TECHNOLOGY TRANSFER COMMUNITY NEWSLETTER

October 2020

Get to Know the "Knew" OTT Director

Richelle Holnick, OTT

Tara Kirby, Ph.D.

Tara Kirby, Ph.D. has been appointed the new OTT Director! This is a very exciting announcement for the NIH Tech Transfer community. Dr. Kirby previously worked at OTT from 2006 to 2015. She worked her way up from being a part of one of the first classes of tech transfer fellows as an IRTA postdoctoral fellow to becoming a Licensing and Patenting Manager in the General Medicine Branch. While working for OTT, she co-designed the original SharePoint system used for licenses and docketing. Since 2015, she has been the CDC Unit Chief within NIAID's Technology Transfer and Intellectual Property Office.

Dr. Kirby is also an impressive scientist. She received her B.S. in Chemistry from the California Institute of Technology, and then went on to earn her Ph.D. in Biochemistry, Molecular Biology, and Biophysics from the University of Minnesota. She completed postdoctoral fellowships at both the University of Minnesota and with NIDDK. Dr. Kirby considered becoming a science writer before joining OTT as a fellow. She even wrote an article about technology transfer for *The NIH Catalyst* back in 2005! Luckily for OTT, she decided to pursue tech transfer instead.

Dr. Kirby has many years of experience in technology transfer. She has managed a wide range of biomedical and occupational safety technologies. She has negotiated more than 170 licenses, amendments, and settlement agreements, including exclusive commercialization licenses for therapeutics, vaccines, in vitro diagnostics, and insect control. Her extensive experience and familiarity with OTT will make her an exceptional new director.

A fun fact about Dr. Kirby is that she is an avid board gamer. Her family owns a broad range of games. Pre-pandemic, they would often play with friends at home or at their local watering hole.

The Office of Technology Transfer is very excited to welcome Dr. Tara Kirby home!

In This Issue

Stops Bugs, Smells Great: CDC's Nootkatone Approved for Use as Insect and Tick Repellant

Theodoric Mattes, NIAID

According to the WHO, vector-borne diseases account for millions of infections and more than seven hundred thousand deaths annually. This includes diseases like Malaria (four hundred thousand deaths) and Dengue (forty thousand deaths). In the US, West Nile Virus, Lyme Disease, and Rocky Mountain Spotted Fever are the most well-known vector-borne illnesses. Tick-borne illnesses represent almost 80% of all reported vector-borne disease cases in the US. Weather changes, mobilization, and urbanization are contributing to new outbreaks. With few vaccines available, these diseases are difficult to prevent and control in endemic regions.

In 2000, CDC's Gary Maupin, Nicholas Panella, and Marc Dolan, with Oregon State's Joseph Karchesy discovered several plant extracts which showed insecticidal and acaricidal activity. One of those compounds was nootkatone, extracted from Alaska yellow cedar and citrus plants like grapefruit. It is nontoxic and is already an approved food additive. It is responsible for the distinctive smell and taste of grapefruit and has been used by the fragrance industry in perfumes and colognes. Nootkatone was shown to kill both ticks and mosquitos and was active for more than six weeks after application. Further study of the extract found that it could also act as

an insect repellant and in certain cases was more potent than some commercial options, including DEET.

CDC sought patent protection for this discovery, resulting in three issued US patents (7,129,271; 7,230,033; and 7,629,387) and several international patents; commercial evaluation licenses were granted to two companies. Ultimately, Allylix Inc., received an exclusive license in 2014 for the use of the technology in insect control, negotiated by the CDC Unit at NIH OTT. In 2016, CDC established a CRADA with Evolva, Inc. (who acquired Allylix in 2014) to evaluate formulations and to answer questions about nootkatone during the US Environmental Protection Agency (EPA)'s review process for new biopesticides. A BARDA award granted in 2017 to Evolva following the Zika epidemic has further advanced development of this project.

On August 10, 2020, the EPA announced that nootkatone has been registered for use as the active ingredient in insecticides and insect repellants. This registration clears the way for the development of new products containing nootkatone, bringing this CDC technology one step closer to the market. The first commercial products containing nootkatone could reach the market by 2022.

As rates of tick and insect-borne disease increase in the United States and worldwide, use of nootkatone could represent a new opportunity to reverse those trends. Its familiar scent and natural origins could represent an acceptable alternative to synthetic chemicals like DEET for consumers, especially those in at-risk regions of the world.

Panella NA, Dolan MC, Karchesy JJ, Xiong Y, Peralta-Cruz J, Khasawneh M, Montenieri JA, Maupin GO. Use of novel compounds for pest control: insecticidal and acaricidal activity of essential oil components from heartwood of Alaska yellow cedar. Journal of medical entomology. 2005 May;42(3):352-8.

NIH Boasts Five National Academy of Inventors Fellows

Richelle Holnick, OTT

The National Academy of Inventors (NAI) selects a group of fellows each year from research universities, governmental and non-profit research institutes worldwide. The NAI is a member organization made up of over 4,000 Inventor Members and Fellows spanning more than 250 institutes worldwide, including NIH. Its purpose is to encourage inventors with patents issued from the United States Patent and Trademark Office (USPTO), enhance the visibility of technology innovation, and help to translate the inventions of its members to the benefit of society. Since NAI's beginnings in 2010, NIH has had five different employees become NAI fellows; Warren J. Leonard, George N. Pavlakis, Kenner C. Rice, John T. Schiller, and Thomas A. Waldmann.

Warren J. Leonard, M.D. leads the Laboratory of Molecular Immunology under the National Heart, Lung, Blood Institute (NHLBI). This laboratory focuses on "the biology, signaling, and molecular regulation of a key family of these cytokines, the interleukins, with studies ranging from basic molecular mechanisms to human disease." His lab cloned the IL-21 receptor and performed ground-breaking work on the IL-21 and the thymic stromal lymphopoietin cytokine systems. Dr. Leonard was an NAI Fellow in 2018.

George N. Pavlakis M.D., Ph.D. is the head of the Human Retrovirus section of the Vaccine Branch of the National Cancer Institute (NCI). His work focuses on developing and testing vaccines and immunotherapies for AIDS and cancer. The Human Retrovirus Section's current initiatives center around DNA vaccine development. There are currently multiple technologies in this area available for licensing or collaboration that Dr. Pavlakis invented. Dr. Pavlakis was an NAI Fellow in 2016.

Kenner C. Rice, Ph.D. is the Chief of the Drug Design and Synthesis Section within the National Institute on Drug Abuse (NIDA). His work focuses on "the elucidation of the structure and function of neurotransmitter systems in the mammalian central nervous system (CNS) in normal, drug-altered, and pathological states and the molecular mechanism of action of CNS active drugs." as described by NIDA's website. Dr. Rice was a NAI Fellow in 2017.

John T. Schiller, Ph.D. is the Deputy Chief of the Laboratory of Cellular Oncology and the head of the Neoplastic Disease Section within NCI. His current work focuses on the basic aspects of the papillomavirus life cycle, second-generation HPV vaccines, and HPV capsid-based vaccines against other infection agents and cancers. He has received many awards for his contributions in these areas. Dr. Schiller was a NAI fellow in 2016.

Thomas A. Waldmann, M.D. is Chief Emeritus of the Lymphoid Malignancies Branch and is head of the Cytokine Immunology and Immunotherapy Section within NCI. He co-discovered IL-15 and performed the first in-human clinical trial with this agent in patients with malignancy. He defined the IL-2 receptor alpha and beta subunits using the daclizumab antibody he discovered. He also defined molecular abnormalities of the common gamma cytokine, Jak/Stat signaling pathway in HTLV-1 associated adult T-cell lymphoma and translated the discovery with a trial of a Jak inhibitor in patients with this disorder. Dr.Waldmann was a NAI Fellow in 2017.

As of 2020, there are 1,060 Fellows that represent over 250 renowned universities and governmental and non-profit research institutes worldwide. The NAI Fellows are extremely accomplished individuals who together hold more than 38,000 U.S. patents, have generated over 13,000 licensed technologies, and created over $2.2 trillion in revenue based on their discoveries. We are pleased to highlight the five NIH scientists who have had the honor of being a NAI fellow. As a new institutional member of NAI, NIH will now be able to nominate its scientists directly. New NIH nominations will be possible via institute technology transfer offices in a process to be announced soon. We look forward to having future nominations for fellows from the NIH pool of talent. More information on the NAI Fellow program is available on their website.

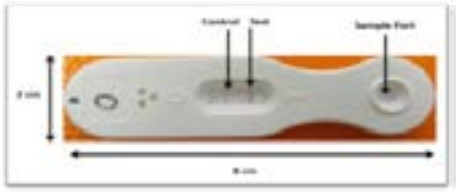
The CDC Team and CDC Technology Portfolio at NIAID

Karen T. Surabian, NIAID

Did you know that the Centers for Disease Control and Prevention (CDC) has the third largest technology portfolio at HHS? This portfolio is managed by the CDC Team at NIAID's Technology Transfer and Intellectual Property Office (TTIPO), through an Inter-Agency Agreement (IAA) with CDC. The CDC Team, which acts as a service center for the CDC, maintains CDC's dynamic technology portfolio, negotiates license agreements, and monitors licenses once they have been executed.

The CDC Team is part of Branch C, one of three transactional branches at TTIPO. The team includes Dr. Jeremiah Mitzelfelt who serves as the Acting Team Lead and Senior Technology Transfer and Patent Specialist, Ms. Karen Surabian who is a Senior Technology Transfer and Patent Specialist, Dr. Patrick McCue who is the Monitoring and Enforcement Officer, and Dr. Ted Mattes who is an ORISE Fellow. The Branch also receives support from a dedicated Paralegal, Inez Fields. The CDC Team works closely with the CDC Office of Technology and Innovation in Atlanta, Georgia and visits these colleagues and CDC investigators frequently, except this year. This enables us to maintain effective and productive lines of communication to achieve CDC's and NIAID's shared public health goals.

The CDC technology portfolio has a wide variety of technologies, including in vitro diagnostic assays, therapeutics, vaccines, drug delivery devices, infectious disease surveillance, and many other exciting applications. The portfolio also includes technologies developed by the National Institute for Occupational Safety and Health (NIOSH), such as sensors, safety ladders, and safety software, to ensure the occupational safety of healthcare workers, miners, and other professions where there are physical hazards. A few of the successful products that have come from this portfolio are described below.



Credit: CDC?NIOSH

BD™ HD Check

CDC scientists at NIOSH developed a technology that rapidly detects commonly used chemotherapy drugs, which was exclusively licensed and commercialized by Becton, Dickinson, and Company (BD). The resulting tool, the BD™ HD Check system, can analyze samples and provide reliable results in less than 10 minutes, a significant advance over previously existing technologies for detection of drug contamination. More information about the BD™ HD Check system on the market, including brochures are available on BD's website. This technology received a 2019 National "Excellence in Technology Transfer Award" from the Federal Laboratory Consortium (FLC) for Technology Transfer, as well as the 2019 FLC Southeast Regional, "Excellence in Technology Transfer Project of the Year" award.

Catchmaster Ovi-Catch® Mosquito Trap

CDC scientists at the National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) developed an autocidal gravid ovitrap (AGO trap) for mosquito population control and monitoring.The AGO trap consists of a plastic bucket and a lid containing a capture chamber and a glue board to trap adult mosquitoes. This trap does not require power or pesticides, making it safe

Credit: CDC NCEZID Puerto Rico lab

for use around children, pets, and livestock. The trap stays effective for at least two months without maintenance, is economical to manufacture, can be provided at low cost, and can be used over multiple years, making it ideal for use in low-resource areas. Atlantic Paste and Glue (AP&G) licensed CDC's technology to sell these AGO traps to pest management professionals, consumers, and property owners for control of mosquito populations. AP&G has assisted in mosquito education and management, donated these traps during the Zika outbreak in Florida, and donated to a study in the Philippines. This technology received an honorable mention from the USPTO's "Patents for Humanity" program and has been featured in many news articles, including USA Today, Miami Herald, and NBC News.

Applied Biosystems HIV-1 Genotyping Kit

CDC scientists at the Center for Global Health (CGH) developed a low-cost technology to rapidly detect HIV-1 drug resistance in plasma and dried blood spot (DBS) samples with 95.8% genotyping sensitivity. Thermo Fisher Scientific Inc. licensed the technology and developed an HIV-1 Genotyping Kit under its Applied Biosystems brand. This kit provides a cost-effective assay, scalable workflow, easy-to-read sequencing results, and robust test performance, and removes a huge barrier for resource-poor areas where HIV drug resistance surveillance and monitoring are recommended, but where storage transportation of samples from remote locations remains a barrier to testing. This technology received a 2020 National "Excellence in Technology Transfer Award" from the Federal Laboratory Consortium (FLC) for Technology Transfer.

Credit: Thermo Fisher Scientific

Rabishield®

Rabies virus results in tens of thousands of deaths each year. Administration of rabies immunoglobulin (RIG) is a critical component of treatment but limited supplies and prohibitive cost means that only one to ten percent of patients in need actually receive it. Rabishield®, the first approved antibody-based, post-exposure prophylactic for rabies, was developed by the Serum Institute of India using a patented monoclonal antibody technology co-owned by CDC and Mass Biologics. It is a recombinant product and offers passive immunization against rabies and is active against all serotypes found in India; this product is currently being distributed throughout India.

Credit: Serum

Pneumosil®

Serum Institute of India has also recently received marketing authorization in India for its new pneumococcal conjugate vaccine (PCV), Pneumosil®; it has also been pre-qualified by World Health Organization. This vaccine was developed as a more affordable alternative to existing pneumococcal vaccines, but with equivalent efficacy; at $2 per dose, it is 30% less expensive than other vaccines. Broad access to a pneumococcal vaccine is critical, because each year nearly 400,000 children worldwide die from this disease, primarily in Africa in Asia, so a low-cost vaccine is predicted to have a dramatic, long-term impact. More information may be found here, here, and here.

Credit: Serum

Stay tuned for more interesting technologies and stories from the CDC portfolio!

Patent Legal Services System Changes

Tim Leahy, OTT

With the transition to the new Patent Legal Services (PLS) contract, there have been multiple data updates, rule changes and code changes to NIH TechTracS and the Law Firm Portal (LFP). We wanted to inform the community about all of the changes so everyone understands the complexities and effort associated with this transition. A special thanks to the PLS Working Group, Jill Roering, Stephen Finley, Bill Bigelow (Publicis Sapient) and Kris Peacock (KSS) for their hard work and dedication during this transition.

Some changes may have appeared to be easy, but all changes required multiple steps. A good example of this is the process it took to establish the new law firm acronyms. In order to do so, Kris confirmed the fields limitation in size and format, followed by Jill and Bill coming up with a suggested format. This was then discussed with the PLS Working Group, who checked with their TT folks and the IC acquisition groups. Discussions went back and forth via email until approved. Once approved, this information was communicated to the incumbent law firms, OIR, and OLAO. Afterwards, the change was introduced into the NIH TechTracS Test Environment, tested, and then introduced into the NIH TechTracS Production Environment. This change was then communicated to the NIH Technology Transfer Community. This simple change took four weeks.

All system changes required:

- Stakeholder engagement with multiple meetings to come up with individual solutions for over 20 main issues.
- Drafting documentation and occasionally generating TechTracS reports to validate the solution with the stakeholders
- Making changes in the NIH TechTracS Test Environment. Testing, sometimes failing, then re-introducing to Test, then testing again.
- Making the changes in the NIH TechTracS Production Environment.

Another factor which made all of these system changes especially challenging was due to the number and variety of stakeholders all with slightly different objectives. A list of the PLS Stakeholders can be found in Figure 1.

A list of the changes to NIH TechTracS and the LFP can be found on the next page.

PLS Stakeholders

- 8 IC tech transfer offices implement new acquisition processes
- Over 80 LPM/TTM/TTPSs
- 24 new law firm contracts
- 14 law firms (5 incumbent firms & 9 new firms)
- 350 new law firm personnel
- OIR
- OLAO

Changes to NIH TechTracS and Law Firm Portal (LFP)

Prosecution Contract/PLS Administration

- Created new law firm work categories for MEC and SOFT
- Established 24 new law firm contract "profiles", listing each firm's labor rates, contract dates, and personnel
- Updated 24 new law firm contract profiles with appropriate Competitive Bid Points of Contact
- Modified TechTracS to allow for two law firm profiles and contract types to run in parallel/simultaneously
- Created new law firm acronyms for the new master contract
- Upon request, updated multiple IC's patent dockets from the old contract to the new. Example, batch updates from CCL-CHM to 20CCL-CHM, KS-CHM to 20KS-CHM, LVM-BIO to 20LVM-CHM, etc.
- After establishing the new fields, added Requisition and NBS Order Numbers for NCI task orders

Overall System

- Added two new Boolean fields to the [Prosecution_Contract] table
- Updated business rule so LFP Status will be updated to "07 – Active" when marked approved any time a Requisition Number is populated
- Adjusted rule to Competitive Bid record generation so both the old and new acquisition processes can run in parallel
- Created a new Action Type in order to assist in generating RFQs for the law firms to send inactive law firm files (in electronic format) to the NIH
- Created new action types to account for the NIAID RTOP process; made visible only to NIAID users
- Added Requisition Number and NBS Order Number fields to [Prosecution_Contract] table; made only visible to NCI users
- Developed business rules to populate the Requisition Number and NBS Order Numbers into NCI and client IC Action Work Order records
- Developed business rule to attach an "-NCI" tag to NCI and client IC Work Order numbers
- Changed the [Action_Work_Order]WO_Number field size from Alpha 15 to Alpha 25
- Changed the [Competitive_Bid]CBP_RFQ_No field size from Alpha 15 to Alpha 25
- Changed the [Patent]Technology_Category field size from Alpha 3 to Alpha 4
- Added two new values, Mechanical Engineering and Software, to the [Patent]Technology Category drop-down
- Added a new field to the [Invention] table to capture the IC Competitive Bid Coordinator

Law Firm Portal

- Updated the Law Firm Portal training documents
- Provided two training sessions for the new law firms for almost 100 users
- Established new end user accounts for 14 new Law Firms; a total of 77 new users
- Collected Law Firm Portal contacts to be included in system notifications

- Updated TechTracS/Law Firm Portal alerts providing guidance on the new acquisition process and removing OIR language
- Updated Law Firm Portal site search capabilities to include new technology categories
-

TORFQ Process

- Updated TORFQ language to reflect new acquisition process
- Created new PAN document for NCI specific task orders
- Developed alert to track PAN approval
- Updated the CB-RFQ form to accommodate for new PLS master organizational structure

Competitive Bid Process

- Established new permissions group for IC Competitive Bid Coordinator access
- Updated Competitive Bid notification language
- Updated notification functionality based on new CB Coordinator field/role
- Modified multiple TechTracS templates related to the competitive bid process

PLS Changes

NIH Librarian's T2 Tip Of The Month -- IEEE Xplore

Josh Duberman, NIH Library

For this month's T2 tip from your NIH Library, let's look at IEEE Xplore, a great resource for medical devices, software and engineering information. IEEE Xplore has full text journal articles, conference proceedings, transactions and standards, from IEEE/IET (Institute of Electrical and Electronics Engineers and the Institution of Engineering and Technology). It has over 5M full text documents covering over 4000 publication titles, and is available from the NIH Library.
To access this resource:

- go to 'Databases'
- search 'IEEE'
- go to https://ieeexplore.ieee.org/Xplore/home.jsp.

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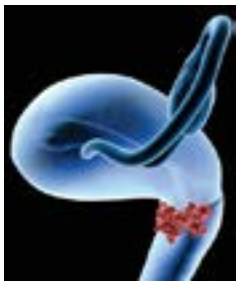
- Browse more than 4,000 publication titles alphabetically or search by title keyword
- Context-sensitive Help features
- Multimedia tied to relevant articles
- Daily updates with approximately 20,000 new articles added each month

If you have any questions, ask me or the NIH Library.

NIH Brings Home Four Awards from FLC National Meeting

Richelle Holnick, OTT

Each year the Federal Laboratory Consortium (FLC) awards outstanding federal technology transfer (T2) efforts. The FLC is a nationwide network of over 300 federal laboratories, agencies, and research centers. Their mission is to help facilitate federal T2 among members in order to create social and economic impacts with their new technologies. For the 2020 award season, the NIH brought home four different awards.



Credit: Istock/Raycat

The National Cancer Institute (NCI) received an Excellence in Technology Transfer Award for their collaboration with Iovance Biotherapeutics. Results from the ongoing clinical trial show that 44% of patients with advanced cervical cancer had a positive response to the new treatment. This personalized cancer therapy is providing hope to patients with advanced cervical cancer, showing a positive response rate that is up to 11 times higher than the response rates associated with conventional therapies.

NCI received a Technology Transfer Innovation Award for their T2 training and mentoring program for postdoctoral students. The Technology Transfer Ambassadors Program (TTAP) offers professional development in invention analysis, commercialization, and entrepreneurship. There was a slight restructuring to the curriculum in 2019 that introduced a new Technology Transfer Boot Camp which offers hands-on training sessions in the beginning of the program so that the ambassadors have some foundational skills that will be immediately applicable to their T2 training. NCI has found that the T2 training has increased internal engagement and made such an impact on the technology transfer efforts at NCI that the 2020 program is being offered across all of NIH.

The National Center for Biotechnology Information (NCBI) created the Pathogen Detection platform by using contributions from the FDA, CDC, USDA, and other global partners. This platform was designed to help identify the source of a food contamination during a foodborne disease outbreak. This database will provide information on outbreak causes and help to improve overall food safety. Their combined efforts on this project earned them an Interagency Partnership Award.

Credit: Istock/Raycat

The CDC won the Excellence in Technology Transfer Award for developing a low-cost technology that can rapidly detect HIV-1 drug resistance in plasma and dried blood spot samples. Thermo Fisher Scientific Inc. licensed and further developed this technology. The CDC Team at the National Institute of Allergy and Infectious Diseases (NIAID) Technology Transfer and Intellectual Property Office oversaw the licensing and patenting on CDC's behalf. The resulting HIV-1 Genotyping Kit is a cost-effective assay with robust test performance. This kit has been sold to 47 customers, including distributers in 27 countries.

Credit: Thermo Fisher Scientific

The last award won by NIH from the FLC this year was the Educational Institution and Federal Laboratory Partnership Award (Mid-Atlantic). This was awarded to the Foundation for Advanced Education in the Sciences "Advanced Studies in Technology Transfer Graduate School Certificate Program". The FAES is "a non-profit organization located at the NIH that provides advanced educational programs to promote the productivity and attractiveness of professional life at NIH." You can learn more about the types of courses offered on the FAES website.

The FLC and the NIH Technology Transfer Community express their gratitude to the members of the FLC Awards Committee for their efforts and time to helping the 2020 National Awards program so great. Special thanks goes out to Donna Bialozor, Sabarni Chatterjee, Steven Ferguson, Suzanne Frisbie, Ami Gadhia, Wade Green, Megan Irvin, Lisa Marianni, and David Yang.

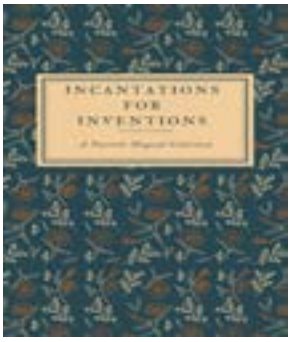
If you are interested in reading further about these awards or seeing the other winners, please refer to the FLC 2020 Award Winners web page. If you are interested in nominating for the 2021 award season, please do so via the FLC website before the end of October.

Patently Magical

Barry Buchbinder, NIAID

In the early days of biotech, there were very few patent lawyers/agents with backgrounds in molecular or cellular biology. Much of the drafting of biotech patents was done by people with backgrounds in chemistry. One might imagine that they saw biotech as having a magical aspect. Here's evidence that they did.

Go to this link. This is one of the first batch of patents claiming transgenic plant technology (Yes, this is where GMOs started.) The three patents in this batch were filed by Monsanto, which was then a chemical company.These patents disclosed selectable markers and their use. A text search for "incantation" finds the following paragraph.



If desired, appropriate incantations may be recited at any time during the performance of this invention. The effects of such incantations upon the methods, substances, or cells of this invention are not fully understood. However, such incantations are believed to perform an important role in enhancing the awareness and appreciation of scientific and other personnel for the importance of this invention and the steps involved therein. A wide variety of incantations are known to those skilled in the art; the choice of incantation(s) for use with any particular method, compound, or type of cell may be determined by personal preference. Such incantations may, if desired, be supplemented or replaced by a variety of other communicative methods and devices.

Evidently, this was put in a draft as a joke but they forgot to take it out when they made their priority filing (this was a decade before there were US provisionals). It was also left in the spec when they filed PCT. However, it was gone by the time it issued in the US.

One might ask, does this patent have problems under § 112 for the lack of specificity in the written description? I'd say that it doesn't. The specification says that the incantations are (a) optional ("If desired") and (b) "known to those skilled in the art".

What do you think?

Disappearing License Documents in SharePoint

Terry Goodell, Publicis Sapient

Are your license or royalty documents not showing up after they were uploaded to SharePoint? This is a common issue that you may encounter. If you have uploaded the document multiple times with no success and the document is not showing up on the list (Figure 1), there are a few actions that the user can take to troubleshoot this issue.

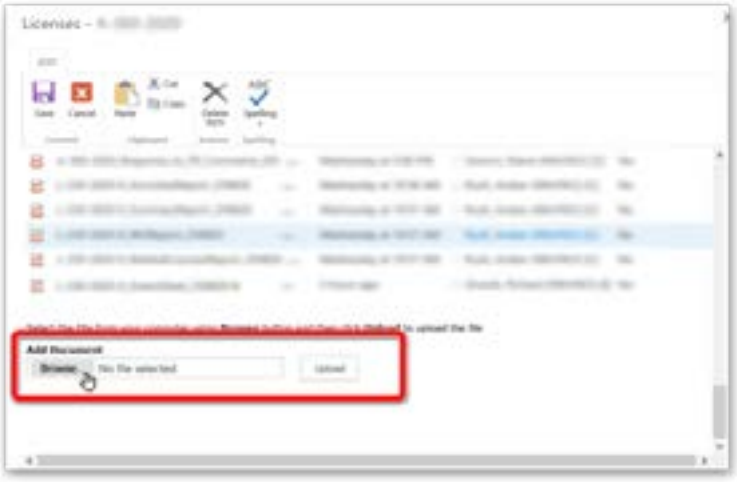


Figure 1

1. **Make sure the naming convention is correct**
   a. Licenses and Royalty Licenses/ Reports require that the naming convention is correct in order to be attached to the appropriate task. (Please contact the Technology Transfer Supervisors in your IC/Unit for more detail)

2. **Investigate if a License or Royalty License/Report has been deleted**
   b. When a License or Royalty Task is deleted, their associated files are kept in a library. If you upload a file with the same name as a pre-existing document, the system will overwrite the document. However, the original task has been deleted so it will not associate the existing file name with a new task.

3. **Investigate if a document has been uploaded without being attached to a task**
   c. In such cases, we might have created an "orphaned document" where it is not attached to any task (see Figure 2 below). In such cases, the document is not associated with a license and any attempt to upload a document with the same name will just overwrite the orphaned document.

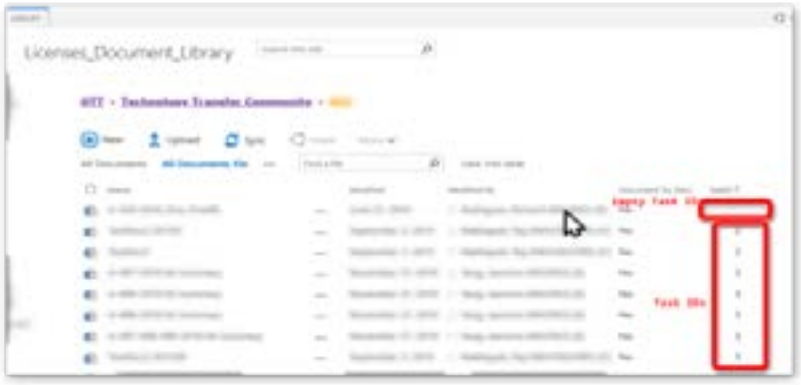


Figure 2

In all cases, you can create an incident report with NIH Helpdesk and assign it to ***OD-NIH-OTT SharePoint Support*** and we will assist you.

What Makes the VRC Special?

Richelle Holnick, OTT

"Improving global human health through the rigorous pursuit of effective vaccines for human diseases" is a noble goal at any time, but especially during our country's fight against the COVID-19 pandemic. This goal is what the Vaccine Research Center (VRC) at the NIH is founded upon. The Dale and Betty Bumpers VRC was established by President Clinton in order to develop an AIDS vaccine. In the decades since, the VRC has expanded its research to include high-burden diseases such as influenza and malaria, as well as biodefense threats and emerging infectious diseases including Ebola, Zika, and Coronaviruses, among many others.

VRC dedication, Left to Right: Betty Bumpers, President Clinton, Senator Bumpers

The VRC is named after Senator Dale Bumpers and his wife Betty. As First Lady of Arkansas, Betty is the one who sparked Bumpers' interest in vaccination as she initiated a system for childhood vaccinations that took Arkansas from being a state with one of the lowest immunization rates in the nation to being one of the highest. During his time on the Senate Appropriations Committee, Bumpers was a champion for increasing funding to improve and purchase vaccines for childhood diseases like measles, mumps, whooping cough, and polio. He was very passionate about immunization programs and was so successful he often helped Congress approve amounts above the Administration's requests. He was also an advocate for funds to fight HIV/AIDS, which ultimately helped to found the VRC at the NIH. Dale and Betty Bumpers are pictured here with President Clinton at the 1999 dedication of the Dale and Betty Bumpers VRC Building.

The VRC is an intramural research arm of the National Institute of Allergy and Infectious Diseases (NIAID). A unique feature of the VRC is that it is led by a wide variety of specialists including specialists from the disciplines of immunology, virology, structural biology, and bioengineering. Having such a varied team matched with the capability to conduct human clinical trials, the VRC is able to accelerate the process of scientific discovery in order to develop prototype vaccines and biologics to protect against infectious diseases.

Throughout its relatively short history, the VRC has produced and published many discoveries that have been field-altering. Since the VRC is able to shift resources quickly within its integrated research program, it has been able to shorten the time needed between the identification of a pathogen's genetic sequence and the clinical testing of an experimental vaccine when there is an unexpected disease outbreak.

NIH National Institute of Allergy and Infectious Diseases

2020 NCI and Frederick National Laboratory Technology Showcase

Michele Newton, NCI

The NCI Technology Transfer Center, in partnership with the Frederick National Laboratory for Cancer Research, held the virtual 2020 Technology Showcase on September 9th. The annual event, now in its fourth year, encouraged licensing and collaboration of select NCI and FNL inventions. The 2020 event agenda included:

- Technology pitches from nine NCI and FNL inventors.
- Keynote presentations by Kelly Schulz, Secretary, Maryland Department of Commerce and Howard Bland, Senior Director, Kite Pharma.
- Four panel sessions focused on technology commercialization including speakers from TTC, the FNL Partnership Development Office, NCI SBIR, TEDCO (Technology Development Corporation of Maryland) and more.
- A virtual poster session highlighting 11 NIH technologies presented by members of the NCI Technology Transfer Ambassadors Program. Those participating in this effort prepared quick video pitches and posters. These video pitches can be viewed on the 2020 Technology Showcase event page, including this one delivered by NCI TTC's Mukta Nag, Ph.D., a TTAP Senior Ambassador.

The 2020 Technology Showcase attracted >400 registrants from over a dozen countries. Companies, entrepreneurs, innovators and those interested in biotechnology development attended. A hybrid live-virtual event is being planned for June 2021. Organizaers of the event will receive a 2020 NCI Director's Award.

Click this image to watch the quick pitch video.

Enterprise Technology Transfer System Update

Tim Leahy, OTT

As the ETT team continues data migration, training, and system validation efforts, we are simultaneously working on preparing the ETT Production Environment and implementing the required security controls for the system. Due to some delays in implementing the network connection to NIH and an expanded level of effort related to implementation of security controls, the ETT Governance Board has decided to delay the ETT system launch, and use the extra time for additional training and familiarization for the user community. We will no longer be launching in Production on October 6th, but we are now planning to launch no earlier than January 1st. We will continue to work at full-speed to get the Stage Environment fully-configured with data from all ICs as quickly as possible.

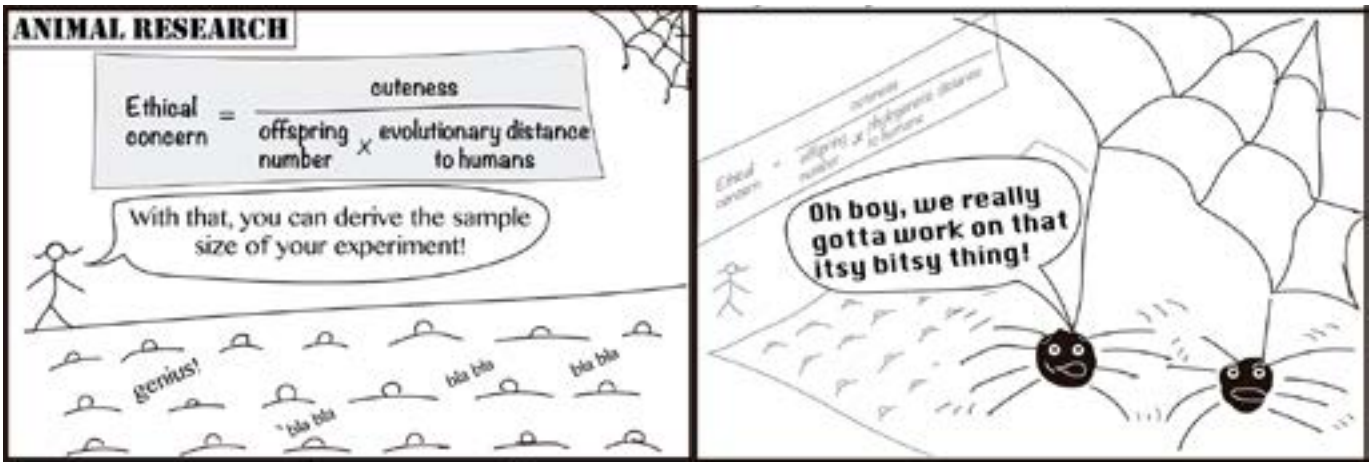
At this moment, we are not setting an exact date for launch. Instead, we will wait until the Stage environment is fully-configured and then establish a timeline that allows for substantial user orientation with the new system. Extending the system go-live date will enable the following:

- Push back of module-specific trainings on agreements and CRADAs until after the IC data migration. This will allow for users to familiarize themselves with post-migration IC data in the Stage Environment for an extended period of time.
- Change of training approach to include IC-led interactive trainings, with ETT support, allowing for deep dives into particular IC processes & daily activities.
- Ability to practice performing business functions within the ETT Stage Environment and existing IC systems, simultaneously.

We are looking forward to making the launch of ETT as smooth as possible, and will continue to update the community. Should you have any questions as we rollout our new training and data migration plans, do not hesitate to reach out by using the newly created distribution list: ETT_Support@mail.nih.gov.

Tech Toon

Comic by Guilherme Gainett, UW-Madison, Cellular and Molecular Biology Grad Student



Keep Up with TT on Twitter

NCI Tech Transfer
@NCITechTransfer

NHLBI Tech Transfer
@NHLBI_TTransfer

NIH Office of Tech Transfer
@NIH_OTT

Call for Cartoons

The T2 newsletter is on the hunt for fresh cartoons or comics! If you are interested in creating a tech transfer themed 'tech toon' please reach out. We would love to feature work from our community!

EMAIL RICHELLE.HOLNICK@NIH.GOV

Comings and Goings

Dr. Hiba Alsaffar has become a TTC permanent staff member. She received her Ph.D. in Biomedical Sciences Albany Medical College, Department of Molecular and Cellular Physiology, Albany, NY. She joined the NCI TTC since 2019 as a CRTA fellow has been involved in providing technology transfer services for NCI, NEI and NIDA, three of the ten institutes served by the NCI TTC.

Dr. Merissa Baxter has become a TTC permanent staff member. She earned her Ph.D. in Pharmaceutical Sciences from the University of South Carolina. Dr. Baxter has been a TTC CRTA fellow since 2018 and has been involved in providing technology transfer services for three of TTC's client institutes, NIA, NEI, NICHD. Before joining TTC, she was a Biologist at NCI Frederick and also worked with NIA's newly established Aging Research Biorepository, a NIA extramural program.

Carnetta Benjamin is has joined the NCI TTC as a paralegal specializing in Intellectual Property law. She has a B.A. in Business Management and an M.S. in Organizational Leadership. For more than 25 years, Carnetta worked as an IP manager, supervising and training patent prosecution specialists and paralegals, and has prepared, filed and managed thousands of U.S. patent applications and prosecution matters before the USPTO. She and her husband have 5 adult children. Carnetta enjoys reading, writing and spending time with family and friends.

Comings and Goings

Dr. Rebecca Erwin-Cohen is the new Technology Transfer and Patent Specialist for the NCATS Office of Strategic Alliences. Dr. Erwin-Cohen was a Postdoctoral Fellow in the Technology Transfer Center (TTC), NCI at Frederick, MD, where her work spanned transactional agreements (e.g., MTAs, CDAs, licensing and collaboration agreements) patentability and commercial viability of early stage inventions, invention marketing efforts to attract prospective commercialization partners, and serving as a Team Lead with the NCI Technology Transfer Ambassador Program (TTAP).

Ann Hammersla has retired from her position as Director, Division of Extramural Inventions and Research Resources -- NIH's extramural tech transfer office. Ann's career as an attorney, general counsel and tech transfer officer included activities at a variety of institutions, including the University of Illinois. MIT as well as other NIH service as Director of Policy at OTT. In 2002 Ann also served as President of the Association of University Technology Managers (AUTM). Our best wishes to Ann for her retirement!

Simmone Henry has been appointed as a Royalty Coordinator for OTT. Simmone has been with the NIH community since 2005. In January 2017 Simmone became a member of the Royalties Administration Unit (RAU). within the NIH Office of Technology Transfer (OTT). Simmone is currently pursuing her MBA with a specialization in Finance, which complements her work as a Royalties Coordinator. As a Royalties Coordinator, Simmone is responsible for providing administrative and technical coordination of the NIH royalties program and the reimbursement of patent prosecution costs from licensees.

Comings and Goings

Jasmine Kalsi has joined the FDA as a Pre-Marketing Application Reviewer after a year as a TTIPO fellow. Prior to joining NIAID, she was part of the CARB-X project in the Experimental Therapeutics (ET) department of the Walter Reed Army Institute of Research (WRAIR). Jasmine has several years of industry experience in small-molecule CMC, working in roles such as process development and scale-up, structural-guided/medicinal chemistry, formulations and analytical method development. Jasmine holds a BS in Molecular Synthesis, and a MS in Chemistry from the University of California, San Diego (UCSD).

Dr. Charlotte McGuinness has retired from her position as Service Center Unit Coordinator at TTC following more than 18 years of tech transfer work at NCI. A Ph.D. neuroscientist and patent attorney by training, her career also encompassed jobs at Lederle, Shire Pharmaceuticals and Venable. An avid supporter of art education, she will be continuing her work with Youth Art For Healing, a group that brings art created by youth into healthcare environments. Our best wishes also to Charlotte for her retirement!

Cecilia Pazman, **Ph.D**. re-joins TTIPO from NHLBI, OTTAD, where she served as the Alternate Technology Development Coordinator and was the Acting Director in 2019. In her role as Acting Director she led and directed technology transfer, intellectual property, patenting and licensing related functions for NHLBI and its six service institutes. She brings to TTIPO broad-ranging experience spanning research at NIH, academia and technology transfer at the NIH.

Comings and Goings

Elizabeth Pitts, Ph.D. joined TTIPO as a fellow in 2020. Prior to joining TTIPO, Elizabeth was a postdoctoral fellow in the laboratory of Dr. Mark Ferris at Wake Forest School of Medicine, where her research focused on the long-term behavioral and biochemical effects of adolescent nicotine exposure. While at Wake Forest, she also served as a business development intern for Wake Forest Innovations working on technology evaluation and marketing. Elizabeth obtained her

Sangeetha Raghavan recently joined NHGRI as a Senior Licensing and Patenting Manager. She is a technology transfer professional with experience assessing technologies for their patentability and commercial viability, negotiating a variety of intellectual property agreements, and marketing technologies to facilitate the transfer of such technologies from the lab to the marketplace. Her diverse educational background includes a graduate degree in Cell Biology and Molecular Genetics and an MBA, both from the University of Maryland system. Ms. Raghavan is also a registered patent agent with the USPTO.

Annette Sante recently joined NHGRI's Technology Transfer Office (TTO) as a management analyst. She worked at NHGRI for 10 years (first at NISC, then at the Office of the Scientific Director and then at the Office of the Director). In 2015 she became a full-time real estate agent with Redfin. After a successful career in the real estate world she decided to jump back to NIH reclaiming a much more desirable work-life balance. Annette is a native to Montgomery County, Maryland and lives in Rockville. She likes to tour historic homes and is a member of Peerless Rockville.

Comings and Goings

Joel Snyderman is the new Acting Director, Division of Extramural Inventions and Technology Resources. Prior to this appointment he was a Systems Policy Analyst in the Systems Policy Branch. He joined OPERA in 2010 as an Assistant Grants Compliance Officer, after working for the NIH Office of Management Assessment, where he investigated allegations of grant fraud, waste, and abuse.

Xania Steele has joined NCI TTC as a paralegal. She obtained a B.A. in Political Science in Raleigh, North Carolina and stayed an additional year in the area to complete the Paralegal Studies program. For 8 years she has held positions as Intellectual Properties Paralegal, U.S. Patent Prosecution Paralegal and Legal Assistant and said that she looks forward to learning all that this new position in NCI TTC has to offer. She says that,"when I'm not working you can usually find me spending time with my family (my son keeps me busy), playing sports, or eating something delicious (probably lemon Oreos). I look forward to working with you all!"

Dawn Taylor-Mulneix, Ph.D. has joined the Technology Transfer and Intellectual Property Office at NIAID. She received her Ph.D. in Molecular Biology and Microbiology from the University of Pittsburgh School of Medicine. After completing her Ph.D., she continued her research and work with infectious diseases and began a post-doc at Pennsylvania State University. After moving with that lab to the University of Georgia, Dawn volunteered her time with the Strategic Alliances and Business Development for Biomedical Sciences Unit. Dawn joined the NIH in the fall of 2019 as a Fellow with the NCI Technology Transfer Center.