

An Inventor's Guide Technology Transfer

at the University of California, Berkeley

Berkeley IPIRA
INTELLECTUAL PROPERTY & INDUSTRY RESEARCH ALLIANCES

MISSION

The Office of Intellectual Property and Industry Research Alliances (IPIRA) is committed to nurturing and managing Berkeley's IP portfolio, supporting Berkeley's research enterprise by fostering research collaborations among scientists, entrepreneurs and corporations to speed innovation and catalyze commercialization of game-changing technology solutions.

IPIRA was founded to develop a multifaceted, relationship-based approach to our relations with industry. Within IPIRA, the Industry Alliances Office (IAO) and Office of Technology Licensing (OTL) work synergistically to promote research that leads to IP; IP then spawns commercial uptake, new research, and other ways of giving back to Berkeley and society in a virtuous cycle.

Office of Intellectual Property & Industry Research Alliances (IPIRA)
2150 Shattuck Avenue, Berkeley, CA 94704

Industry Alliances Office (IAO)
Suite 1000
Phone: (510) 642-5766
Fax: (510) 642-5723

Office of Technology Licensing (OTL)
Suite 510
Phone: (510) 643-7201
Fax: (510) 642-4566

Note: This booklet is based on the University of Michigan's "Inventor's Guide to Technology Transfer," with adaptations for UC Berkeley and UC Berkeley's IPIRA. We are very grateful the staff of the UM Office of Technology Transfer for their kind permission to use their excellent material and to the University of Michigan for the permission to use its copyright.

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The Inventor’s Guide to Tech Transfer outlines the essential elements of technology transfer at the University of California, Berkeley.

This guide is organized to answer the most common questions we typically field from our research community and provides a broad overview of the tech transfer process and services available for researchers.

TECHNOLOGY TRANSFER OVERVIEW

What is technology transfer?

Technology transfer is a process by which knowledge and discoveries are disseminated to the public. It can occur through publications, educated students entering the workforce, exchanges at conferences, and relationships with industry, among other things. For the purposes of this guide, technology transfer refers to the formal licensing of technology to third parties under the guidance of professionals employed by universities, research foundations, and businesses.

Why would a researcher want to participate in the technology transfer process?

The reasons are unique to each researcher and may include:

- Making a positive impact on society
- Make available for the public benefit
- Feeling a sense of personal fulfillment
- Achieving recognition and financial rewards
- Generating additional laboratory/departmental funding
- Meeting the obligations of a research contract
- Attracting research sponsors
- Creating educational opportunities for students
- Linking students to future job opportunities

What is the Office of Technology Licensing (OTL)?

OTL is a UC Berkeley service unit composed of specialists in licensing, business development, legal and policy matters. Its role is to manage inventions and works of authorship from the physical sciences, life sciences, and information and computer sciences and license intellectual and tangible property to industry.

What is the Bayh-Dole Act?

The U.S. Bayh-Dole Act of 1980 allows universities and other non-profit institutions to obtain title to inventions developed from federally funded research provided certain obligations are met. These obligations include making efforts to protect (when appropriate) and commercialize the discoveries, submitting progress reports to the funding agency, giving preference to small businesses that demonstrate sufficient capability, and sharing any resulting revenues with the inventors. The Bayh-Dole Act is credited with stimulating interest in tech transfer activities and generating increased research, commercialization, educational opportunities, and economic development in the United States.

How is Technology Transferred?

Technology is typically transferred through a license agreement in which the University grants its rights in the defined technology to a third party (the licensee) for a period of years, that is sometimes limited to a particular field of use and/or region of the world. The licensee may be an established company or a new business startup. Licenses include terms that require the licensee to meet certain performance requirements and to make financial payments to the University. These payments are shared with the inventors and are also distributed to the schools/colleges, departments/units, and central administration to provide support for further research, education, and participation in the tech transfer process.

Note: Throughout this manual, unless specifically described otherwise, the term inventor includes individuals listed on a patent as well as contributors who have shared in creating the value of intellectual property that is not patented.

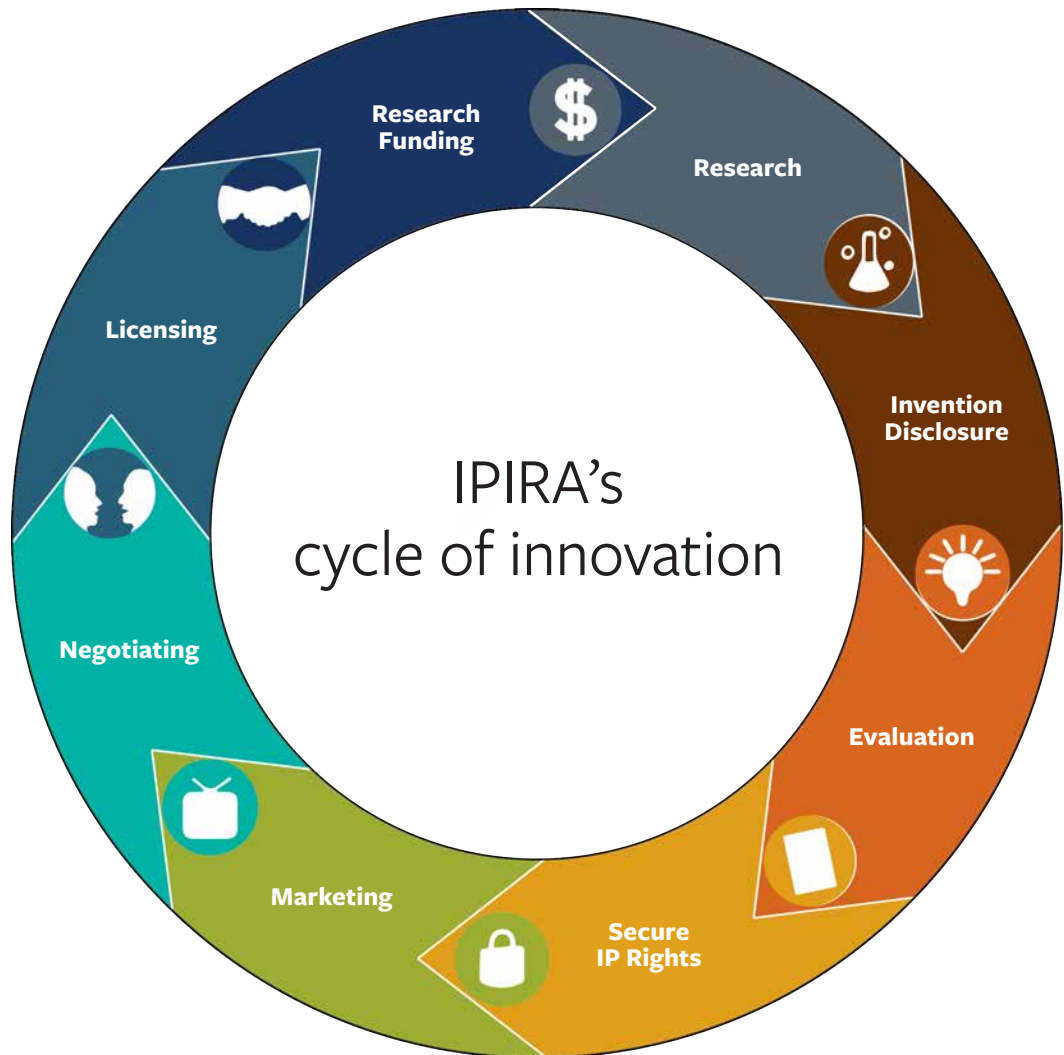
THE TECH TRANSFER PROCESS

How do I work with OTL?

We encourage you to contact OTL during your early research activities. The staff at OTL will work with you to make you aware and advise you of the options that will best leverage the commercial potential of your research. The Licensing Officers at OTL are trained to assist you with questions related to marketability, patenting and other protection methods, new business startup considerations, University policies and procedures, and much more.

How long does the tech transfer process take?

The process of protecting the technology and finding the right licensing partner may take months or even years to complete. The length of time will depend on the development stage of the technology, the market for the technology, competing technologies, the amount of work needed to bring a new concept to market-ready status, and the resources and willingness of the licensees and the inventors.



10 steps to commercialization

The process of technology transfer is summarized in the steps and diagram that follow. Note that these steps can vary in sequence and often occur simultaneously.

1 RESEARCH

Observations and experiments during research activities often lead to discoveries and inventions. An invention is any useful process, machine, composition of matter, or any new or useful improvement of the same. Often, multiple researchers may have contributed to the invention.

2 PRE-DISCLOSURE

An early contact with the Licensing Officer to discuss your invention and to provide guidance with respect to the disclosure, evaluation, and protection processes.

3 INVENTION DISCLOSURE

The written notice of invention to OTL that begins the formal technology transfer process. An invention disclosure remains a confidential document and should fully document your invention so that the options for commercialization can be evaluated and pursued.

4 ASSESSMENT

The period in which your Licensing Officer reviews the invention disclosure, conducts patentability review, and analyzes the market and competitive technologies to determine the invention's commercialization potential.

This evaluation process will guide the strategy on whether to focus on licensing to an existing company or to a new business startup.

5 INTELLECTUAL PROPERTY PROTECTION

Safeguarding IP with protection through patents and copyrights is crucial to fostering innovation because without protection of ideas, universities and individuals would not benefit from their inventions.

Patent protection, a common legal protection method, begins with the filing of a patent application with the U.S. Patent Office (USPTO) and, when applicable, with foreign patent offices. Once a patent application has been filed, it typically will require several years and tens of thousands of dollars to obtain issued U.S. and foreign patents. Other UC protection methods include copyright, trademark, tangible research property (e.g., biological material), and contractual use restrictions (e.g., for databases and materials).

6 MARKETING

The Licensing Officer identifies candidate companies that have the expertise, resources, and business networks to bring the technology to market. This may involve marketing to an existing company or a startup. Your active involvement can dramatically help facilitate the marketing process.

7 SELECTING LICENSEES

OTL is committed to selecting licensees who have the greatest potential to commercialize the invention/technology. After companies are selected, the Licensing Officer will work with those potential licensees to develop the appropriate financial and diligence terms to fully commercialize the technology.

8 LICENSING

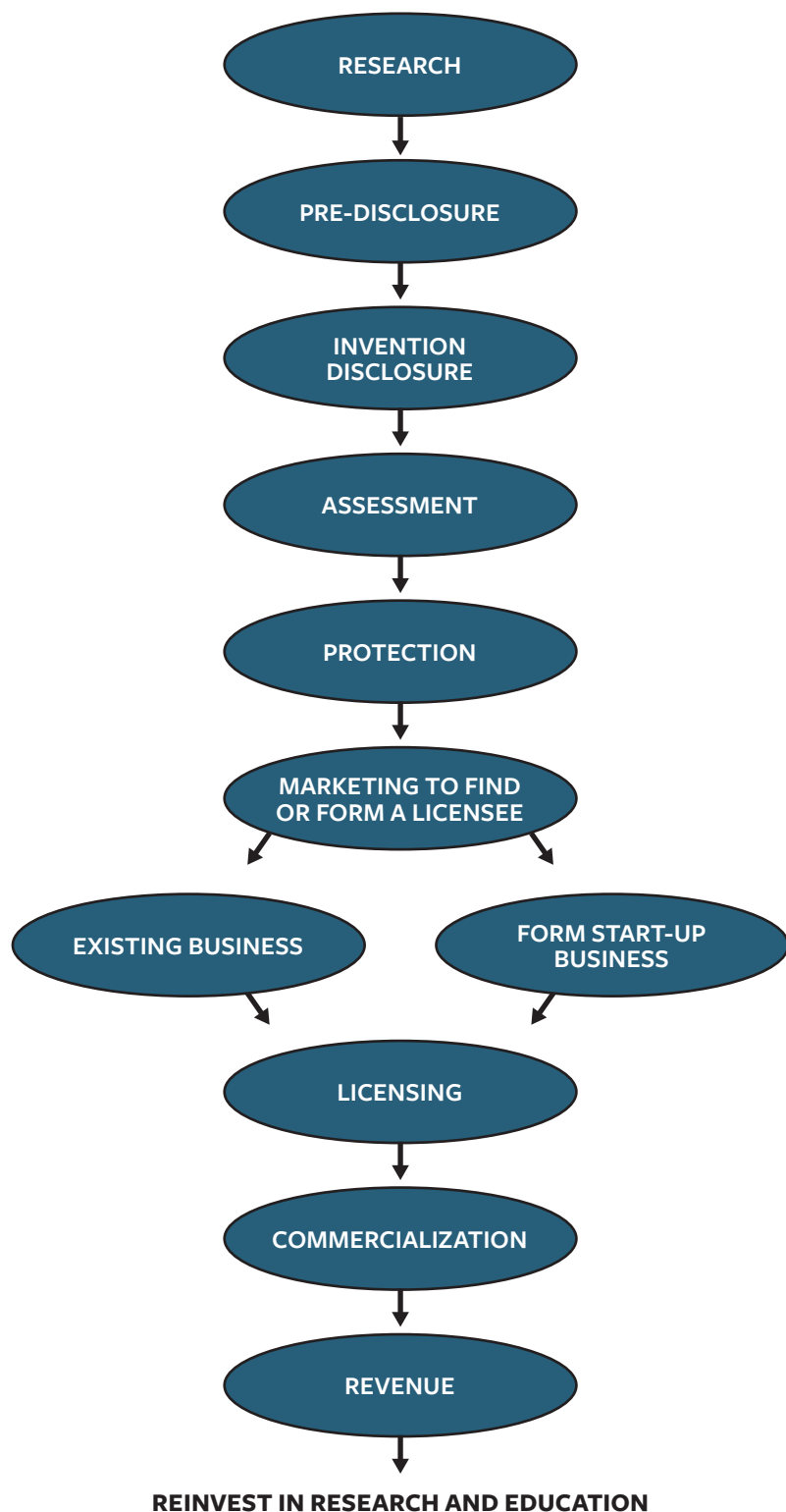
Once a Licensee is identified, OTL will negotiate and execute a license agreement. A license agreement is a contract between the Regents of the University of California and a third party in which the University's rights to a technology are licensed, without relinquishing ownership, for fair consideration (e.g., upfront fee, milestone payments, royalties) and other benefits. A license agreement is used with both a new startup business or with an established company. A fee-based option agreement is sometimes used to enable a third party to evaluate the technology and its market potential for a limited time, prior to making a decision about licensing.

9 COMMERCIALIZATION

The licensee continues the advancement of the technology and makes other business investments to develop the product or service. This step may entail further development, regulatory approvals, sales and marketing support, training, and other activities.

10 REVENUE

Revenues received by the University from licenses are distributed to inventors, schools, colleges, departments, units, and central administration to fund additional research and education and to encourage further participation in the tech transfer process.



How can I help in this process?

- Contact OTL at (510) 643-7201 when you believe you have created, discovered, or authored something unique with potential commercial or research value.
- Next, complete and submit the Invention Disclosure Form or Software Disclosure Form at <http://ipira.berkeley.edu/ip-protection>.
- It is critical to contact OTL before submitting a manuscript for review and publication, publicly disclosing your technology, or holding any discussions with people outside the Berkeley community. Failure to do so may result in loss of overseas patent rights and possibly hinder the opportunity to market your invention.
- If you must present or discuss your technology with an outside party, please notify the Licensing Officer of any such meeting or discussion before disclosing the information, so that the Licensing Officer could have them sign a Non-Disclosure Agreement to protect your IP.
- On the Invention Disclosure Form, include companies and contacts you believe might be interested in your invention or who may have already contacted you about your invention.
- Respond to OTL and outside patent counsel requests. While some aspects of the patent and licensing process may require significant participation on your part, we will strive to make efficient use of your valuable time.
- Keep OTL informed of upcoming publications or interactions with companies related to your intellectual property.

RESEARCH CONSIDERATIONS

AND MATERIAL TRANSFER AGREEMENTS

Will I be able to publish the results of my research and still protect the commercial value of my intellectual property?

Yes, but since patent rights are affected by these activities, it is best to submit an Invention Disclosure (discussed in next section) well before communicating or disclosing your invention to people outside UC Berkeley. There are significant differences between the U.S. and other countries as to how early publication affects a potential patent. Once publicly disclosed (published or presented in in any other form), an invention may have restricted or minimal potential for patent protection outside of the United States. Be sure to inform the Licensing Officer assigned to you of any imminent or prior presentation, lecture, poster, abstract, website description, research proposal submission, dissertation/ masters thesis, publication, or other public presentation including the invention.

May I use material or intellectual property from others in my research?

Yes, but it is important to document carefully the date and conditions of use so that we can determine if this use may influence the ownership and license rights of your subsequent research results. If you wish to obtain materials from outside collaborators, an incoming Material Transfer Agreement (MTA) should be completed. Contact your project representative in the IAO (Industry Alliances Office) for more information on incoming MTAs. For details, visit <http://ipira.berkeley.edu/material-transfer-agreements-o> or call (510) 643-7201.

Will I be able to share materials, research tools or intellectual property with others to further their research?

Yes. However it is important to document items that are to be shared with others and the conditions of use. If you wish to send materials to an outside collaborator, an outgoing MTA should be completed for this purpose. It also may be necessary to have a Confidentiality Agreement completed to protect your research results or intellectual property. Contact OTL at <http://ipira.berkeley.edu/material-transfer-agreements-o> or (510) 642-7201 to assist you in completing outgoing MTAs or Confidentiality Agreements.





What rights does a research sponsor have to any discoveries associated with my research?

The Sponsored Research Agreement should specify the intellectual property (IP) rights of the sponsor. The University retains ownership of the patent rights and other intellectual property resulting from sponsored research. However, the sponsor may have rights to obtain a license to the defined and expected outcomes of the research. Often, sponsored research contracts allow the sponsor a limited time to negotiate a license for any patent or intellectual property rights developed as the result of the research. Even so, the sponsor generally will not have contractual rights to discoveries that are clearly outside of the scope of the research. Therefore, it is important to define the scope of work within a research agreement.

Sponsored research projects are handled by IAO. IAO project representatives work closely with OTL on Intellectual Property (IP) issues in sponsored research agreements. If you have questions about sponsored research, please contact the IAO at (510) 642-5766 or visit <http://ipira.berkeley.edu/industry-sponsored-research>.

What About Consulting?

When researchers enter into consulting agreements, they are deemed to be acting outside of the scope of their employment. Therefore consulting arrangements are not negotiated by the University nor reviewed by OTL or IAO. Researchers who enter into consulting agreements should familiarize themselves with the policies of University of California relevant to consulting activities. The researcher is expected to ensure that the terms of the consulting arrangement are consistent with University policies, including those related to IP ownership, employment responsibilities and use of Intellectual Property. OTL is available to provide informal advice on how your consulting agreement relates to your UC Intellectual Property. (A discussion regarding consulting and conflict of interest can be found at <http://researchcoi.berkeley.edu>).

INVENTION DISCLOSURES

What is an Invention Disclosure?

An Invention Disclosure is a written description of your invention or development that is submitted to OTL. The Invention Disclosure Form (IDF) should list all collaborating sources of support and include all of the information necessary to begin pursuing protection, marketing, and commercialization activities. It is very important to include the date of any upcoming publication or enabling public disclosure in the IDF. These dates establish bar dates (deadlines) for filing patent applications. This document will be treated as “University Confidential.”

After OTL has received your IDF, a Licensing Officer will contact you to discuss the invention and its potential commercial applications. Based on the disclosure, OTL may generate a non-confidential description of your invention in order to assist in marketing the technology. Once potential partner has been identified, and confidentiality agreements has been signed, more detailed exchanges of information can be made.

When should I complete an Invention Disclosure?

You should complete an Invention Disclosure whenever you feel you have discovered something unique with possible commercial value. This should be done well before presenting the discovery through publications, poster sessions, conferences, press releases, or other communications. Once publicly disclosed (i.e., published or presented in some form), an invention may have restricted or minimal potential for patent protection outside of the United States. Differences exist between the U.S. and other countries on the impact of early publication on a potential patent. Be sure to inform OTL well before time of any imminent or prior presentation, lecture, poster, abstract, website description, research proposal, dissertation/masters thesis, publication, or other public presentation including the invention.



Why should I submit an Invention Disclosure?

When you disclose your invention to OTL, it starts a process that could lead to the commercialization of your technology. This may involve beginning the legal protection process and working to identify outside development partners. If government funds were used for your research, you are required to file a prompt disclosure, which will be reported to the sponsoring agency. Similar requirements may exist for other sponsored projects.

How do I know if my discovery is an invention?

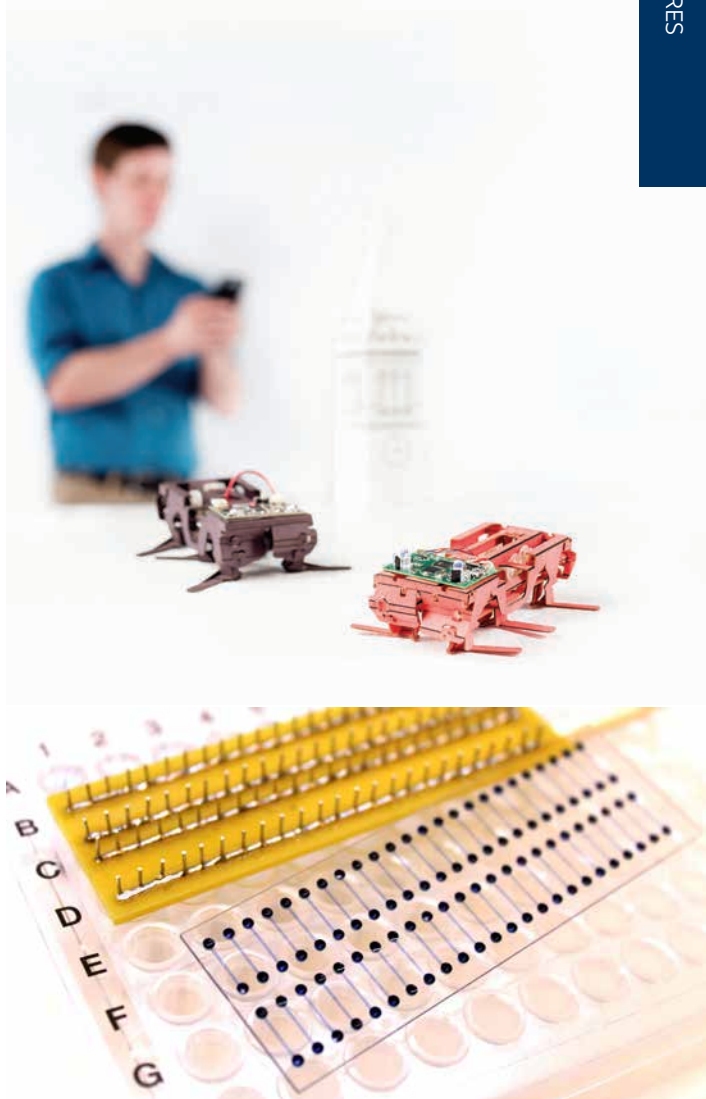
You are encouraged to submit an Invention Disclosure for all inventions and developments that you feel may solve a significant problem and/or have significant value. If you are in doubt, contact OTL to discuss the invention and strategies for commercialization.

Should I disclose research tools?

Yes, if your new research tools would benefit other researchers and you are interested in providing them to those researchers and other third parties. Typically, research tools are materials such as antibodies, vectors, plasmids, cell lines, mice, and other materials used as “tools” in the research process. Most research tools do not necessarily need to be protected by patents in order to be licensed to commercial third parties and/or generate revenue for your laboratory. If you have research tools that you believe to be valuable, or wish to provide to others (including research collaborators), OTL will work with you to develop the appropriate protection, licensing, and distribution strategy. OTL will also assist you in distributing research materials to other academic collaborators/institutions while preserving the materials’ commercial potential.

How do I submit an Invention Disclosure?

You can download an Invention Disclosure Form (IDF) and instructions from <http://ipira.berkeley.edu/ip-protection>. Invention Disclosures are assigned to the Licensing Officer as those are received. If you have any questions, call OTL at (501) 643-7201 or email us at ipira@berkeley.edu.



OWNERSHIP

OF INTELLECTUAL PROPERTY

What is “intellectual property”?

Intellectual property includes inventions and/or material that may be protected under the patent, trademark and/or copyright laws, and sometimes by contract.

What is UC’s policy on ownership of inventions?

The policy is stated in Regents’ Bylaw 3.10 and the UC Technology Transfer Policy at <http://policy.ucop.edu/doc/2500493/Patent-Policy>.

As a general rule, the University owns inventions made by its employees while acting within the scope of their employment or using University resources. Ownership depends upon the employment status of the creators of the invention and their use of University facilities.

All inventions made by University employees must be disclosed to the University, regardless of when or where they have been made. This is a legal obligation of University employment even if you have developed an invention in the performance of activities on your own outside of UC Berkeley. You may disclose such inventions using the [Preliminary Invention Disclosure Form](#). Following review and consultation with the Department Dean, the University determines if the invention is owned by the inventor.

Who owns rights to discoveries made while on sabbatical?

If you are on a sabbatical paid by the University, the UC still retains rights to any discoveries connected to your scope of employment. Contact OTL or IAO before your sabbatical to ensure that ownership considerations are documented.

Who owns the rights to discoveries made while I’m consulting?

The University of California has official guidelines regulating faculty and academic employee consulting efforts. In short, consulting agreements between faculty or other academic employees and outside entities are personal agreements. It is the University employee’s responsibility to ensure that the terms of the agreement are consistent with University employment obligations. University regulates the allowable consulting time, but not the amount of compensation. The UC consulting policy can be found at http://www.ucop.edu/academic-personnel-programs/_files/apm/apm-025-07-01.pdf. A quick guide to Outside Consulting for UC Berkeley Faculty can be found at <http://www.spo.berkeley.edu/guide/consultquick.html>. All inventions made by University employees under a consulting agreement with a company must be disclosed to the University. You may disclose such inventions using the [Preliminary Invention Disclosure Form](#). Following review of the Invention Disclosure, the University determines ownership of the invention.

For more about information about inventions developed under a consulting agreement, see [UCOP’s Consulting Policy](#).

Consulting relationships are often helpful in the process of marketing an invention. They help IPIRA reach the right decision makers in industry, ones that will be a good match for the IP rights. By sharing your web of research and consulting relationships in the invention disclosure process, a more effective partnership with us can be achieved.

Can a student contribute to an invention?

Yes, many students work on inventions at Berkeley under a wide variety of circumstances. Berkeley promotes student entrepreneurship, and students can be named as Inventors under UC Technology Transfer Policy. Typically, a student will own his or her rights to an invention unless the invention was created by a student in a capacity as a UC employee and/or the student used more than incidental resources. Regents' Bylaws 3.10 and the UC Technology Transfer Policy provide more details: <http://policy.ucop.edu/doc/2500493/PatentPolicy>.

Should I list visiting scientists or scientists at other institutions on my Invention Disclosure?

All contributors to the ideas leading to a discovery should be mentioned in your disclosure, even if they are not UC employees. OTL, along with legal counsel, will determine the rights of such persons and institutions. It is prudent to discuss with OTL all working relationships (preferably before they begin) to understand the implications for any subsequent inventions.



ASSESSMENT

OF AN INVENTION DISCLOSURE

How does OTL assess Invention Disclosures?

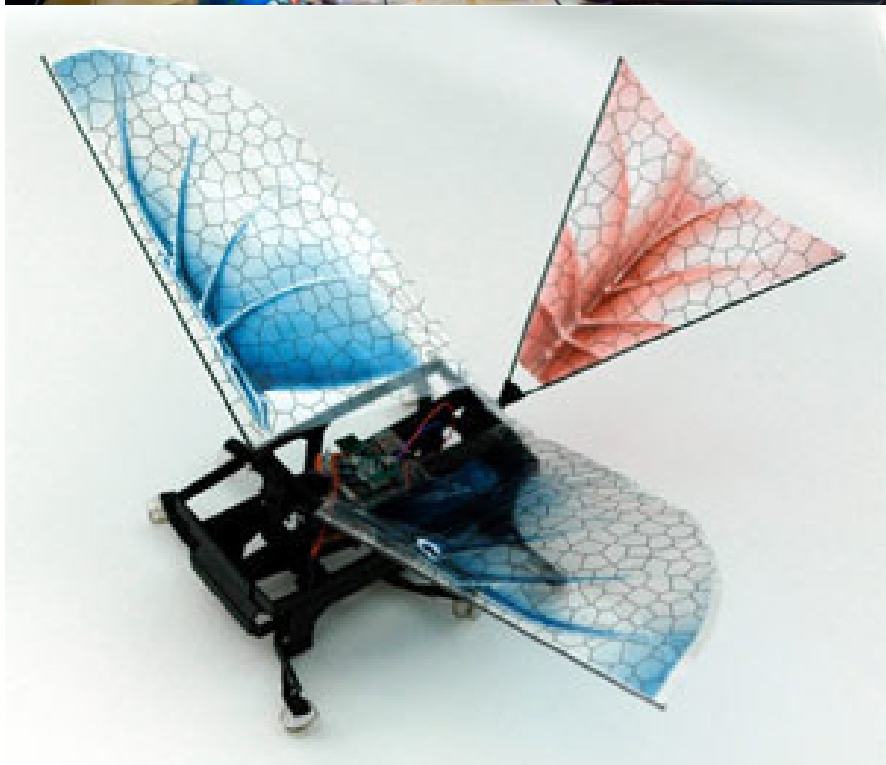
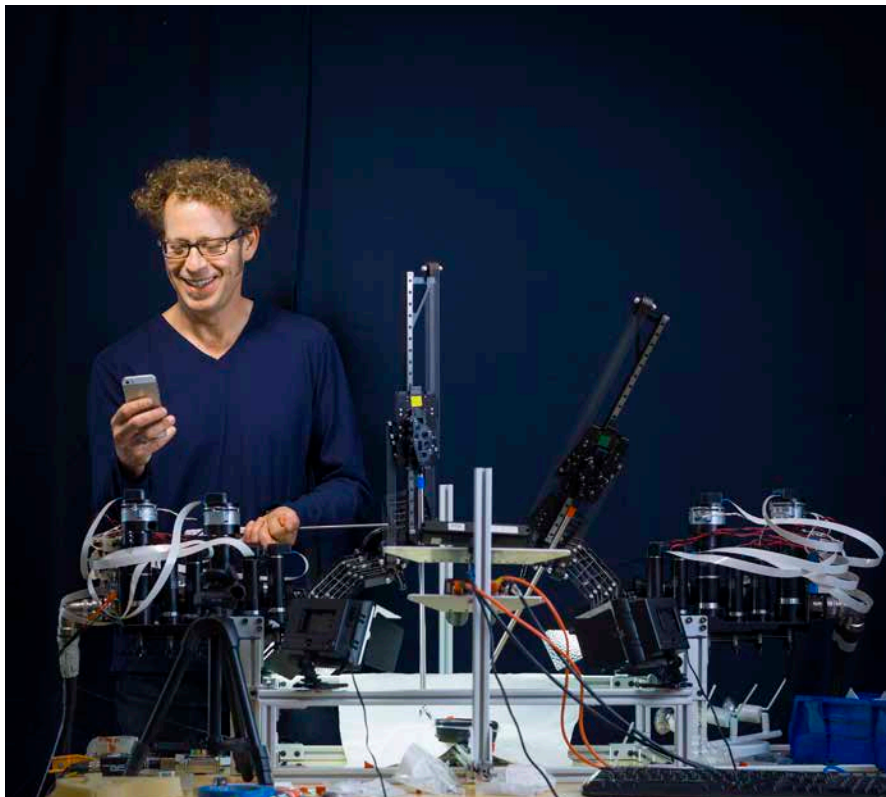
Licensing Officers at OTL examine each invention disclosure to review the novelty of the invention, protectability and marketability of potential products or services, relationship to related intellectual property, size and growth potential of the relevant market, amount of time and money required for further development, pre-existing rights associated with the intellectual property (IP), and potential competition from other products/technologies.

How does OTL decide whether to commercialize with a traditional or an “open source” license for software?

Generally, OTL supports University software developers who choose to essentially give their programs away through open source mechanisms, provided the University retains the right to distribute the program freely, that open sourcing is consistent with obligations to sponsors, and that each developer’s unit supports the decision. Developers should seek authorization from an appropriate department chair or dean.

Is an invention ever assigned to an Inventor?

If OTL decides not to pursue patent protection and/or chooses not to actively market the invention, the University may waive the invention back to the inventor(s). Reassignment of inventions funded from U.S. government sources requires the government’s prior approval. The OTL Licensing Officer can discuss alternatives based on the specific circumstances of a particular invention. You will find further information on this topic in the Technology Transfer Policy at <http://ipira.berkeley.edu/uc-policies-useful-forms>.



PATENTS

AND OTHER LEGAL PROTECTION

What is a patent?

In the U.S., a patent gives the holder the right to exclude others from making, using, selling, offering to sell, and importing the patented invention. A patent does not necessarily provide the holder any affirmative right to practice a technology since it may fall under a broader patent owned by others. Instead, it provides the right to exclude others from practicing the invention. Patent claims are the legal definition of an inventor's protectable invention.

What type of subject matter can be patented?

Patentable subject matter includes processes, machines, compositions of matter, articles, some computer programs, and methods, including methods of making compositions, methods of making articles, and even methods of performing business.

Can someone patent a naturally occurring substance?

Generally, you cannot patent a naturally occurring substance. A natural substance that has never before been isolated or known may be patentable in some instances, but only in its isolated form (since the isolated form had never been known before). A variation of a naturally occurring substance may be patentable if an inventor is able to demonstrate substantial non-obvious modifications that offer advantages of using the variant.

What is the United States Patent and Trademark Office (USPTO)?

The USPTO is the federal agency, organized under the Department of Commerce that administers patents on behalf of the government. The USPTO employs patent examiners skilled in all technical fields in order to appraise patent applications. It also issues federal trademark registrations.

What is the definition of an inventor on a patent and who determines this?

Under U.S. law, an inventor is a person who takes part in the conception of the ideas in the patent claims of a patent application. Thus, inventorship of a patent application may change as the patent claims are changed during prosecution of the application. An employer or person who only furnishes money to build or practice an invention is not an inventor. Inventorship is a legal issue and may require an intricate legal determination by the patent attorney prosecuting the application.

Who is responsible for patenting?

OTL contracts with outside patent counsel for IP protection, thus assuring access to patent specialists in diverse technology areas. Inventors work with the patent counsel in drafting the patent applications and responses to worldwide patent offices. The Licensing Officer will help with the selection and oversight of the outside patent counsel.

Why does UC protect some intellectual property through patenting?

Patent protection is often a requirement of a potential commercialization partner (licensee) because it can protect the commercial partner's often sizable investment required to bring the technology to market. Due to their expense and the length of time required to obtain a patent, patent applications are not possible for all UC intellectual property. We carefully review the commercial potential for an invention before investing in the patent process. However, because the need for commencing a patent filing usually precedes finding a licensee, we look for creative and cost-effective ways to seek early protections for as many promising inventions as possible.

What is the patenting process?

Patent applications are drafted by a patent attorney or a patent agent (a non-attorney with a science education licensed to practice by the USPTO). The patent attorney or patent agent generally will ask the inventor to review an application before it is filed and will also ask questions about inventorship of the application claims. At the time an application is filed, the patent attorney will ask the inventor(s) to sign an Inventor's Declaration and an Assignment, which evidences the inventor's duty to assign the patent to the University.

In approximately one year or longer, depending on the technology, the patent attorney will receive written notice from the USPTO as to whether the application and its claims have been accepted in the form as filed. More often than not, the USPTO rejects the application because either certain formalities need to be cleared up, or the claims are not patentable over the "prior art" (anything that workers in the field have made or publicly disclosed in the past). The letter sent by the USPTO is referred to as an Office Action or Official Action.

If the application is rejected, the patent attorney must file a written response, usually within three to six months. Generally the attorney may amend the claims and/or point out why the USPTO's position is incorrect. This procedure is referred to as patent prosecution. Often it will take two USPTO Official Actions and two responses by the patent attorney—and sometimes more—before the application is resolved. The resolution can take the form of a USPTO notice that the application is allowable; in other words, the USPTO agrees to issue a patent. During this process, input from the inventor(s) is often needed to confirm the patent attorney's understanding of the technical aspects of the invention and/or the prior art cited against the application. The USPTO holds patent applications confidential until published by the USPTO, 18 months after initial filing.

Who decides what gets protected?

OTL and the inventor(s) consider relevant factors in making recommendations about filing patent applications. Based on a recommendation from the licensing officer, the Director of OTL ultimately makes the final decision whether to file a patent application or seek another form of protection.

What if I created the invention with someone from another institution or company?

If you created the invention under a sponsored research agreement with a company, the Licensing Officer will need to review that agreement to determine ownership and other rights associated with the contract and to determine the appropriate next steps. Should the technology be jointly owned with another academic institution, the Licensing Officer will usually enter into an "inter-institutional" agreement that provides for one of the institutions to take the lead in protecting and licensing the invention, sharing of expenses associated with the patenting process and allocating any licensing revenues. If the technology is jointly owned with another company, the Licensing Officer will work with the company to determine the appropriate patenting and licensing strategy.

Will the University initiate or continue patenting activity without an identified licensee?

Often the University accepts the risk of filing a patent application before a licensee has been identified. After University rights have been licensed to a licensee, the licensee generally pays the patenting expenses. At times OTL must decline further patent prosecution after a reasonable period (often a year or two) of attempting to identify a licensee (or if it is determined that we cannot obtain reasonable claims from the USPTO).

Is there such a thing as a provisional patent?

No. However, there is a provisional patent application, which is described below.

What is the difference between a provisional patent application and a regular (or “utility”) patent application?

In certain circumstances, U.S. provisional patent applications can provide a tool for preserving patent rights while temporarily reducing costs. This occurs because the application is not examined during the year in which it is pending and claims are not required. A regular U.S. application and related foreign applications must be filed within one year of the provisional form in order to receive its early filing date. However, an applicant only receives the benefit of the earlier filing date for material that is adequately described and enabled in the provisional application. As a result, the patent attorney may need your assistance when an application is filed as a provisional.

What’s different about foreign patent protection?

Foreign patent protection is subject to the laws of each individual country, although in a general sense the process works much the same as it does in the United States. In foreign countries, however, an inventor will lose any patent rights if he or she publicly discloses the invention prior to filing the patent application. In contrast, the United States has a one year grace period after publication or public disclosure in any form during which a patent may be filed.

Is there such a thing as an international patent?

Although an international patent does not exist, an international agreement known as the Patent Cooperation Treaty (PCT) provides a streamlined filing procedure for most industrialized nations. For U.S. applicants, a PCT application is generally filed one year after the corresponding U.S. application (either provisional or regular) has been submitted. The PCT application must later be filed in the national patent office of any country in which the applicant wishes to seek patent protection, generally within 30 months of the earliest claimed filing date.

The PCT provides two advantages.

First, it delays the need to file costly foreign applications until the 30-month date, often after an applicant has the opportunity to further develop, evaluate and/or market the invention for licensing. Second, the international preliminary examination often allows an applicant to simplify the patent prosecution process by having a single examiner speak to the patentability of the claims, which can save significant costs in prosecuting foreign patent applications.

An important international treaty called the Paris Convention permits a patent application filed in a second country (or a PCT application) to claim the benefit of the filing date of an application filed in a first country. However, pursuant to this treaty, these so-called “convention applications” must be filed in foreign countries (or as a PCT) within one year of the first filing date of the U.S. application.

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

Filing a regular U.S. patent application may cost anywhere from \$10,000 to \$20,000. To obtain an issued patent may require an additional \$10,000 to \$15,000 for patent prosecution. Filing and obtaining issued patents in other countries may cost \$20,000 or more per country. Also, once a patent is issued in the U.S or in foreign countries, certain maintenance fees are required to keep the patent alive.

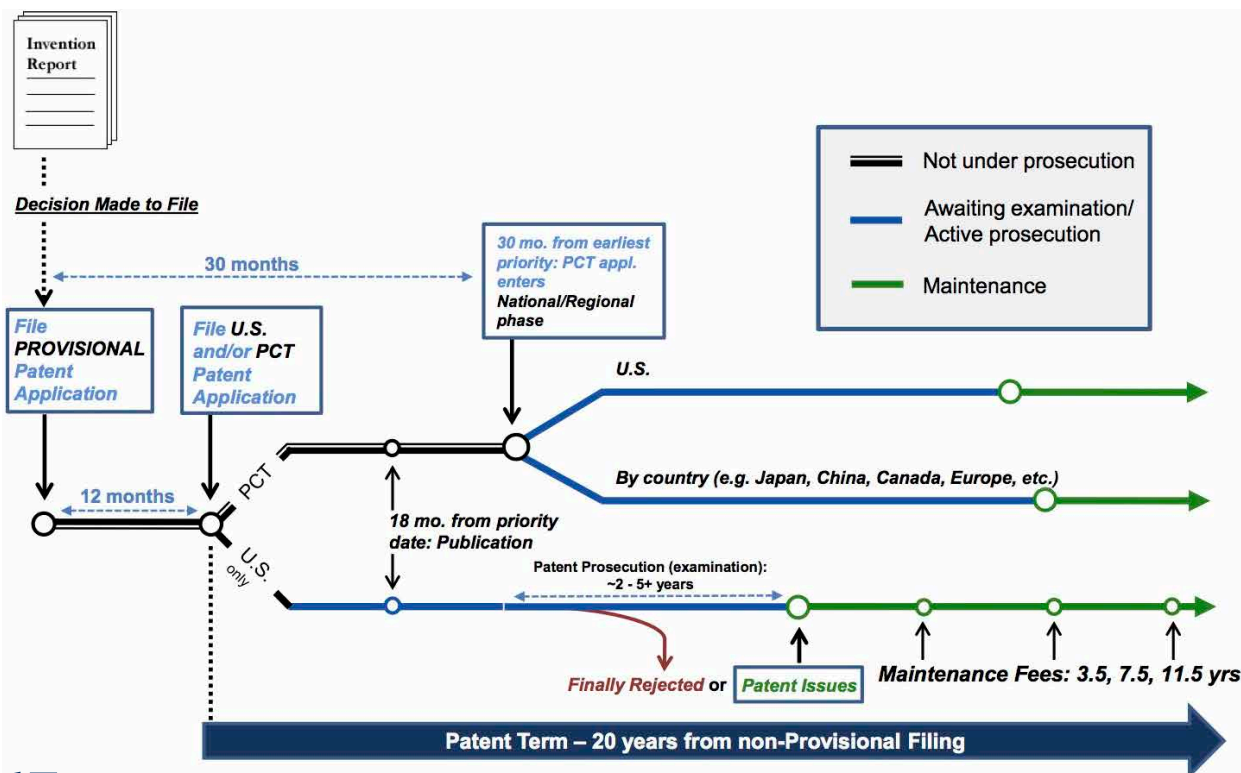
What is the timeline of the patenting process and resulting protection?

Currently, the average U.S. utility patent application is pending for about two years, though inventors in the biotech and computer fields should plan on a longer waiting period. Once a patent is issued, it is enforceable for 20 years from the initial filing of the application that resulted in the patent, assuming that USPTO-mandated maintenance fees are paid.

What is a copyright and how is it useful?

Copyright is a form of protection provided by the laws of the United States to the authors of “original works of authorship.” This includes literary, dramatic, musical, artistic, and certain other intellectual works as well as computer software. This protection is available to both published and unpublished works. The Copyright Act generally gives the owner of copyright the exclusive right to conduct and authorize various acts, including reproduction, public performance and making derivative works. Copyright protection is automatically secured when a work is fixed into a tangible medium such as a book, software code, video, etc. In some instances, the University registers copyrights, but generally not until a commercial product is ready for manufacture.

The University’s copyright policy describes the applicable rules for copyrightable works (<http://ipira.berkeley.edu/ip-protection>).



What is a derivative work?

A “derivative work” is a work based upon one or more preexisting works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed or adapted. A work consisting of editorial revisions, annotations, elaborations, or other modifications, which, as a whole, represent an original work of authorship, is a “derivative work.” The owner of a copyright generally has the exclusive right to create derivative works.

How can I learn more about University copyright policies?

We recommend that you begin by reviewing material on the University’s copyright website at <http://ipira.berkeley.edu/FAQs>. If you have additional questions about a potentially copyrightable invention, please contact OTL. If you have questions about other copyright policies, please contact the University’s Office of General Counsel.

What role does an inventor usually play in a company?

UC faculty typically serves as technology consultants, advisors or in some other technical developmental capacity. Rarely do faculty choose to leave the University and join the startup. In many cases, the startup investors and the management team identify the best role for the inventor based on his/her expertise and interests. As the company matures, and additional investment is required, the inventor’s role may change. Faculty involvement of any kind in a startup is also reviewed by a UC Berkeley Conflict of Interest Committee. Student inventors and post-docs may choose to join the startup upon graduation but rarely have the experience or business skills to serve as the company’s sole management.

Can the University accept equity in the company?

The University can accept equity as part of the financial terms of the license. Equity may be substituted for other cash considerations that are often difficult for startups. It is also a way for the University to share some of the risk associated with the startups. A decision to take equity must make sense for both the University and the company.

What legal assistance is needed in creating a startup?

In addition to corporate counsel, the startup may have its own intellectual property counsel to assist with corporate patent strategy, especially if the company will be involved in a patent-rich area. The startup’s counsel must be separate from UC counsel prosecuting the patent application(s). Also, it is wise for inventors to have agreements regarding their roles with the startup reviewed by their own counsel to ensure that all personal ramifications, including taxation and liabilities, are clearly understood.

For additional information and available resources, see <http://ipira.berkeley.edu/entrepreneurs>.



MARKETING

TO FIND A LICENSEE

How does OTL market my inventions?

Licensing Officers use many sources and strategies to identify potential licensees and market inventions. Sometimes existing relationships of the inventors, the Tech Transfer staff, and other researchers are useful in marketing an invention. Market research can assist in identifying prospective licensees. We also examine other complementary technologies and agreements to assist our efforts. We use our website to post inventions, and make direct contacts. Faculty publications and presentations are often excellent marketing tools as well.

How are most licensees found?

Research and consulting relationships of inventors are often a valuable resource for finding licensees. Licensees are also identified through existing relationships/networks of the Tech Transfer staff. Our licensees often license more than one technology from the University. We attempt to broaden these relationships through contacts obtained from website posting inquiries, market research, and the cultivation of existing licensing relationships.

How long does it take to find a potential licensee?

It can take months and sometimes years to locate a potential licensee, depending on the attractiveness of the invention, its stage of development, competing technologies, and the needs of the market. Most university inventions tend to be in the early stage in the development cycle and thus require substantial commercialization investment, making it difficult to attract a licensee.

How can I assist in marketing my invention?

Your active involvement can improve the chances of matching an invention to an outside company. Your research and consulting relationships are often helpful in both identifying potential licensees and technology champions within companies. Once interested companies are identified, the inventor is the best person to describe the details of the invention and its technical advantages.

Can there be more than one licensee?

Yes, an invention can be licensed to multiple licensees, either non-exclusively to several companies or exclusively to more than one company, each for a unique field-of-use (application) or geography.



LICENSES

AND OTHER AGREEMENTS

What is a license?

A license is a permission that the owner or controller of intellectual property grants to another party, usually under a license agreement

What is a license agreement?

License agreements describe the rights and responsibilities related to the use and exploitation of intellectual property developed at the University. University license agreements usually stipulate that the licensee should diligently seek to bring the intellectual property into commercial use for the public good and provide a reasonable return to the University.

How is a company chosen to be a licensee?

A licensee is chosen based on its ability to commercialize the technology for the benefit of the general public. Sometimes an established company with experience in similar technologies and markets is the best choice. In other cases, a startup company may be a better option. It is rare for the University to have multiple potential licensees bidding on an invention.

What can I expect to gain if my IP is licensed?

Per University policy, a share of any financial return from a license is provided to the inventor(s). Under the current (1997) Inventor Share Policy, the inventors receive 35 percent of net income. For more information, visit <http://ipira.berkeley.edu/uc-policies-useful-forms>.

Furthermore, most inventors enjoy the satisfaction of knowing their inventions are being deployed for the benefit of the general public. New and enhanced relationships with businesses are another outcome that can augment one's teaching, research and consulting. In some cases, additional sponsored research may result from the licensee.

What is the relationship between an inventor and a licensee, and how much of my time will it require?

Many licensees require the active assistance of the inventor to facilitate their commercialization efforts, at least at the early stages of development. This can range from infrequent, informal contacts to a more formal consulting relationship. Working with a new business startup can require substantially more time, depending on your role in or with the company and your continuing role within the University. Your participation with a startup is governed by University conflict of interest policies.





What other types of agreements and considerations apply to tech transfer?

- **Non-Disclosure Agreements (NDAs)** are often used to protect the confidentiality of an invention during evaluation by potential licensees. NDAs also protect proprietary information of third parties that University researchers need to review in order to conduct research or evaluate research opportunities. OTL enters into NDAs for University proprietary information shared with someone outside of the University. IAO manages incoming NDAs related to research contracts.
- **Material Transfer Agreements (MTAs)**, used for incoming and outgoing materials at the University, are administered by OTL (outgoing materials) or IAO (incoming materials). These agreements describe the terms under which University researchers and outside researchers may share materials, typically for research or evaluation purposes. Intellectual property rights can be endangered if materials are used without a proper MTA.
- **Inter-Institutional Agreements** describe the terms under which two or more institutions (generally universities) will collaborate to assess, protect, market, license, and share in the revenues received from licensing jointly owned intellectual property.
- **Letter Agreements** are entered into with companies (and sometimes individuals) wishing to evaluate the technology. The agreement provides the company a time-limited period to negotiate a license or option agreement while conducting due diligence or speaking with investors and other potential partners.
- **Option Agreements** are entered into with companies wishing to evaluate the technology prior to entering into a full license agreement. The option agreement provides the company with a time-limited right to obtain a full license by “exercising” the option to obtain the license.
- **Research Agreements** describe the terms under which sponsors provide research support to the University. These are negotiated by IAO. More information about IAO can be obtained at <http://ipira.berkeley.edu/industry-sponsored-research>.

COMMERCIALIZATION

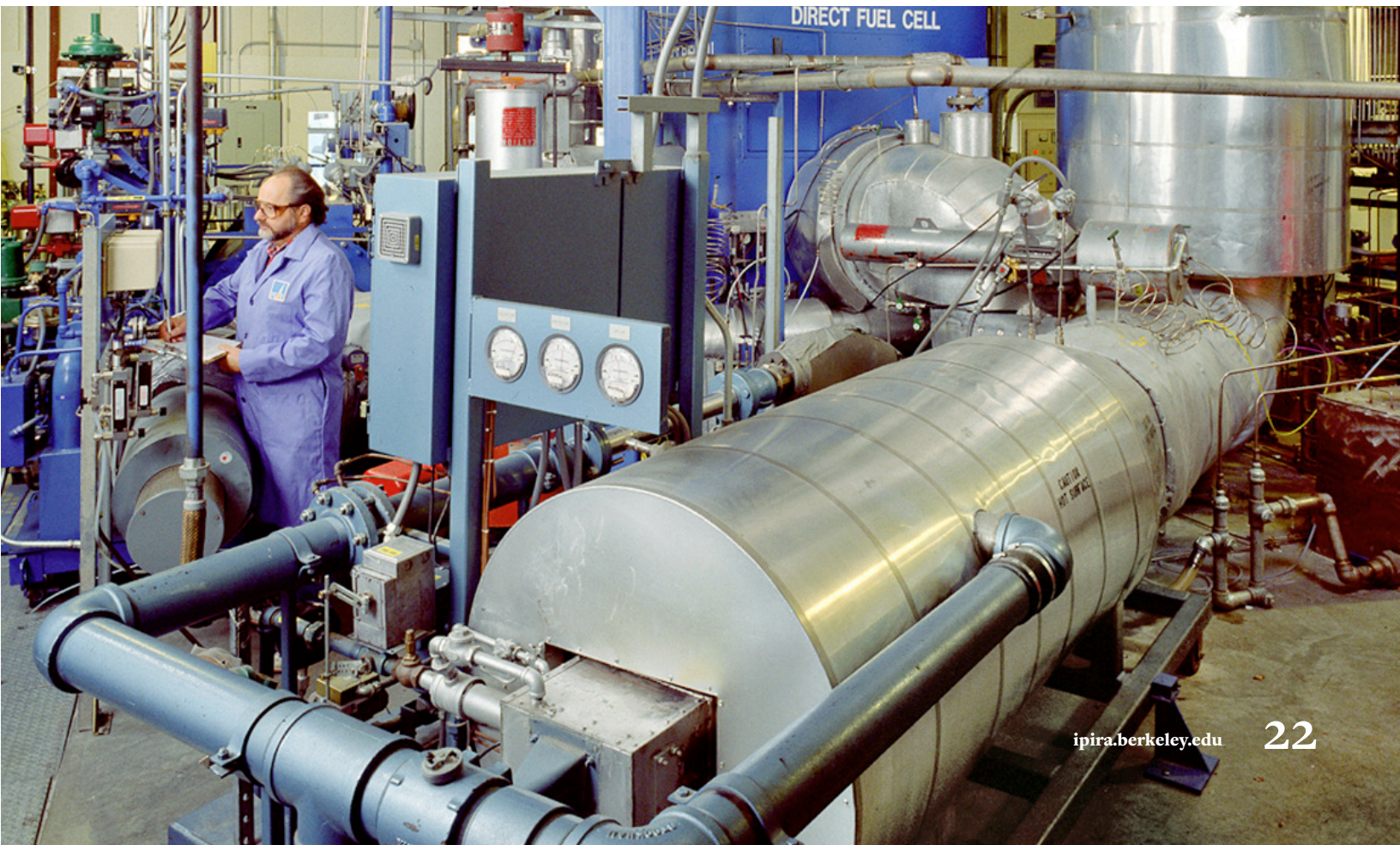
What revenues are generated for the University if commercialization is successful?

Most licenses have licensing fees that can be modest (for startups or situations in which the value of the license is deemed to warrant a modest license fee) or can reach hundreds of thousands of dollars. Royalties on the eventual sales of the licensed products can generate revenues, although this can take years to occur. Equity, if included in a license, can yield returns, but only if a successful equity liquidation event (public equity offering or a sale of the company) occurs. Most licenses do not yield substantial revenues.

A recent study of licenses at U.S. universities demonstrated that only 1% of all licenses yield over \$1 million. However, the rewards of an invention reaching the market are often more significant than the financial considerations alone.

What will happen to my invention if the startup company or licensee is unsuccessful in commercializing the technology? Can the invention be licensed to another entity?

Licenses typically include performance milestones that, if unmet, can result in termination of the license. This termination allows for subsequent licensing to another company.



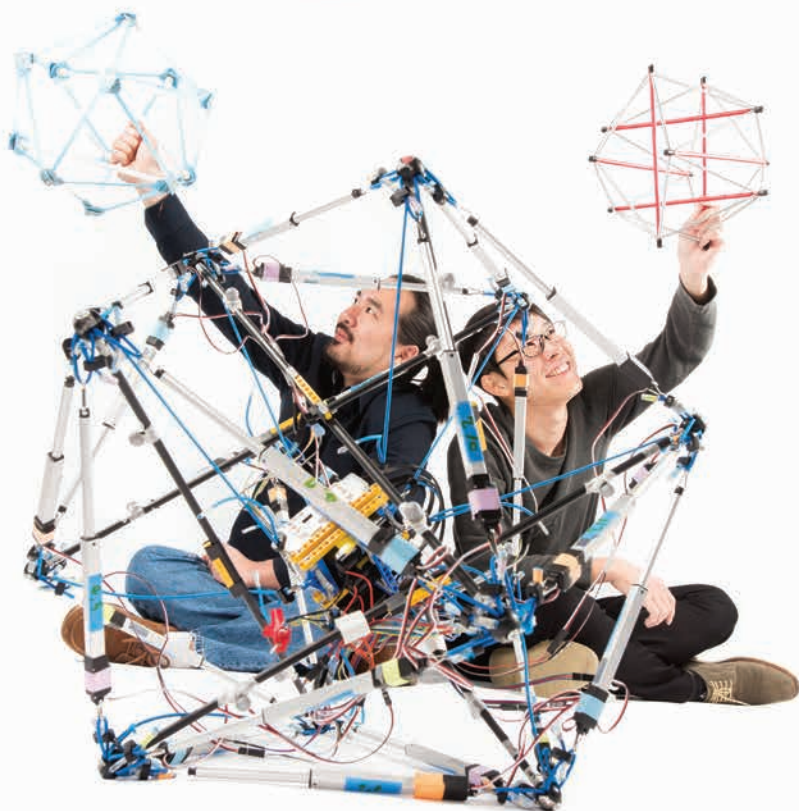
STARTUP COMPANIES

Startup companies embody the entrepreneurial spirit and culture at UC Berkeley. Backed by a vibrant startup culture that serves as the engine of economic growth for much of the Bay Area, UC Berkeley has numerous programs that support the translation of university research into real-world solutions. These programs make up the entrepreneurial ecosystem that supports Berkeley startups.

For the past decade, OTL has helped streamline the spread of cutting-edge ideas from the campus to the rest of the society. OTL plays a critical role for Berkeley's Entrepreneurs by maintaining partnerships with companies. These relationships allow Berkeley entrepreneurs to develop research partners, obtain venture funds, perform industry-sponsored research, apply for SBIR/STTR funds and grants, protect intellectual property rights, commercialize inventions, and start a company.

Who decides whether to form a startup and what resources are available to the inventor?

The choice to establish a new company for commercializing IP may be made by the inventor(s) or other entities/entrepreneurs. If a new business startup is chosen as the preferred commercialization path, the inventor(s) can draw upon an extensive network of resources available at The Berkeley Entrepreneurship Ecosystem (<http://ipira.berkeley.edu/entrepreneurship-ecosystem>) including links to networks, support programs, incubators, and seminars, to assist you. For funding, inventor(s) may explore funding opportunities at the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) program website, (<https://www.sbir.gov>). This program, run by US government, enables small businesses to explore the technological potential of their inventions and to provide incentive for commercializing those. In addition, a list of venture capitalists is available at <http://ipira.berkeley.edu/partial-list-venture-capitalists> and the Entrepreneur's Startup Guide can be found at http://ipira.berkeley.edu/sites/default/files/shared/docs/Startup_Guide.pdf.



NAVIGATING CONFLICT OF INTEREST



How does the University define a conflict of interest?

A conflict of interest (COI) can occur when a University employee, through a relationship with an outside organization, is in a position to: 1) influence the University's business, research or other areas that may lead to direct or indirect financial gain, 2) adversely impact or influence one's research or teaching responsibilities, or 3) provide improper advantage to others, to the disadvantage of the University (<http://researchcoi.berkeley.edu>).

How does the University manage conflict associated with research and tech transfer transactions?

Conflict(s) associated with research and tech transfer transactions are managed by the COI Committee. Should a need arise IAO/OTL can direct you to the appropriate COI Committee representative. It is the responsibility of the researcher or faculty member to disclose and document any outside arrangements that constitute disclosable situations or interests as described in University conflict of interest policies. COI approval is required before any associated agreements can be approved. For more information, see <http://researchcoi.berkeley.edu>.

REVENUE DISTRIBUTIONS

How are license revenues distributed?

OTL is responsible for managing the expenses and revenues associated with technology agreements. Per the UC Technology Transfer Policy, revenues from license fees, royalties and equity—minus any unreimbursed patenting and file expenses—are shared with inventors.

What are the tax implications of any revenues I receive from the University?

License revenues are typically taxed as Form 1099 income. You should consult a tax advisor for specific advice.

How are inventor revenues distributed if there are multiple inventors?

The inventors' share of royalties and other income under the license is equally divided amongst all inventors, unless all inventors collectively agree to an uneven distribution, in writing, in advance at the time of submission of the IDF.

How is equity from a license distributed?

When University equity is liquidated by the University's Office of the Chief Investment Officer, the resulting funds are distributed per the Inventor Share policy (<http://ucop.edu/innovation-alliances-services/innovation/training-and-education/inventor-share-policy.html>).

