for Recurrent Respiratory Papillomatosis" for the 2021 Excellence in Technology Transfer award.** "The FLC MAR Excellence in Technology Transfer Award recognizes employees of FLC member laboratories in the region and non-laboratory staff who have accomplished outstanding work in the process of transferring federally developed technology. A panel of experts from industry, state and local government, academia, and the federal laboratory system judges the nominations."

FLC Mid-Atlantic Region

Congratulations to the following awardees:

**NIH:**

- Clint Allen, M.D., NIDCD Principal Investigator in the section of Translational Tumor Immunology
- Jeffrey Schlom, Ph.D., Chief, NCI CCR Laboratory of Tumor Immunology and Biology (LTIB)
- James Gulley, M.D., Ph.D., NCI CCR Genitourinary Malignancies Branch (GMB)
- Christian Hinrichs, M.D., Formerly with NCI CCR Genitourinary Malignancies Branch
- Scott Norberg, D.O., NCI CCR Genitourinary Malignancies Branch
- Michael Pollack, Ph.D., Supervisory Technology Transfer Manager, NCI TTC

**Precigen, Inc.**

- Helen Sabzevari, Ph.D., President and CEO
- Douglas Brough, Ph.D., Senior Vice President and Head of Research

The award winners were recognized and honored during the joint Mid-Atlantic and Northeast Regional Meeting, October 5-7.

NIH NATIONAL CANCER INSTITUTE

# NIH T2 Flashbacks - A New Feature!


Pictured above, OTT's Steve Ferguson, above left, and JP Kim, above right, staff the exhibit booth at a biotech conference in the early 1990s. Alas, the flask with red colored water technology pictured on the banner remained unlicensed!

As NIH technology transfer reaches middle age, we are introducing a new feature for your newsletter – T2 Flashbacks! Have some photos of our tech transfer program's earlier days? Please forward them to Richelle Holnick or Steve Ferguson for inclusion in upcoming editions.

# Where Are They Now?

*Karen Rogers, OTT*

Many inventors have their technologies licensed years after they have worked at the NIH. Would you know how to locate them to try and obtain their contact and banking information years later? Many have moved to other parts of the United States or back to their home in another country. You can help by asking them to provide their personal contact e-mail and personal cell phone number when they complete the Employee Invention Report. Any time you hear from an inventor, ask them if they need to update their personal contact information in our records. Inventors may change their address, but most keep the same personal e-mail. You can help us stay in touch by obtaining their personal e-mail address or cell phone number.

# Technology Transfer at the Frederick National Laboratory

*Victoria Brun, FNL*

The Frederick National Laboratory for Cancer Research (FNL) houses two offices that together cover the spectrum of technology transfer activities, including partnership development, invention development support, terms negotiation, and licensing.

The Intellectual Property and Strategic Agreements (IPSA) Office handles employee invention reporting, patents, copyrights, and a variety of strategic agreements, including Material Transfer Agreements, Collaborative Agreements, Collaborative Research and Development Agreements (cCRADAs), Testing Agreements and License Agreements.

The Partnership Development Office (PDO) establishes partnerships and collaborations among FNL scientists and external researchers in government, academia, industry, and the nonprofit research sector, as well as neighbors in our community. The PDO conducts active outreach and markets the FNL's unique capabilities and technologies to external investigators.

Together, the offices have a staff of ten and decades of experience in laboratory research, business development, entrepreneurship, and technology transfer. The offices also offer a range of training experiences to high school, undergraduate, and graduate students—providing them a unique experience in the technology transfer space.

"Interoffice collaboration such as the one between the PDO and IPSA is the most successful model of teamwork and a 'one stop shop' for partners and collaborators," said PDO Director Vladimir Popov. "Even though we are two different offices, to outside entities we appear as a unified, organized, and efficient partner in establishing a relationship with our lab."

Both offices also interact regularly with the NCI Technology Transfer Center (TTC), sharing expertise, identifying areas for collaboration, and developing shared resources. The PDO participates in the monthly NCI Technology Review Group, which reviews, evaluates, and makes decisions on NCI inventions. The PDO and NCI TTC also collaborate with community partners to host the annual Technology Showcase, which promotes FNL and NCI technologies and collaborations. This event regularly draws in 200 or more attendees.

**Handling FNL technologies**

Although most inventions by FNL scientists are developed using contract funds and therefore are managed by the NCI TTC, some inventions and intellectual property are managed by and remain the responsibility of the national laboratory, including cCRADA subject inventions. To date, the FNL has executed more than 60 cCRADAs, covering a diverse array of biomedical research. One such cCRADA is with the small biotechnology company TheRas, Inc., to develop and characterize

K-Ras targeting compounds. The collaboration, which is now on its fourth year, has generated promising intellectual property, which TheRas has licensed and is further developing through the collaboration. Currently, 12 full-time FNL employees are involved in this research and are funded through the cCRADA.

Another unique instrument in the FNL's licensing portfolio is FLU-PRO©, a self-administered patient questionnaire to quantify influenza and influenza-like illness symptom presence and severity. IPSA manages the copyright, licensing, and oversight of FLU-PRO. The questionnaire has been extensively licensed by companies and organizations seeking symptom information related to influenza studies. More recently, the office has received requests for more expanded respiratory study use, including for Respiratory Syncytial Virus (RSV) and COVID-19.

Working directly with FNL scientists, the IPSA actively evaluate intellectual property at all stages in light of the prior art. "Our office is capable of handling the variety of technologies that are developed from the FNL research portfolio," explained IPSA Director Claudia Haywood. "And because we often work with FNL scientists on other strategic agreements, they are familiar with the IPSA team and can reach out to us knowing that we will do our due diligence in handling their IP."

**Supporting early stage technologies and small and start-up companies**

Both offices also engage in activities to support promising early-stage technologies. IPSA runs a technology review group for FNL technologies called the Technology Evaluation Committee. The PDO helps manage the NCI Invention Development Program, which accelerates the development of NCI intramural inventions by supporting promising technologies through pre-clinical proof-of-concept studies—de-risking (reducing or mitigating risk) them and making them more attractive to potential commercial licenses and co-developers.

The PDO also supports and co-developed The Edge, a 12-week business accelerator, offered by the Frederick Innovative Technology Center, Inc., (FITCI) to help start-up companies in Frederick County, Maryland, form, develop, and expand. As part of The Edge, the FNL and NCI offer local biotech entrepreneurs assistance in licensing and partnering around promising technologies.

"Small companies bring bold ideas into reality," said Popov. "And we, as a national lab, are happy to support them in this endeavor of bringing valuable technologies to market for the ultimate benefit of the patients."

# NIH Librarian's T2 Tip Of the Month - Scopus

*Josh Dubberman, NIH Library*

Scopus is an Elsevier cited reference database covering scientific, technical, medical, humanities & social science literature, available to NIH staff via the NIH Library. Scopus indexes more than 24,000 journals as well as books and extensive conference proceedings, with complete citation counts for articles from 1996-present.

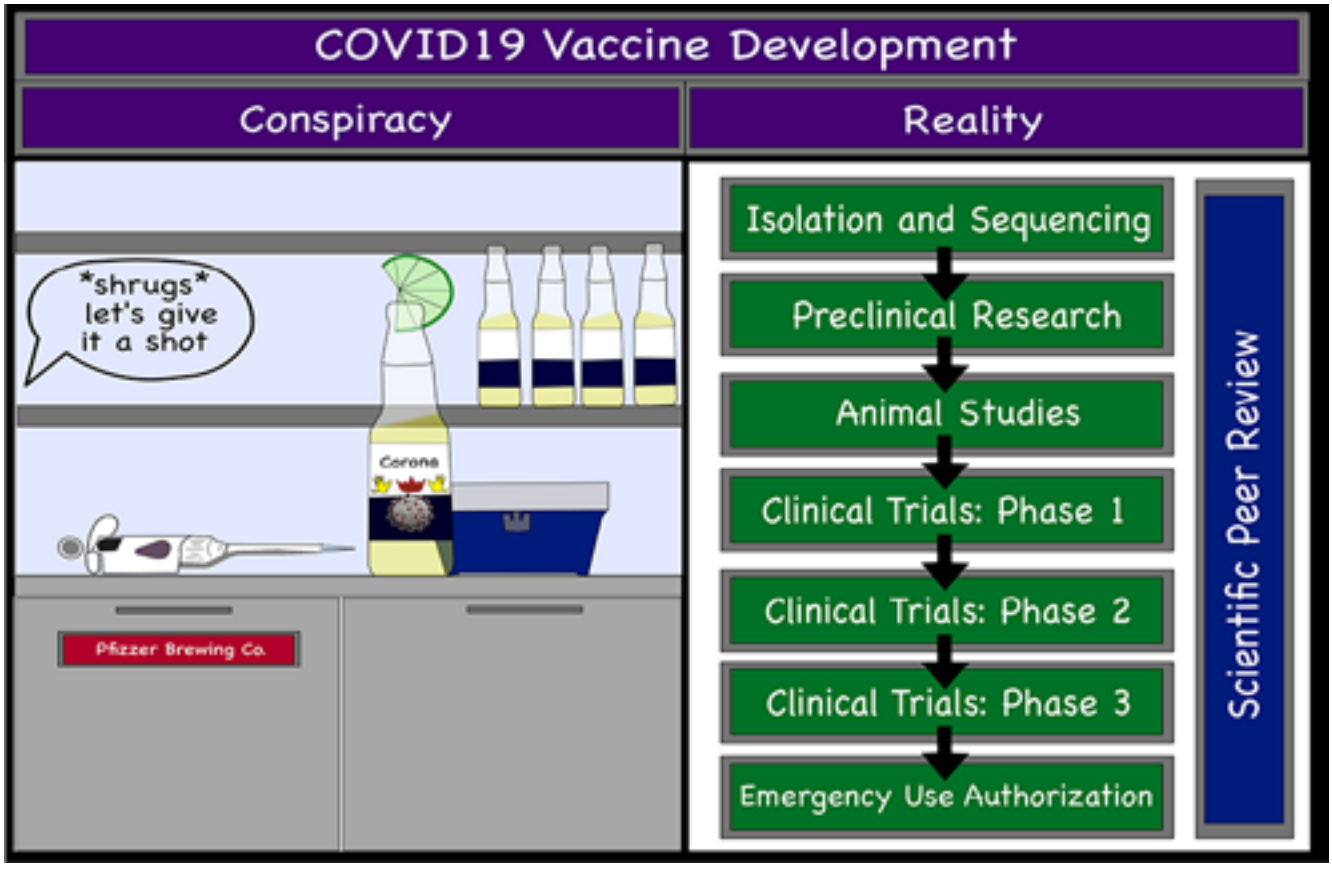
Many Scopus records include abstracts, and records can be searched for words, authors, affiliations/ institutions and cited references. Citation ranking of publications can be very useful in identifying experts, and affiliation ranking can help identify companies interested in particular technologies. Scopus has broad engineering literature coverage, which can be very useful in researching medical devices and technologies.

The NIH Library offers classes on Scopus, and vendor training is available here. A Scopus Quick Reference Guide is available at here.

Contact Josh Duberman jduberman@nih.gov for answers to any questions or training on Scopus and other information resources. You may also click here for the NIH Library class schedule, or sign up for the NIH Library email news.

# Tech Toon

*Joshua Choe, University of Wisconsin-Madison, Cellular and Molecular Biology Grad Student*



# The Great Patent Fire of 1836

*Barry Buchbinder, NIAID*


William Thornton

The USPTO traces its origins back to the US Constitution (Article I, Section 8), and the Patent Act of 1790 (1 Stat. 109), April 10, 1790. It has changed form and departments several times since then but one thing has remained the same: paper -- it receives, processes, and publishes mountains of it daily. Paper, unfortunately, burns and the PTO has not always been as lucky or as careful as it is today.

**When Fire Did Not Strike**

The Patent Office's earliest experience with fire was an act of war. On August 25, 1814, the patent models and papers narrowly escaped ruin. Dr. William Thornton, who had been the original Architect of the Capitol, was building a musical instrument in the same building, known as Blodgett's Hotel, in which the patent papers and models were housed. Dr. Thornton, who served as the first "chief" and later "superintendent" of the Patent Office from 1802 until his death in 1828, learned of a British plan to attack and burn all the Government buildings in Washington, DC. He persuaded the British that they would be destroying the common heritage of all mankind if they burned the Patent Office. When the smoke cleared from the dreadful attack on Washington, the Patent Office was the only Government building that was left untouched. It temporarily housed Congress in 1815 after the destruction of the Capitol by the British.

**The Best of Years and the Worst of Years: 1836**

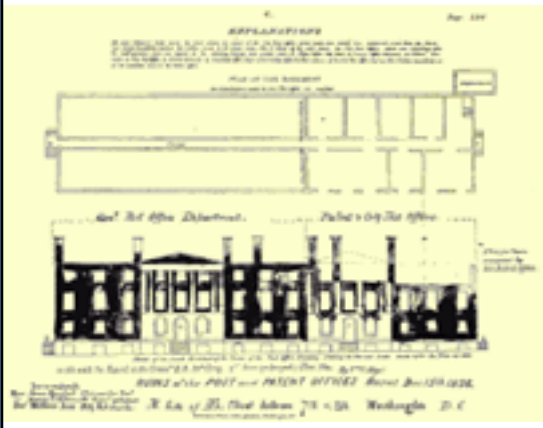
On July 4, 1836, the Patent Act of 1836 (5 Stat. 117) created the first Patent Office as a separate organization within the Department of State. Henry Leavitt Ellsworth was named as the organization's very first Commissioner and immediately began construction of a new fire-proof building just for the Patent Office. While awaiting completion of the new building, the Patent Office shared quarters with the General Post Office and Washington City Post Office. All 10,000 or so patent records and several thousand patent models were housed in about two fifths of the first floor, all of the second and all of the third floor of this shared building, known as Blodgett's Hotel. A fire-engine house was situated right at the corner of Blodgett's Hotel, complete with a fire engine, a forcing pump and 1000 feet of leather hose. This station and equipment had been provided by the US Congress sixteen years earlier. They had demonstrated both the good sense and foresight to provide appropriate precautions against such things as fires. The station was manned by a volunteer fire fighting force.


Blodgett's Hotel

When the fire struck, the new, fireproof building was still under construction. It was cold outside and, Like most of Washington, DC, Blodgett's Hotel was heated with firewood. The Patent Office and Postal employees stored wood inside the Hotel, specifically in separate wooden bins in the drafty, dank cellar.

The employees of both the City Post Office and the Patent Office had been warned against storing ashes near the firewood. However, City Post Office clerks stored ashes in the cellar hallway and Patent Office messengers stored ashes in a wooden box in

the corner of the fuel room. The messengers and clerks were warned, but there was no trash pickup and nowhere else to put the ashes but in the street, which is what the General Post Office employees did do. Warnings were disregarded without consequence.



Drawing of Blodgett's Hotel after the fire

At 3:00 am in the morning on December 15, 1836, a messenger who was quartered in the building awoke to suffocating smoke. He roused others in the building who searched for the source of the smoke and finally found it coming from the cellar. The few employees who could get there in time tried in vain to enter the Patent Office portion of the building, encountering blocked doors, heavy smoke, and windows too high to get to. While some ran for help, others began removing those records that they could get to from the Post Offices.

The fire engine was called. Though it was right on the corner, but it had been 16 years since the equipment was bought and things had fallen into disrepair. The volunteers quickly found that the leather hose had disintegrated and the fire pump was useless. They desperately formed a bucket brigade while others ran to another fire station to get working equipment. By the time a working fire engine arrived, it was too late. The building was doomed after the first 15 to 20 minutes of the fire and people could do little more than protect the surrounding buildings from being swallowed up by the inferno.

Everything in the Patent Office was lost to the Great Fire, including the musical instrument saved by Dr. Thornton in 1814. The Patent Office was then faced with the mammoth task of restoring records and patent models. There were no patent records at hand save those in the mind of the single patent examiner and a book that a draftsman named William Steiger had borrowed from the Patent Office despite official rules that prohibited their removal from the Office. Not following the rules saved a little bit of history.

Patent Office Building After 1877 Fire

**One More Time….**

The Patent Office survived another fire on September 24, 1877. This second fire struck in the "fire-proof" building whose construction had started in 1836. The building may have been fire-proof, but its contents were not! Many patent models were devoured in the flames. Despite the loss of many models, the Patent Office fared far better than in 1836 because the important records which illustrated and described all the inventions were saved.

**And Now …**

In the ensuing years, the Patent Office has faced the threat of losses during moves, damage from broken water pipes, breakage of file storage racks, and general wear and tear but never anything so disastrous as the Great Fire of 1836. Modern fire safety precautions and an

Patent Fire

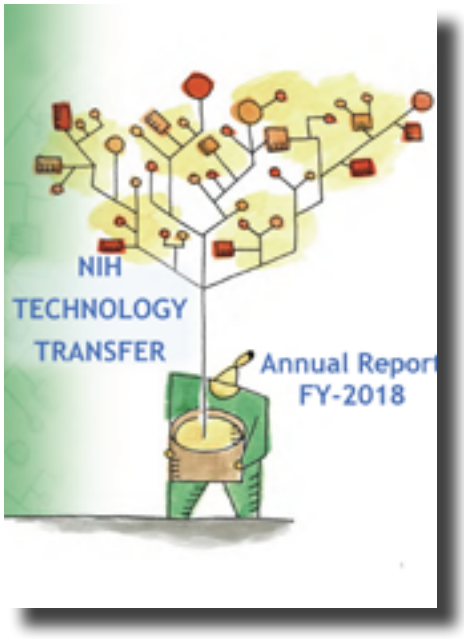
awareness on the part of PTO employees regarding fire safety have prevented new disasters. Duplicate records are created and stored in separate locations and media, including past use of microfilm and current reliance on electronic records.

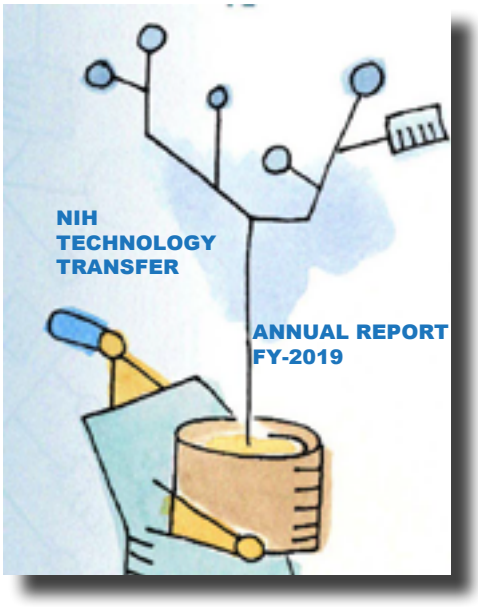
The USPTO moved to Arlington, Virginia, in the 1950's, originally to Crystal City. Now its main campus is near the King Street-Old Town and Eisenhower Avenue Metro stations. Starting in 2012, the PTO has opened regional offices in Dallas, TX, Denver, CO, Detroit, MI, and San Jose, CA. There are Patent and Trademark Resource Centers (PTRCs) in almost every state. The headquarters in Arlington houses the National Inventors Hall of Fame and Museum. The "Old Patent Office Building" was transferred to the Smithsonian in 1958. Since 1968 it has been occupied by the American Art Museum and the National Portrait Gallery. Halls designed to display patent models now display art. Indeed, use as a museum is not new. For a part of the nineteenth century the building was a major tourist attraction, housing the Declaration of Independence, Constitution, and part of the Smithsonian's collection. To an invention-loving publics, the patent models themselves were an attraction.

## Annual Report Reminder

*OTT*

Happy Fiscal New Year everyone! It is now almost time for the Annual Report. You can expect to receive emails from Steve Ferguson and Richelle Holnick next month with prompts for you to fill out about all of the wonderful accomplishments your IC had this year! If you would like some inspiration, you can view past Annual Reports on SharePoint.



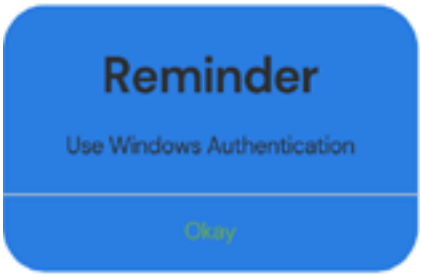




## SharePoint Log In Reminder

*Mitchell Ha, Sapient*

For NIH employees and contractors: if you are not physically at a NIH location, please connect via VPN to access SharePoint. When connecting to OTT SharePoint over VPN, the system might ask you to authenticate. Please choose Windows Authentication and enter your NIH username and password in the form of "NIH\[username]" and password.

If your computer allows you to use Windows Authentication with your PIV card, you can try to log in that way.




SharePoint Tip: If you use iTrust, you will be denied access as the certificates stored within your PIV card will not identify you.

For CDC and FDA clients, please use iTrust to login. Use your username and password.

## Book Review Answers

*Steve Ferguson, OTT*

1. **Answer**: Yes. If the government grants an exclusive license or assignment to IP from the CRADA, it would retain march-in rights (see page 127). However these function more as a diligence clause and have never been exercised (page 53).

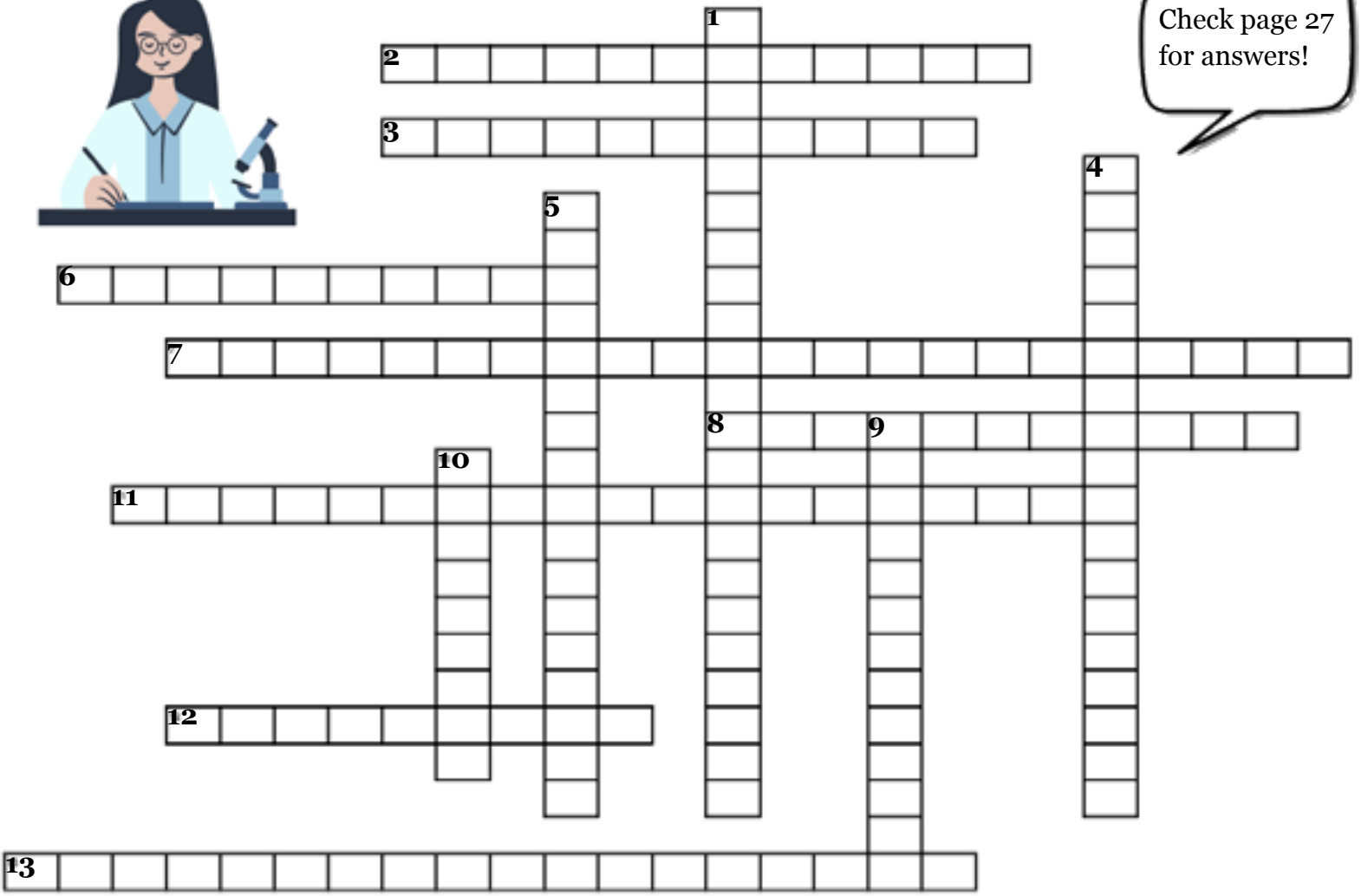
2. **Answer**: No, at least not directly with the inventor. The University of North Dakota is the presumptive owner of all IP, except for copyrights, at this institution (page 439).

3. **Answer**: Most typically, a license. Although there are exceptions, generally the government will have a license to use it for any government purposes but will not own it (page 43).

# Research Terms Crossword Puzzle



Check page 27 for answers!




**Across**

2. When observers are aware of the purposes of a study, they may see and record what they expect to see rather than what participants actually do.
3. A descriptive, qualitative technique directed at understanding a culture or a distinct social group through participant observation.
6. A prediction drawn from a theory.
7. When an investigator sets up a laboratory situation that evokes the behavior of interest so that every participant has an equal opportunity to display the response.
8. Type of variable that the investigator expects to cause changes in another variable.
11. researchers gather information on individuals, generally in natu- ral life circumstances, and make no effort to alter their experiences. Then they look at relationships between participants' characteristics and their behavior or development.
12. The type of variable that the one the investigator expects to be influenced by the independent variable.
13. Type of research that permits inferences about cause and effect because researchers use an evenhanded procedure to assign people to two or more treat- ment conditions.

**Down**

1. Measures the relationship between nervous system processes and behavior.
4. When participants are studied repeatedly at different ages, and changes are noted as they get older.
5. The effects of the observer on the behavior studied.
9. When a observer records all instances of a particular behavior during a specified time period.
10. Brings together a wide range of information on one child, including interviews, observations, test scores, and sometimes neurobiological measures.

# Comings & Goings

**Adele Benitez** joined OTT in early July and has been working with Laura Lane-Unsworth to provide support services for the OTT Annuities group. Adele is from Yorktown Heights, NY. She has a BA from Syracuse University and a Masters degree from St. Joseph's. She has worked as a paralegal for over 20 years in the field of patent law providing support for companies and law firms in the areas of annuities, docketing and patent prosecution.

**Vincent Carbone** has joined NIAID as a Fellow in the Technology Transfer office. He is an Intellectual Property Attorney with a focus on patent prosecution related matters. He was born and raised in Baltimore, MD and received his Bachelor of Science in Biology from Tufts University. Following college, Vincent worked as a marine biologist in the Institute of Marine and Environmental Technology's aquaculture research program. He then attended the University of Maryland Francis King Carey School of Law, where he received a Juris Doctor with a Certificate of Concentration in Intellectual Property Law and was awarded a CALI Excellence for the Future Award in Licensing and Tech Transfer Law. He was accepted to practice as a member of the Maryland State Bar in December of 2020 and has been a federally registered patent practitioner since November of 2019.

**Michael Davis** is now the first Deputy Director of OTTAD. He has been a member of OTTAD for five years, supporting the mission of NHLBI and six client ICs. Prior to joining OTTAD, he was a technology transfer fellow with the NIAID Technology Transfer and Intellectual Property Office. Dr. Davis is a graduate of the University of Maryland Francis King Carey School of Law, holds a Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degree from the University of Virginia School of Medicine, and a Bachelor of Science (B.S.) degree from San Diego State University.

**Maria C. Freire** stepped down as FNIH President and Executive Director in September 2021. Dr. Freire has served in that role since November 2012, making her the longest-serving leader of the FNIH since its inception 25 years ago. Previously, she was the director of OTT.

Under Dr. Freire's leadership, the FNIH has become an innovative, impactful player in the national and international ecosystem of biomedical research. Now established as a world leader in pioneering public-private partnerships (PPPs), the FNIH has served as a model for organizations and foundations widely, including in the creation of other Congressionally mandated foundations that support the mission of agencies of the US federal government.

**Catherine Goldsborough** started working with OTT in mid-September and has been working with the OTT CORs to organize various aspects of our contracts. She is from Damascus, MD. She has a BS from the University of Connecticut. Prior to joining the OTT team, she worked as a Contract Administrator for 13 years for a legal and tax publisher in support of federal, state and local government, law firm, law school and accounting firm customers.

**Michael Gottesman** is stepping down as the Deputy Director for Intramural Research (DDIR). He became the OIR Director and DDIR in 1993. Dr. Gottesman obtained his M.D. from Harvard University Medical School, completed his internship and residency in medicine at the Peter Bent Brigham Hospital in Boston, and received his postdoctoral research training in molecular genetics with Martin Gellert at the NIH. After a year as an assistant professor in the Department of Anatomy at Harvard, he moved to the NIH in 1976. However, he will not be retiring completely, he will remain chief of the the NCI Laboratory of Cell Biology.

**Karen Griffin**, administrative officer for NCI TTC, retired after 42 years of federal service. in August 2021 She served at TTC for 18 years.

**John Hewes** retired in August after 14 years of service at the NCI. John was a member of NCI's Technology Transfer Center's (TTC) Invention Development and Marketing Unit. He joined TTC in December 2019.

**Dani Klinenberg** has joined OTT as a PLS/ETT Support Analyst. She is a recent graduate of Vanderbilt University, where she received a B.S. in Human and Organizational Development. While at Vanderbilt, she developed a passion for the world of technology, minoring in both Computer Science and Engineering Management. She is excited to be working to help advance the technological capabilities within the public sector.

**Jay Kline** joined NCI's TTC IDMU as an Invention Development and Marketing Fellow in June. He is a recent graduate of Georgetown University with an M.S. in Biotechnology. During that time, he interned with two biotech startups and the Focused Ultrasound Foundation, working in business development, strategic marketing, and partner engagement to streamline innovative research into clinical impact. Prior to graduate school, he attended the University of Arizona, and graduated with a B.S. in Neuroscience & Cognitive Science, and a B.S. in Cellular & Molecular Biology.

**Wayne Pereanu** joins OTT as a Science Writer. Previously, he worked with the National Institute of Environmental Health Science (NIEHS) and the NIH Scientific Workforce Diversity (SWD) office as a science writer. Prior to working as a science writer, Wayne investigated the development of the nervous system in the fruit fly Drosophila melanogaster with both the Howard Hughes Medical Institute (HHMI) and at the University of California, Los Angeles (UCLA).

**Prasanna Raja** joined OTT as a Senior Software Quality Assurance Analyst with over 9 years of experience as a federal contractor. She started with FDA for 5 years and later moved to NIH CIT before joining OTT. Prasanna completed her Bachelor's program in Business Administration at National Institute of Management, India. In her spare time, Prasanna enjoys traveling, hiking and running.

**Karen Rogers** is the new License Compliance and Administration Unit Chief at OTT. Karen is a long-timer at OTT, starting in 2005 as a Royalties Administrator and then being promoted to Senior Royalties Administrator in 2009. In addition to her full-time Royalties duties, she took on extra responsibilities as Acting Deputy Director and as Acting Director between 2015-2020, and not only kept OTT afloat but also made it a better place to work, more capable, and more responsive to our customers' needs. All along the way, she has gone above and beyond for OTT and the NIH tech transfer community. Although Karen is starting a new position, she will continue to directly oversee activities of RAU for the time being.

**Sean Terry** has joined OTT as a Data Engineer on the ETT project. He graduated from Florida A&M University with a bachelor's degree in Computer Information Sciences. Mr. Terry has over 19 years of experience implementing IT solutions as a software developer, reports developer, and a database administrator. He has also supported several other government clients including FEMA, FBI, and FDA. In his spare time, he enjoys watching sports and spending time with his family.

**Russell E. Woemmel** joined the NIAID TTIPO in September 2021 as a Fellow. He comes to NIAID right out of law school. Before law school, he served as an analytical chemist for a food safety laboratory specializing in the analysis of mycotoxins and held a research assistant position in a molecular ecology laboratory. In law school, he focused on coursework relating to intellectual property law, including specialty coursework in patent law, copyright law, and advanced legal writing. He holds a BS in Biological Sciences from the University of Missouri-Columbia and a JD from the University of Missouri-School of Law.

**Ellen Zalucha** is thrilled to be starting as a TTIPO Fellow at NIAID. She is from Michigan where she attended the University of Michigan for both her BS (Biology) and PhD (Nutritional Sciences). While completing her BS, she explored biochemistry research in a crystallography lab and decided to pursue a PhD. Ellen's PhD thesis focused on the complex interaction between diet and immune responses; specifically, she investigated the role of GLP-1 on pancreatic macrophage accumulation under severe inflammation. During 2020, Ellen adopted Frankie, a puppy named for Rosalind Franklin. Ellen is also an avid reader and enjoys book club selections by Oprah and Malala.

# Research Terms Crossword Answers