THE UNIVERSITY OF MISSOURI ST. LOUIS

Innovation GUIDE

UMSL Innovation, intellectual property, technology transfer, and commercialization

UMSL | IP Management and Commercialization

Protecting and Commercializing UMSL Innovations

Our mission at the **Office of IP Management & Commercialization**, UMSL's tech transfer office (TTO), is to bring the benefits of academic discovery to the world, specifically where a business entity is best poised to translate science and creative works to practice. That starts with you, our innovators, whose research and creative work is creating hope for humanity.

This Innovator's Guide offers an overview of IP and the technology transfer process, along with the services we offer under the purview of the Vice Chancellor for Research and Economic & Community Development at UMSL. More information and resources can be found on our **web site**.

Please contact us for assistance and we look forward to partnering with you.

Mike Seper | UMSLtechtransfer@umsl.edu| 346 Woods Hall

Content

Overview

INTELLECTUAL PROPERTY & TECHNOLOGY TRANSFER AT THE UNIVERSITY OF MISSOURI–ST. LOUIS

The **Office of IP Management & Commercialization** is UMSL's technology transfer office, sometimes referred to as the "TTO." But don't let the "tech" in tech transfer fool you — we manage IP of all forms. This service unit is composed of and supported by specialists in licensing, business development, and legal matters with experience in transferring IP to the marketplace. In support of the University's economic development mission, the TTO serves as the focal point for entrepreneurship, economic development, and technology transfer, actively bringing together the organizations, resources and processes to move research results into the marketplace.

What is intellectual property?

Intellectual property (IP) describes creations of the mind. In the university context, this includes inventions; literary and artistic works; designs; and symbols, names, and images used in commerce. IP is protected by law, enabling innovators to benefit from their work while balancing the interests of the public as well in an effort to foster an ecosystem where innovation flourishes.

What is technology transfer?

Technology transfer is a key component in the economic development mission of the University of Missouri and complements its research mission. It is the movement of knowledge, discoveries, and creative works from the research setting to the public to benefit society. This can occur in many ways, but, for the purposes of this guide, tech transfer refers to the formal licensing of IP to a third party for commercialization or a defined use of the IP. The UMSL TTO protects University IP using patents, copyrights, and trademarks, and then works to transfer it through licensing to bring new, useful products and services to those who can benefit from them.

The University works to maximize the commercial and societal impact of research results by seeking the most effective dissemination. There are many mechanisms for this, including tech transfer.

Why would a researcher want to engage in tech transfer?

The reasons are unique to each researcher.

- Making a positive impact on society
- Reaching additional professional achievement
- Achieving recognition and financial return
- Generating additional lab or departmental funding
- Meeting the obligations of a research contract
- Attracting research sponsors
- Creating educational opportunities for students
- Linking students to future job opportunities

Why do universities engage in technology transfer?

Academic tech transfer is key to:

- Bringing the next life-changing inventions and pivotal copyrightable innovations to those who need them
- Developing academic-corporate alliances on ground-breaking research projects
- Forming, incubating, and positioning for success the start-up companies launched from academic research
- Supporting regional economic growth and new job creation
- Attracting and retaining talented faculty, staff and students
- Maintaining compliance with federal law

The tech transfer process.

Typically, the following steps make up the process. Depending on the innovation, some steps may be taken in parallel or in different order.

- **Disclosure Evaluation:** analyzing new technologies and creative works to assess among other things IP ownership; any contractual rights and obligations may impact our ability to protect or commercialize the work; and any potential bars to patenting including previous or upcoming public disclosures.
- **IP Analysis:** for inventions, analyzing novelty and identifying any issues that may impact the patent decision; conducting a preliminary patentability analysis to identify possible prior art. For patentable inventions, we also look at whether the technology is a concept or a complete invention, which affects if/when a patent application is filed.
- **Market Analysis:** comprehensively reviewing the IP's potential market(s); its potential applications and advantages/ disadvantages over existing products or services in the market; and market size and the ability to capture market share. Additional applications for the IP may be discovered during this process. The goal is to determine market strength and whether IP protection would likely result in a licensed, commercial product.
- **Forming Development and Commercialization Strategies** such as marketing and licensing to existing private-sector entities or new start-up companies formed around the IP.
- **Protecting intellectual Property (IP)** through patents, registered copyrights, and/or trademarks, and service marks.
- **Marketing to Potential Licensees** by leveraging various resources and networks, importantly including the innovator's contacts. Interest from a commercial partner is particularly important in the decision to invest in filing a patent application.

- **Option/License Negotiations.** If a company or other entity expresses interest in taking an option to license or enter into a license agreement, the campus TTO will negotiate terms of such agreement. Innovators will be kept updated with an opportunity to provide input as the negotiations proceed.
- **Receipt and Distribution of Revenues.** In accordance with the university's collected rules (100.020, 100.030), a University employee innovator ("inventor" on a patent or "author" on a copyright) may be entitled to share in up to 33 1/3% of net revenues the University receives through the transfer of rights in IP. See **page 13** for more information and the UM Collected Rules and Regulations for the complete distribution policy. *

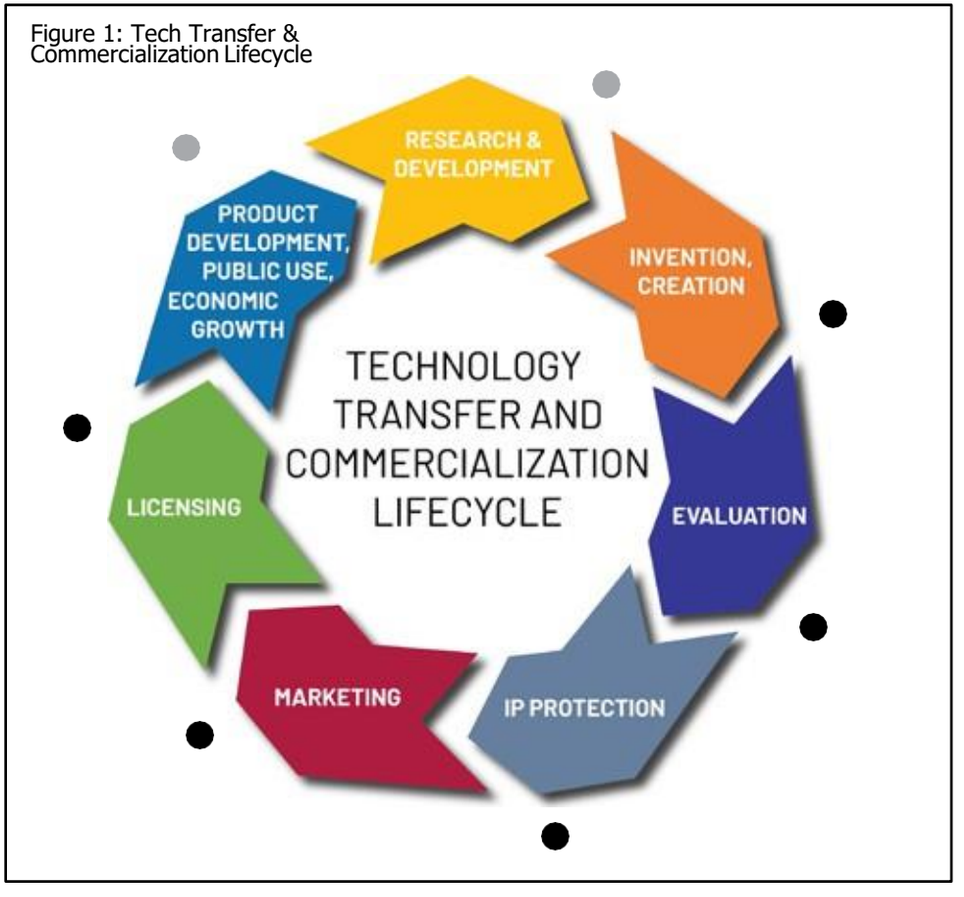
The process of protecting an innovation and finding the right licensing partner can take months or even years to complete and depends on many factors including the innovation's development stage, the market, competing products, and the resources and willingness of both licensees and inventors.

How can I help with this process?

If you believe you have created or discovered something unique or something with research or commercial value, contact the UMSL TTO at **UMSLtechtransfer@umsl.edu**

Make sure to complete and submit the appropriate **Innovation Disclosure Form (IDF)** before any **public disclosure** of an invention or dissemination of copyrightable materials. Note that an IDF is not a patent application, but rather the first step in protecting an invention.

Figure 1: Tech Transfer & Commercialization Lifecycle



MORE INFORMATION & RESOURCES

- **UM Collected Rules & Regs: 100.020 Invention and Patent Regulations**
- **UM Collected Rules & Regs: 100.030 Copyright Regulations**
- **UMSL TTO**
- **AUTM: About Tech Transfer**
- **AUTM: Better World Project** *(success stories that help illustrate the impacts of research commercialization on the world)*
- **Questions? Contact Us**

* This guide is intended to be a summary of the rules, regulations and policies of the University of Missouri System and does not supplant or alter any of the terms of those rules regulations and policies.

PUBLIC DISCLOSURES

Can I publish my research results still protect the commercial value of patentable IP?

YES!

Just contact us BEFORE you make the public disclosure of your invention. Ideally, you would submit your innovation disclosure form to the TTO at least one month prior to the planned date of disclosure.

So, what is such a disclosure that could jeopardize patent rights? A disclosure is any form of non-confidential communication (some examples journal articles, include academic posters, conference presentations, website articles, and book chapters). **See p. 15 for more information.** We will work to protect the IP prior to the planned public disclosure if possible.

If you've already made a disclosure, but not longer than one year prior, contact us as soon as possible. While we would have already lost most foreign patent rights, there may still be the possibility of a US patent depending on the date of public disclosure.

A university employee submitting an innovation disclosure form to the University is not a public disclosure.

How does the UMSL TTO work with researchers and innovators?

Contact the TTO early — we'll work with you to identify the various strategic options and pathways that will best leverage the commercial potential of your research discovery, invention or creative work.

Staff in the UMSL Office of IP Administration & Commercialization are trained to assist innovators with questions related to marketability, funding sources, commercial partners, patenting and other protection methods, new business startup considerations, University policies and procedures, license and other agreements, and much more.

Our team approach provides researchers with an assigned licensing specialist supported by internal legal assistance, and, if a new business startup is being considered, business development resources as well. At a minimum, we need your input at various stages through the IP protection and commercialization processes (see more about innovator roles on page 03); beyond that, we want you to be as actively involved as meets your interest.

If your innovation is a **new product or process** (e.g., a therapeutic compound, computational method, medical device, chemical process, etc.), we can pursue patent protection that prevents others from making and using your invention.

If your innovation is an **original work of expression** (e.g., model curricula, training program or videos, computer source code, digital images, etc.), we can maintain and possibly register a copyright that prevents others from copying, distributing or creative dives of your work.

JUMP TO:
Patents
Copyrights & Trademarks

MORE INFORMATION & RESOURCES

- **UMSL TTO Web Site**
- **Innovation Disclosure Forms** **(links to all forms)**

What is the TTO's role in technology transfer?

The UMSL Office of IP Management & Commercialization (the campus "TTO") is the university division responsible for overseeing University owned intellectual property and technology transfer for the entire campus. We are here to:

- EVALUATE reported innovations (technologies, discoveries, creative works) and their optimal protection and commercialization strategies. Evaluation factors include protectability and marketability, relation to existing IP, market size, needed resources for further development, competition, and pre-existing rights in consultation with the inventors, patent attorneys, and industry partners.
- PROTECT intellectual property with patent, copyright or trademark filings
- MARKET innovations to identify third-party licensees
- NEGOTIATE option and license agreements
- DISTRIBUTE revenues
- SUPPORT faculty and staff regarding intellectual property — from industry connections and collaborations and assistance with grant application IP plans through commercialization, protecting creative works from unapproved modification or use, and providing resources for entrepreneurial ventures so that discoveries are brought to market

The UMSL TTO provides additional services including agreements related to research and other activities, recognition of campus innovators, IP generation programming, training, events, and more.

INNOVATOR'S ROLE

What is my role when I have an invention, copyrightable materials, or other creative work?

SUBMIT AN INNOVATION DISCLOSURE. Disclose your IP* to the University prior to publicly describing an invention or distributing your work outside the University.

Disclosure Forms | See CRR 100.020 | Questions? Email Us

REVIEW MARKETING MATERIALS, HELP IDENTIFY & ENGAGE WITH POTENTIAL LICENSEES. We will seek your help in reviewing non-confidential IP summaries used in marketing the IP, identifying potential licensees, responding to technical questions from interested companies and institutions, and participating in licensing discussions when appropriate.

RESPOND TO REQUESTS FROM OUR IP TEAM. If we decide to pursue protection for your innovation, you will play a critical role in providing information for and review of applications for patent, copyright and/or trademark. This is particularly crucial for patent application filing and prosecution.

KEEP US INFORMED

Share technology or other developments, upcoming publications, and interactions with companies regarding your innovation.

** Unless any of the four situations outlined in **CRR 100.030 A. 2.** apply, faculty retain copyright for certain IP developed in their roles as teachers and scholars. A few examples include materials such as books, articles, music and performance whether embodied in print, electronic format, or in other media. Please be sure to review the entirety of the UM Collected Rules and Regulations regarding University copyright regulations (**CRR 100.030**). Questions? **Contact us**.*

Patents

What is a patent?

A patent is a type of intellectual property that gives its owner the **legal right to exclude others from making, using, selling or importing an invention for a limited period of time** in exchange for publishing an enabling disclosure of the invention.

What are the three categories of patent applications?

1. UTILITY PATENTS

What do utility patents protect? Any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.

Process: A method, operation, or series of actions intended to achieve some end or result. *Examples: chemical compound production, pharmaceutical manufacturing, soap making.*

Machine: A device or apparatus consisting of fixed or moving parts that work together to form a function and produce a result. *Examples: hammer, engine, computer.*

Manufacture: A tangible item that is made or built by a human being (or by a machine), as distinguished from something that is a product of nature. *Examples: chair and tires.*

Composition of Matter: all compositions of two or more substances and all composite articles, whether they be the results of chemical union or mechanical mixture, or whether they be gases, fluids, powders or solids. This includes mixtures of ingredients, new chemical compounds, and genetically modified micro-organisms.

However, laws of nature, physical phenomena, and abstract ideas are not patentable (although a specific application of these can be).

Utility patents are granted for 20 years from the date of application (maintenance fees are required to keep the patent enforceable).

2. DESIGN PATENTS

What do design patents protect? The appearance, ornamental features of an article such as its shape, configuration, surface ornamentation, or coloration.

A design patent does not protect the article's structure or utilitarian features. Examples: the outward design of smart phones, the unique shape of a kitchen appliance, packaging, fonts, and even the Statue of Liberty.

Design patents last for 15 years from the date of grant (periodic maintenance fees are required).

3. PLANT PATENTS

What do plant patents protect? A new and distinct plant variety. A plant patent, along with the previously mentioned rights, gives the owner the right to prevent others from asexually reproducing the plant.

Plant patents are granted for 20 years from the date of application (no maintenance fees).

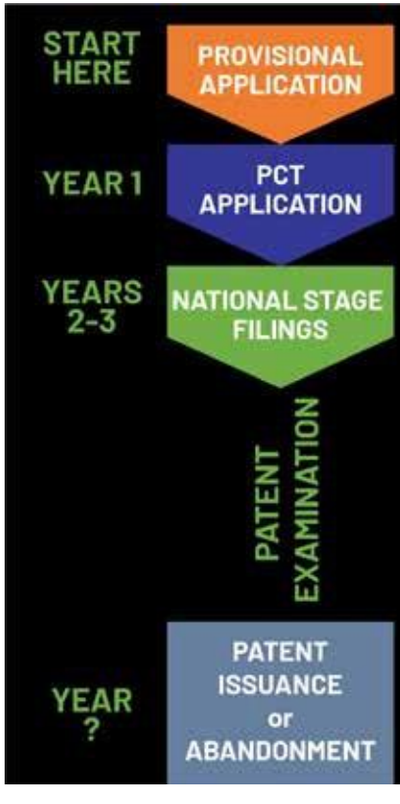
MORE INFORMATION & RESOURCES

- **UM Collected Rules & Regulations, Invention & Patent Regs (100.020)**
- **United States Patent & Trademark Office**

What is the patenting process?

The patenting process is normally pursued by UMSL once the TTO receives an invention disclosure describing patentable subject matter and decides to pursue patent protection and commercialization is illustrated in Figure 2. Different situations might arise that call for a modified strategy, such as filing a full US utility patent initially if earlier issuance is desired due to faster-moving markets such as in information technology. The TTO will work with you as an inventor to determine the best strategy.

Figure 2: Typical Patenting Process at UMSL



The process usually begins by filing a provisional application with the United States Patent & Trademark Office (USPTO). *This is a distinct and separate step from submitting an invention disclosure to UMSL.*

A Patent Cooperation Treaty (PCT) application holds the door open for separate full application filings in chosen PCT states, If we intend to file only in the US, a US non-provisional is filed at this time rather than a PCT, and the national filings stage is skipped.

If there is no licensee identified by the national stage filings, we will normally file only a U.S. national stage application. If we do have a licensee in place, they will help determine and cover the costs for national stage filings in countries of interest.

During the patent examination phase, there is a series of communications between the USPTO, external counsel, and the TTO. Inventor(s) are engaged to review draft responses to USPTO Office Actions to help increase the chances of a valuable issued patent.

What is the difference between provisional and regular (a.k.a. "utility" or "non-provisional") patent applications?

Initially filing a provisional patent application is often a cost-effective way to start the pursuit of patent protection while gathering more data, assessing the market and the invention's commercial potential, or even drafting a non-provisional application. It is not examined but provides a priority date for the described invention. It expires 12 months from the filing date, before which a non-provisional or Patent Cooperation Treaty (PCT) application must be filed in order to receive the benefit of the provisional filing date. Note that only the material described and enabled in the provisional receives this benefit.

What does it cost to file for and obtain a utility patent?

Most patents filed through the University of Missouri-St. Louis are utility patents. Typically, filing a U.S. utility patent application costs $10,000 to $15,000. The cost of patent prosecution to secure an issued patent can cost at least another $10,000 or more. To obtain issued patents in countries outside of the U.S. can cost $20,000 or more per country. Maintaining issued patents to keep them "alive" incurs additional fees. UMSL's patent budget is used for both new application costs and maintenance fees for issued patents.

MORE INFORMATION & RESOURCES

- UM Collected Rules & Regulations, Copyright Regulations (100.030)
- United States Patent & Trademark Office

Copyrights & Trademarks

What is a copyright?

Copyright is a type of IP that protects original works of authorship fixed in a **tangible form of expression**. In other words, copyrightable works are original ideas that are put into physical form. And while the idea itself isn't protected by copyright, the physical use of the tangibly expressed idea is. Both published and unpublished works are protected by copyright. Copyright owners have the right to control who can make/distribute copies of their work, perform or display the work publicly, and make derivative works such as translations or reinterpretations.

There are a lot of different types of copyrightable works, including books, articles, computer programs, paintings, photographs, illustrations, musical compositions, sound recordings, poems, blog posts, movies, architectural works, plays, and so much more!

In the US, a creative work is automatically protected by copyright as soon as it's created. While registration of a copyright with the **US Copyright Office** is voluntary, it is required in order to be able to bring an infringement lawsuit. Registration also provides the fact of a copyright to be on the public record. The TTO works with authors to determine whether we should pursue registration of the copyright.

The University copyright mark must be shown as follows per **CRR 100.030: Copyright Regulations**:

> © Copyright (year) by The Curators of the University of Missouri, a public corporation

What is a trademark or service mark?

A trademark includes any word, phrase, symbol, design, or combination thereof that identifies and distinguishes a company's goods and is used, or intended to be used, in commerce. A trademark is a brand -- it helps customers recognize a company and distinguish it from competitors. A service mark is the same as a trademark except that it is used, or intended to be used in commerce to identify and distinguish one provider's services (rather than manufactured goods) from those of another and also indicate the source of the services.

These types of IP can also provide legal protection for a brand, help guard against counterfeiting and fraud, and promise a consistent level of quality. Examples include product names, logos, slogans, and even package design ("trade dress") like the Coca-Cola bottle.

The UMSL TTO assists those on campus with protecting new brands through trademark and service mark searches, registration where appropriate, and communications with the **US Patent and Trademark Office**.

To get federal trademark protection, a mark must be distinctive and not likely to be confused with an existing trademark. Once registered, the owner has the exclusive right to use the mark nationwide.

Contact your TTO if you have questions about any intellectual property, whether patents, copyrights, or trademarks/service marks.

MORE INFORMATION & RESOURCES

- **UM Collected Rules & Regulations, Patent & Plant Variety Regs (100.020)**
- **United States Patent & Trademark Office**

IP Ownership

Who owns what I create?

Inventions.

All inventions conceived of or first reduced to practice (in whole or in part) by UM faculty and/or staff in the course of their University responsibilities or with more than incidental use of University resources, facilities, financing, or time by Employees are owned by the University, regardless of the source of funding.

Copyrights.

Ownership of original works of authorship subject to protection by copyright law are governed under the UM Copyright Policy. The University owns materials that it commissions for its use, that an Employee creates as a specific responsibility of the position he or she was hired for, that result from internal or external funding, or that are created with the use of substantial University resources specifically provided to support the production of copyrightable materials.

If a faculty member authors teaching materials or a scholarly work and none of the situations noted in the previous paragraph apply, then the faculty member is allowed to hold the copyright for such works. A few examples are books, workbooks, articles, and music and performances embodied in any format.

Student-developed IP.

Intellectual property made by a student during their enrollment at the University is generally owned by the student unless the student meets the definition of Employee. Please **contact the TTO** prior to engaging a non-Employee student to work on a research project where University ownership of resulting IP is desired for protection and commercialization purposes.

Are you not sure about who owns your innovation?

If there is any question in your mind about whether the University has an ownership stake in what you have created (per the UM System Collected Rules & Regulations), **contact us**. The TTO will guide you through the process to have ownership determined either way. You can also start the process by submitting an unsigned innovation disclosure form, which will most often be the first step in the determination.

MORE INFORMATION & RESOURCES

- UM Collected Rules & Regulations, Patent & Plant Variety Regs (100.020)
- UM Collected Rules & Regulations 100.030 (Copyright Regs)
- Intellectual Property in Student-Developed Inventions FAQs

Innovation Disclosure

How do I report my intellectual property to UMSL?

Disclosure to the University is done using the appropriate **Innovation Disclosure Form (IDF),** whether the **invention**, **software**, **non-software copyright**, or **mobile app** disclosure form. This is the critical first step in IP protection and commercialization.

A thoroughly completed form provides a written description of your innovation including information necessary to evaluate the protectability and commercial potential of your work, from novel aspects to sources of support and potential licensees. Did you know that studies have shown that more than 70% of licenses are executed with entities known by the innovator. Your contacts can be critical for successful commercialization.

All IP developed by UMSL employees should be disclosed to the University unless it falls into categories of faculty owned intellectual property, such as journal articles. If there is a question of ownership, **email us** to discuss prior to submitting an innovation disclosure form (IDF).

If you have questions about the innovation disclosure forms or when or whether you need to submit an IDF, don't hesitate to **contact us**.

An Innovation Disclosure Form (IDF) can now be signed via Adobe Sign — just submit your unsigned disclosure to the TTO and we will send it back to you through Adobe Sign for your online signature. You can then forward to your co-inventors (if applicable) for their signatures as well.

Should I disclose research tools?

Yes. Materials such as antibodies, vectors, plasmids, cell lines, and mice that are used to conduct research are often referred to as Tangible Research Property (TRP) and should be disclosed. Research tools can also include software. TRP can be licensed to commercial parties or research collaborators, potentially generating royalty revenues for the lab. Patent protection is often not necessary for commercialization of TRP. The tech transfer office will work with you on an appropriate strategy for protection, licensing, and distribution.

Software

If you have developed new software, complete and submit the Software Disclosure Form; we will determine whether pursuing patent protection to supplement the existing copyright is advisable.

Patents protect the underlying systems and processes of software, while copyrights protect the code itself. For example, a patent on software could prevent others from using a specific algorithm or creating software that performs functions covered by the patent. While copyrights protect the expression of an idea (e.g., the source code, graphics, audio, text of an app); they don't prevent others from creating their own code that implements the same method.

But how is software commercialized? There are several pathways including traditional licensing of patent rights and/or copyrights to a company for distribution. Depending on publication and IP requirements of any relevant grant contract, another distribution through an open-source license. The TTO will help determine the best pathway.

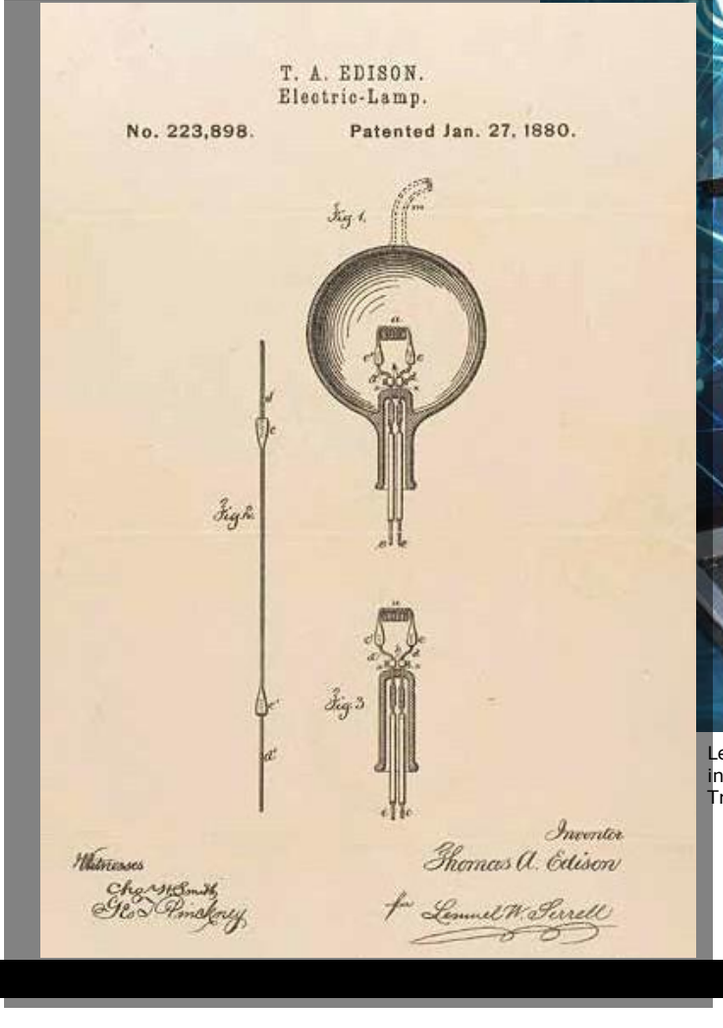
Copyrights, Trademarks

For copyrightable works, generally expressions of ideas in tangible form, that are developed by faculty, staff, or students classified as "employees" for the work, use the non-software copyright disclosure form. For IP that would be covered by a trademark or service mark, **contact us** to discuss.

Mobile Apps

If you've developed a mobile app with potential commercial value and/or benefit to society, please disclose using the mobile app disclosure form.

HAVE QUESTIONS?
Contact Us



T. A. EDISON.
Electric-Lamp.

No. 223,898. Patented Jan. 27, 1880.

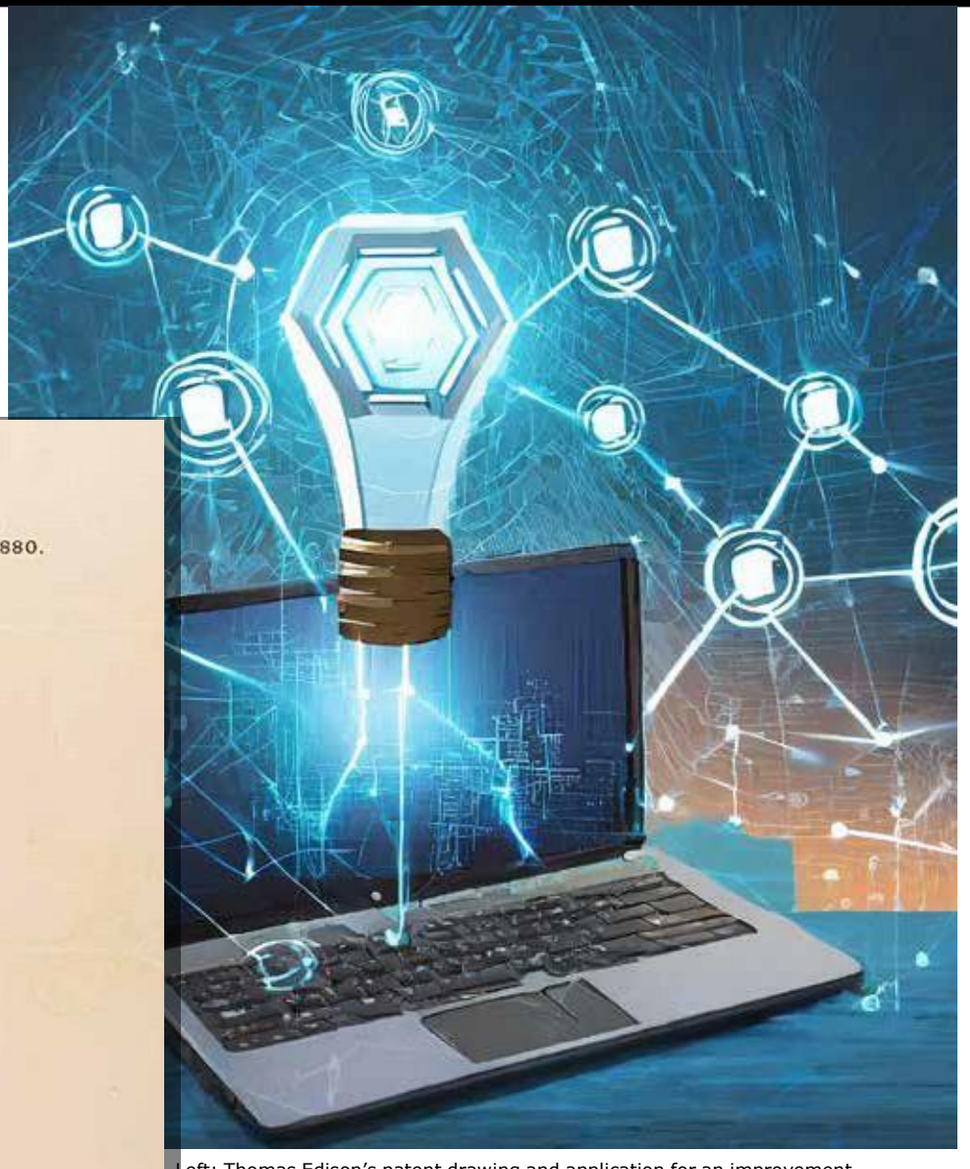
Fig 1.

Fig 2.

Fig 3

Witnesses
Chas. H. Smith
Geo. Ponsonby

Inventor
Thomas A. Edison
for Lemuel W. Serrell



Left: Thomas Edison's patent drawing and application for an improvement in electric lamps, patented January 27, 1880; Records of the Patent and Trademark Office; Record Group 241; National Archives.

Marketing & Licensing

How are potential licensees identified? How is my innovation marketed to them?

We work closely with innovators to identify potential licensees as your subject-matter expertise and relationships with industry through research and consulting are critical both for finding potential partners but also champions for your technology or creative work within those commercial entities. Your contacts are extremely important. Did you know that more than 70% of all licenses are executed with commercial partners known by the innovator? *Please make sure to provide the names of all potential licensees from your network in your IDF.*

The UMSL TTO also leverages an online market research and matching tool, existing relationships across the System, along with industry conferences and events to identify companies interested in sponsoring further development for or licensing of an innovation.

Additionally, we post innovation summaries on TechFinder, the UM System's searchable online database of IP, and on the UMSL Innovations online licensing portal. Faculty innovators can increase marketing success by including a link to their IP on these sites on their faculty web pages.

Many commercial tech scouts search academic publications and attend industry conferences to identify new innovations of interest Contact us for information (e.g., flyers, talking points, informational slide) to help connect interested parties with the UMSL TTO.

How much time does marketing and licensing take?

Depending on the innovation, it can anywhere from a few months to years to identify a licensee and execute a license agreement. Patentable inventions at universities are often at a very early stage and need significant investment for further research and development, which comes with risk for a licensee. Other obstacles can include market competition and size, which might affect how attractive an innovation is to a commercial partner.

What is a license agreement? An option to license?

A license of University intellectual property (IP) allows another party to act under some or all of the University's rights as IP owner. The agreement explains rights and responsibilities of both parties and business terms related to use and/or commercialization of the innovation. Diligence terms help ensure the licensee works to bring the IP to the market for the benefit of society.

An option agreement allows a potential licensee a specific period of time to evaluate an innovation and raise funds if needed prior to licensing the IP. During the option period, the IP is not marketed or licensed to others by the University.

Express licensing (support for faculty start-ups):

Sometimes an UMSL innovator will establish a start-up venture to commercialize the IP. How does UMSL support that?

Eligible faculty have the opportunity to use the **UM Express License**, a fast-track process that allows faculty entrepreneurs focus their time, efforts and resources on the development and commercialization of University IP. Designed to streamline contract negotiations, the license includes predefined terms and conditions that are based on shared success and meant to encourage entrepreneurial efforts at the University. The start-up is required to provide a business

plan that includes information about company leadership, the commercialization pathway, meaningful diligence milestones, financial strategies and funding sources, etc. The innovator is responsible for initiating **potential Conflict of Interest** reviews. Also, the UMSL TTO can provide a faculty entrepreneur connections to available internal and regional entrepreneurship support resources.

License negotiations:

The UMSL TTO is responsible for negotiating option and license agreements for UMSL IP on behalf of the Curators. If you have identified a potential licensee, contact us. Do not negotiate or suggest potential agreement terms (financial or otherwise) to a third party on your own, as such terms might conflict with University policy. The TTO will conduct negotiations in close consultation with you to create an agreement that reflects your and the University's goals.

Expectations after licensing:

A licensed innovation indicates that it potentially addresses a need in the market and society and might reach the market as a new product or service. When an option or license results in revenues to the University, the inventors (patents) or authors (copyrights) share in the return per University regulations (**CRR 100.020**, **CRR 100.030**).See "License Revenues" below for details on revenue sharing.

The commercialization process can strengthen industry relationships and lead to new sponsored research or consulting opportunities for innovators along with possible career opportunities for student and post-doc innovators.

Your role after licensing might include involvement with the licensee, from informal contacts to more formalized sponsored research agreements. We will work with you to ensure a licensee's expectations of your involvement align with yours.

Licensing Revenues

If the University receives revenue from an option or license agreement, where does the money go?

Proceeds received by the University for an option or license of University owned IP, minus certain expenses as defined in **CRR 100.020** and **CRR 100.030**, are distributed as follows:

- 33.3% to the inventor(s) for Inventions and authors for copyrightable works
- 66.7% to the campus from which the IP originated

At UMSL, the campus share is used to support the analysis, protection, and marketing of UMSL IP along with initiatives to facilitate the generation and development of intellectual property across disciplines.

Are there tax implications related to receiving licensing revenues?

License revenues distributed to UMSL inventors and authors is treated as personal income by the IRS. The University System sends each recipient annually a Form 1099-MISC. You should consult with a tax advisor regarding your specific tax situation.

What if there are multiple inventors/authors?

License revenues are by default distributed equally among multiple inventors unless all inventors/authors agree in writing (revenue distribution or authors agreement) on a different split.

IP Concerns in Research

There are some things you'll want to keep in mind related to IP when conducting your research. In this section, we'll review some common areas of concern. Please **contact us** if you have questions.

Publication, Public Disclosure, and Patent Rights

Publishing, while critical for research professors, or other public disclosure of an invention before a patent application is filed can adversely impact patentability as an enabling public disclosure destroys the novelty of an invention.

Public disclosures that bar patentability must be "enabling," meaning that it must give enough information to someone "of ordinary skill in the art" for them to be able to duplicate the invention. This requirement is sufficient to exclude some articles, abstracts, etc., from patent barring public disclosure. If unsure, please **send us a copy** for review at least three days in advance.

An enabling public disclosure can be used as prior art against a patent application; it also eliminates most foreign rights for that invention.

Some broad categories of public disclosure are discussed below:

- Printed and online **publications** such as journal articles, book chapters, theses, and email or mail correspondence outside of the University with a notice that the information being provided is confidential.
- **Grant proposals to federal agencies**, which are accessible under Freedom of Information laws. However, you can protect the proprietary information you provide in a grant proposal with the following pro-active steps. Place the following notice on the first page: "Confidential Information — Pages _ to __ of THIS PROPOSAL contain potentially patentable information" noting the pages that contain confidential information in the statement. Then, mark each page that contains the confidential information with an obvious "CONFIDENTIAL" marking.
- **Presentations** (conferences, departmental seminars, thesis defense, etc.), **posters, abstracts**. Note that oral presentations can be difficult to determine whether they constitute public disclosure. Even if you don't distribute a copy of your presentation that describes the invention, an attendee might be taking detailed notes. Plan your oral presentations to not inadvertently disclose your invention.
- It is in **public use.** In some instances, distribution of research materials or prototypes that embody the invention can constitute public disclosure. We can avoid having the materials considered to be made available to the public with a written agreement that details the restrictions under which the materials are being provided, e.g., for testing, evaluation, or research purposes only.
- It is **on sale**. Selling or offering to sell research materials or a prototype, even if private/confidential, can trigger a patent bar date.

Other common examples of public disclosure include trade shows, websites, advertising and marketing materials, business meetings conducted without NDAs, dissertations, contest submissions, etc.

Patenting and publication can work hand-in-hand. The UMSL TTO will work to best protect your innovation. **Contact us** as early as possible prior to a public disclosure.

IP Restrictions and Requirements in Grant Contracts

Sponsored research contracts and other agreements often include either restrictions or requirements on the use of IP. Researchers should make sure they are familiar with all IP language in contracts related to their work, discoveries, and creations.

Industry sponsored research agreement negotiations often include working out terms around **IP ownership** for what is developed under the sponsored project along with an **option to license** such IP.

Contact the TTO if you have questions or need an agreement for your research project.

Confidentiality and Industry Collaborations

The University encourages its researchers to engage with industry to address research, commercial, and societal needs.

Prior to discussing research discoveries, inventions or ideas with parties outside of the University, contact your TTO. A non-disclosure agreement (NDA) might be enough protection in certain circumstances.

NDAs are negotiated and executed by the UMSL TTO often using a standard form agreement for quicker processing if agreed to by the other party.

In situations where there is a patentable invention already conceived, we may determine the better route is to file a provisional patent application for more protection than an NDA would provide.

Potential Conflicts of Interest in Commercialization

When a faculty member's financial, professional, or other personal considerations might affect their professional judgment regarding duties to the University, there may be a conflict of interest that requires a management plan. Such plan would guide activities around sponsored research contracts, student workers, etc.

All outside interests, including faculty start-up companies licensing IP from the University, must be disclosed as a potential conflict via **eCompliance**. The TTO does not oversee COI or other research compliance areas such as human subjects; but you can find more info at the links below:

- **UMSL Research Compliance website**
- **UM CRR 330.015 Policy on Conflict of Interest**

Research Data: Rights and Permissions

Not clarifying rights to primary and permissions for secondary data before beginning research can impact the ability to use and share the data. This might also lead to legal issues if the IP of another party is infringed (by, for example, publishing data without authorization).

Research Data: Use, Sharing and Transfer

Whether you need to bring data in for your research or wish to send data to another party for their use, it is important to have an agreement that outlines which data will be shared, how the data can be used, and under what conditions data can be further transferred. Such agreement is often referred to as a Data Use Agreement (DUA), which can help prevent data misuse, abuse, and unregulated dissemination. Typical terms identify the period of time the data is to be available, the intended use, confidentiality and security, usage constraints, costs, etc. At UMSL, you can **request a DUA online**. The request triggers all necessary reviews and approvals (e.g., IRB, IACUC, IT, IP, FERPA, legal, etc.). Contact **UMSLdua@umsl.edu** with any questions.

Students on Your Research Team

Students, unless classified as an Employee of the University for their contribution to IP developed, retain ownership of IP they develop during their time as a student. Therefore, when planning your research, if you intend to include unpaid students on the research team, contact us to discuss how to avoid any unwanted joint-IP ownership situations.

Visiting Scientists

A visiting scientist might bring existing IP to use at UMSL but also might create IP while here. Best practice includes executing a visiting scientist agreement to clarify IP ownership issues with the visiting researcher before research starts.

There are various scenarios that might apply, including UMSL having an agreement with a sponsor regarding IP ownership of what the visiting scientist creates or, in a more complex situation, the visitor is self-funded or funded by a sponsor with which UMSL has no agreement. In any case, IP ownership should be considered and agreed upon in writing in advance.

Material Transfer

UMSL requires an MTA (Material Transfer Agreement) for the transfer in or out of biological and other research materials. If materials are coming to campus under an MTA or a Fee-for-Service Agreement, the materials must be clearly identified.

The UMSL TTO is responsible for negotiating and executing MTAs on campus. **Contact us** if you need an agreement reviewed and signed or a draft agreement created.

Use of Genetic Resources from Foreign Countries

The Nagoya Protocol on Access and Benefit Sharing is a 2010 supplementary agreement to the 1992 Convention on Biological Diversity (CBD). The protocol was intended to establish a transparent legal framework to govern access to and utilization of genetic resources, giving authority to each country to require those seeking access to obtain permission first and for the parties to share in the benefits from research and commercialization of the resources. As of April 2022, 137 parties including the European Union had ratified the protocol (not including the U.S.).

"Genetic resources" is defined in the protocol to mean "genetic material of actual or potential value," and "genetic material" is then defined as "any material of plant, animal, microbial or other origin containing functional units of heredity." Many protocol parties take the position that "genetic resources" also includes "digital sequence information" (DSI).

Even though the US has not ratified the protocol, this is a complex, time-consuming situation for US researchers wanting to use genetic resources from a protocol country or collaborating internationally when such resources might need to be used. Please **contact us** as early as possible if this might apply to your research project.

Agreements

In support of research, technology transfer, and industry outreach activities, we negotiate and process various agreements on UMSL's behalf.

Sponsored Programs Administration, **Business Services**, and other units at UMSL process other types of agreements; if you are unsure with whom you should work or if you have questions about what agreement you might need, **contact us**. We'll help guide you.

A few examples of TTO-processed agreements include:

- Allocation of IP Rights Agreements
- Assignment Agreements
- Confidentiality / Non-disclosure Agreements (CDAs, NDAs)
- Copyright Authors' Agreements
- Data Use, Sharing, Transfer Agreements (DUAs, DTUAs): **request a DUA online**
- Industry Sponsored Research and Collaboration Agreements
- Interinstitutional Agreements (IIAs)
- IP Waivers
- Licenses out of UMSL IP (including faculty Express License)
- Material Transfer Agreements (MTAs)
- Options to license UMSL IP
- Research Related Service Contracts

Who has signature authority at UMSL?

Agreements are made between third parties and The Curators of the University of Missouri on behalf of specific campuses. Only those with signature authority delegated by the UM System President

(campus chancellors) or re-delegated by a campus chancellor have the authority to sign agreements on behalf of the Curators.

Do not sign any agreement for the University without confirmation that you have the authority to sign on behalf of The Curators. This includes all agreements, including DUAs, NDAs, and MTAs, which can seem minor, and faculty sometimes mistakenly sign for themselves.

An agreement signed by someone without the proper authority can be invalidated. In some instances, this could also jeopardize the protection of intellectual property and even put at risk the University and possibly the individual who signed.

Have you been asked to sign an agreement, need an agreement developed or reviewed related to your work at the University, or have any other questions about agreements or signature authority and don't know who to speak with? **Contact Us**

Policies & Resources

University of Missouri System Policies Related to IP

IP policies are important within a research university. They establish norms and principles for IP ownership and responsibilities related to protection, commercialization, revenue distribution, potential conflict, etc. Three primary sections of the University of Missouri System Collected Rules and Regulations relate to IP and tech transfer:

- **CRR 100.020:** **Invention and Patent Regulations**
- **CRR 100.030:** **Copyright Regulations**
- **CRR 330.015:** **Policy on Conflict of Interest**

Online IP Marketing and Licensing Portals

Summaries of many UM technologies available for licensing are searchable on TechFinder. UMSL also features its IP on UMSL Innovations, an online portal that allows for online licensing of copyrightable materials and marketing of patented innovations to supplement other efforts to connect with licensees.

- **UMSL Innovations**
- **UM TechFinder**

Industry Partner Search Tool

The UMSL TTO has access to a search tool for industry contacts that get matched to a description of a research project, patentable technology, copyrightable material, or other projects. The tool can provide information on resulting market sectors and patent landscape along with a summary of the project. **Contact Us** to request a search.

Data Agreement (DUA/DTUA) Online Request Form

Use this form to request a data use/sharing/transfer agreement. All approvals are processed within the form system (Kuali), including IRB, IACUC, FERPA, IT, IP, legal. **Request a DUA**

Training Resources

- **CITI Training Modules** on IP, tech transfer, and entrepreneurship are available online for all research investigators. **Log In**
- **Custom Presentations, Workshops.** Your TTO will work with you to create custom presentations or workshops for your faculty, staff, or students on IP and how inventions, copyrightable works, and brands are protected and commercialized. **Contact Us** to design the right training for your department or group.

Recognition

UMSL appreciates, recognizes, and celebrates its innovators, including through formalized initiatives.

Innovator of the Year Award

Each year, the University of Missouri-St. Louis honors outstanding faculty in the areas of research, innovation, and commercialization.

Selection of the "Innovator of the Year" award winner is based on criteria that can include, but are not limited to, the following: having disclosed to the University a discovery/invention that has contributed (or has the potential to contribute) significantly to the public good, economy, research funding to UMSL, regional entrepreneurship, and

advancement of science and useful arts. Eligible candidates include faculty and staff with an active invention disclosure on file with UMSL during the previous calendar year. Current student inventors are eligible for the "Student Innovator of the Year" based on the same criteria for the faculty innovator award. Each winner receives $500 dollars and is recognized at the annual UMSL Research & Innovation reception event. (**see previous winners**)

UMSL Wall of Innovation

Each issued U.S. patent with an UMSL inventor is displayed on the UMSL Wall of Innovation in the Science Learning Building (SLB) lobby.

This wall helps illustrates the amazing research conducted at UMSL that can have a positive impact on the well-being of society. Each patent plaque represents cutting-edge innovation and the desire to improve people's lives.

National Academy of Inventors (NAI)

The **National Academy of Inventors (NAI)** is a member organization comprising U.S. and international universities and government and nonprofit research institutes. The NAI was founded in 2010 to:

- Recognize and encourage inventors with patents issued from the U.S. Patent and Trademark Office.
- Enhance visibility of university and nonprofit research institute innovations.
- Encourage disclosure of intellectual property.
- Educate and mentor innovative students.
- Translate the inventions of its members to benefit society.

UMSL is a member institution in the NAI with a chapter that was established in 2011 to promote and foster innovation on campus. Individual membership is available through university chapters.

New members are inducted at the annual Research & Innovation reception. Those interested in joining UMSL's chapter must have at least one patent issued from the U.S. Patent and Trademark Office. Contact **UMSLtechtransfer@umsl.edu** for more membership info.

Contact Us!

Email: UMSLtechtransfer@umsl.edu
Address: Office of IP Management & Commercialization
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St. Louis, MO 63121