

East Carolina University

Infinite Possibilities

AN INVENTORS and INNOVATORS HANDBOOK

Office of Technology Transfer

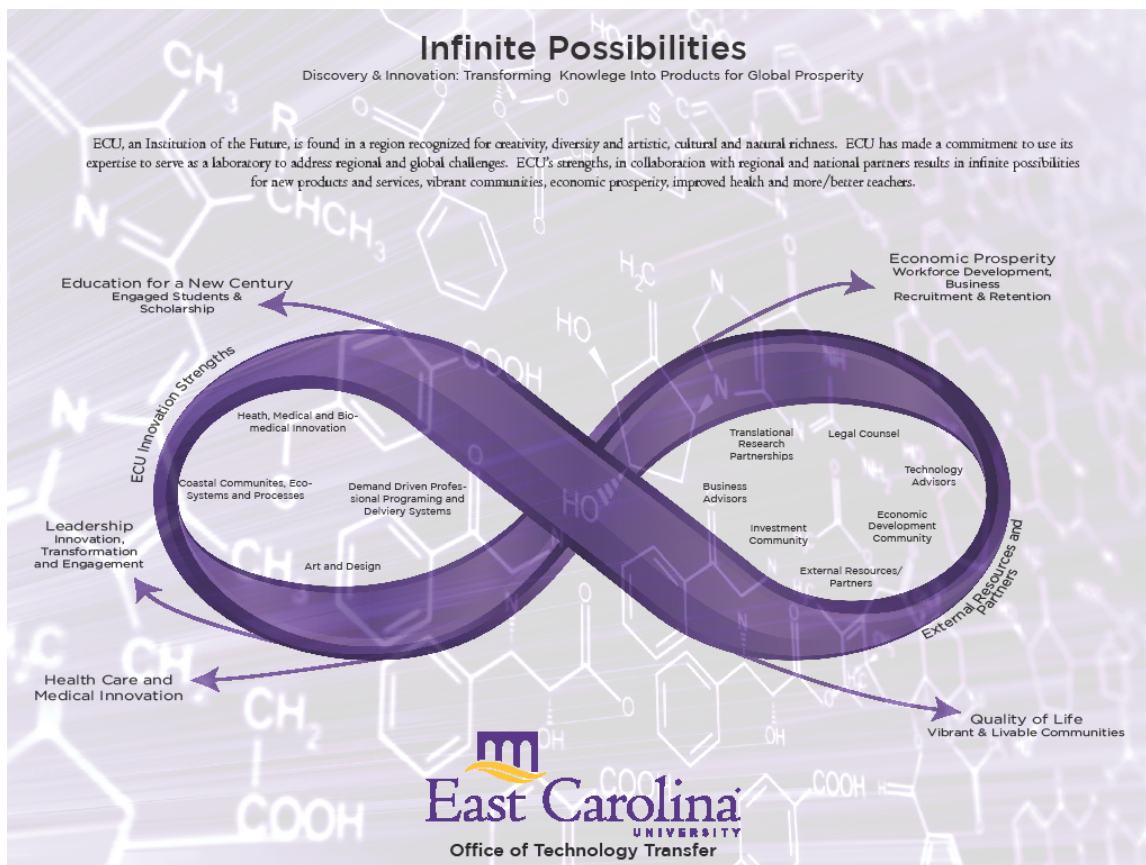
TABLE OF CONTENTS

- I. **Introduction**
- II. **Advancing University Inventions and Innovations**
 - Technology Transfer
 - Bayh-Dole Act
 - Public Benefit
- III. **Intellectual Property**
 - Intellectual Property Defined
 - Patents
 - Copyrights
 - Trademarks
 - Trade Secrets
- IV. **Patent Process**
 - Statutory Requirements
 - Types of Patent Applications
 - Documentation and Laboratory Notebooks
 - Premature Public Disclosure
 - Inventorship vs. Authorship
- V. **Technology Transfer Process**
 - Invention Ownership
 - Invention Disclosure
 - Intellectual Property Strategy
 - Commercialization Strategy
 - Industry Partnerships
 - License Negotiation
 - Income Generation
- VI. **Licensing**
 - Types of Licenses
 - License Terms
- VII. **Other**
 - Consulting
 - Starting a Business
 - Responsibilities
 - Resources
- VIII. **Contact Information**

Introduction

East Carolina University, an Institution of the Future, is found in a region recognized for creativity, diversity and artistic, cultural and natural richness. ECU has made a commitment to use its expertise to serve as a laboratory to address regional and global challenges. ECU's strengths, in collaboration with regional and national partners have resulted in opportunities for new products and services to benefit the quality of life for our community, our region and beyond. These new intellectual assets may qualify for intellectual property protection in the form of patents, copyrights, trademarks, and trade secrets. The Board of Governors of the University of North Carolina has determined that patenting and commercialization of these assets are consistent with the mission of the University.

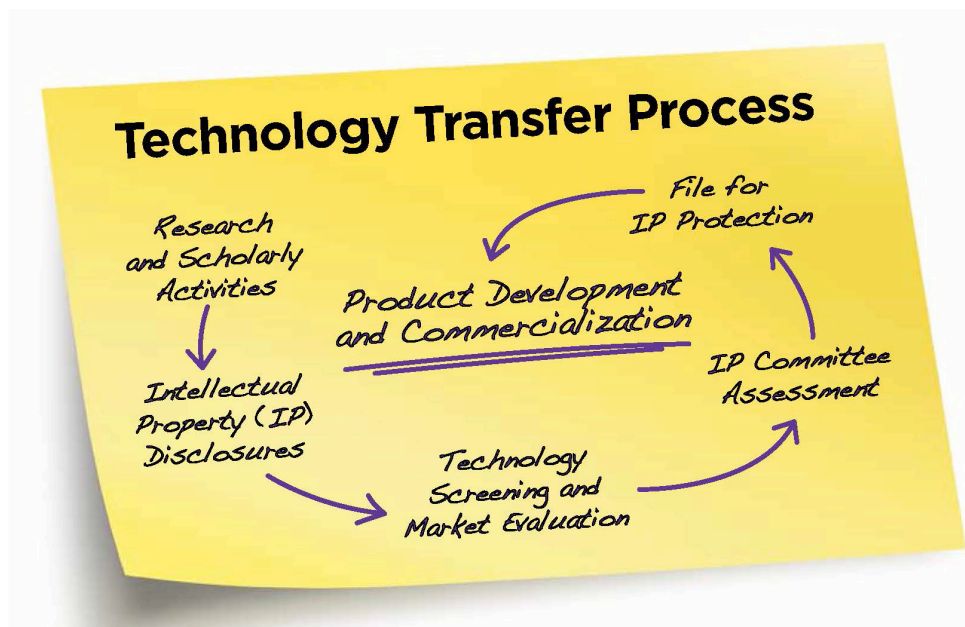
The Office of Technology Transfer joins ECU's research and economic development enterprise and regional resources in offering support for research, scholarly and educational activities. ECU has assembled many resources to facilitate development of your innovative ideas and research. The purpose of Infinite Possibilities - An Inventors and Innovators Handbook is to acquaint you with the process and benefits of technology transfer and commercialization activities.



II. Advancing University Inventions and Innovations

Technology Transfer

straddles the line between facilitating the research infrastructure and commercializing new inventions and innovation for public benefit. In its support of academic research, technology transfer is the process of facilitating the transfer of knowledge and materials among the broader research community in a manner that recognizes ownership and confidentiality. Technology transfer is also the process of identifying and evaluating university inventions and innovations, establishing appropriate intellectual property protections, and licensing resulting intellectual property rights to interested business partners for development of new products, services and businesses.



Bayh-Dole Act

The field of academic technology transfer received a boost with the passage of the Bayh-Dole Act (P.L. 96-517, Patent and Trademark Act Amendments of 1980). Bayh-Dole was primarily responsible for allowing universities, small businesses and non-profit organizations to maintain ownership of intellectual property rights resulting from federally funded grant support. These rights require university commitment to diligently pursue commercialization efforts, provide regular progress reports to the federal government, and give commercialization preferences to U.S. small businesses.

Public Benefit

While financial rewards are readily accepted and valued in the technology transfer process, the primary purpose of technology transfer is to develop new products, processes, and businesses for the benefit of society. Impacts of academic technology transfer include improved human, environmental and economic conditions, such as longer lives, better quality of health, jobs and improved natural and economic environments.

III. Intellectual Property

Intellectual Property

can be either tangible or intangible personal property, like concepts, ideas, and other works, that can be protected from unauthorized use through patents, copyrights, trademarks, and trade secrets.

Patents

provide an intellectual property right to exclude others from making, having made, using, selling, having sold, or importing an invention without prior permission, in exchange for public disclosure of the invention when a patent is granted. These exclusive rights must be established on a country-by-country basis through a process of filing and prosecuting a patent application. For an invention to be patentable it must meet criteria for patentable subject matter and satisfy the statutory requirements for novelty, utility, enablement and non-obviousness. Types of patents include:

Utility Patents offer protection to new and useful processes, methods, machines, composition of matters, or improvements thereof. The term of a utility patent is 20 years from date of first filing of a patent application, subject to payment of maintenance fees.

Design Patents offer protection to new, original and ornamental design (appearance) of an article of manufacture. The design must be inseparable from the object to which it is applied. The term of a design patent is 14 years from date of granting of a patent.

Plant Patents offer protection for distinct and new varieties of asexually propagated plants that are reproduced without use of seed. The term of a plant patent is 20 years from date of first filing of a patent application, but is not subject to the payment of maintenance fees.

Copyrights

provide protection to tangible forms of expression but not to underlying ideas behind the expression. Copyrightable works include written, musical, dramatic, pictorial, graphic, sculptural, and architectural works, as well as motion pictures, sound recordings, computer programs, and software. Copyright protection generally extends for 70 years or more beyond the life of the author. Copyright is automatically established at the time of creation. It is not necessary to label a copyrighted work with a copyright notice. Neither is it necessary to formally register a copyrighted work to establish copyright protection. Copyright registration is a relatively simple and inexpensive process, and can be accomplished by referring to the Library of Congress.

Trademarks

consist of words, phrases, symbols or designs, or a combination thereof that identifies and distinguishes a product in commerce. **Service marks** serve a similar purpose for services, rather than products.

Trade Secrets

of institutional research are considered contrary to academic standards for publication and dissemination of knowledge. However, there are times when maintaining information in confidence is necessary, especially if that information is provided by non-ECU collaborators and industry partners. Information of a confidential nature should only be provided to ECU under the terms of a **Confidential Disclosure Agreement (CDA)**. In other instances unpublished information and research data generated by ECU may also benefit from a CDA before sharing with collaborators from other organizations, especially collaborators from industry. CDA's recognize the proprietary nature of unpublished information and restrict the manner in which that information can be used by the receiving party.

IV. Patent Process

The process of applying for and obtaining a patent is managed by a qualified patent attorney or patent agent, who is licensed to practice before the United States Patent and Trademark Office (USPTO) and is approved to represent the University. Patent prosecution begins with the preparation and filing of a patent application, and continues through a lengthy negotiation process with a patent examiner from the USPTO. The prosecution of a patent application typically is filled with rejections, cancelled claims, and new applications. Despite its complexity, the prosecution process is designed to generate strong and effective patent protection that best benefits the applicant and society. The process takes a firm commitment of time on the part of the inventor, as well as a significant financial investment from the University. University inventors will be required to review patent documents and help the attorney develop a strategy for responding to office actions issued by the patent examiner. The University's commitment not only involves shepherding the overall process, but also includes a fiduciary responsibility. The cost to simply file a U.S. utility patent application can be \$10,000 or more for each application. The cost to prosecute a U.S. application can be as much as a 3-5 fold greater than the filing cost. In addition, international patent applications can easily reach several hundred thousand dollars per patent family. Fiscal responsibility requires periodic evaluations of ECU's patent portfolio by ECU's Office of Technology Transfer and the University Committee on Intellectual Property / Patents.

Statutory Requirements

A patent application must address several statutory requirements. These include statutory subject matter, novelty, utility, enablement, and non-obviousness.

Statutory Subject Matter

Patents may only be issued for subject matter considered legally patentable. These include new and useful processes, machines, articles of manufacture, and compositions of matter or improvements to processes, machines, articles of manufacture, and compositions of matter. Examples of patentable subject matter include chemical compounds, chemical compositions or mixtures, machines, manufacturing processes, therapeutic & diagnostic methods, electronic devices, microorganisms, and computer software.

Novelty

In order to prove that an invention is novel, a thorough search must be made to prove that the invention a) is not already patented by another party; b) is not otherwise described in any printed or electronic publication; and c) has not been sold, offered for sale, or in public use. U.S. patent law allows a one-year grace period for filing patent applications if an unintended public disclosure is made but most other countries require absolute novelty. This means that there can be absolutely no public reference or use of an invention before an international patent application is filed.

Utility

The applicant of a patent application must prove that the invention serves a useful purpose. For instance, a new mathematical algorithm may meet the statutory subject matter requirement, but if the algorithm does not specify a practical purpose for using it other than pure intellectual curiosity, then the algorithm will not meet the practical utility test.

Enablement

The application must demonstrate proof of concept that the invention will work. This does not mean that the final embodiment of the invention must be defined but it does require proof that the concept will in fact work as described. For example, laboratory data demonstrating proof of concept in a lower order animal model may be sufficient to demonstrate that a compound performs as expected. Similarly, a preliminary prototype device may prove effectiveness of a new mechanical process.

Obviousness

A patent may not be issued if the difference between the invention and any prior art would be obvious to someone having ordinary skill in the art. In some cases it may be obvious that an invention is identical to something that has already been patented or otherwise described in the literature. However, most times it is difficult to judge whether obviousness is problematic without the guidance of a skilled patent attorney.

Types of Patent Applications

The patent process may involve the filing of any of the following types of patent applications.

Provisional Patent

A provisional patent application can serve as an interim utility patent application. It establishes a filing (priority) date, but it cannot mature into an issued patent unless the applicant re-files it as a non-provisional, utility application within one year of first filing. Provisional applications allow the university the advantage of establishing priority with an early filing date. This is especially valuable when little time is available to prepare a complete utility application before a looming publication deadline. Provisional applications allow the University to respond initially to early stage discoveries while providing the inventor additional time to prove the value of the invention. If institutional interest in the inventions continues, then the university can re-file the application as a non-provisional utility application, as long as it is filed prior to the one-year anniversary date.

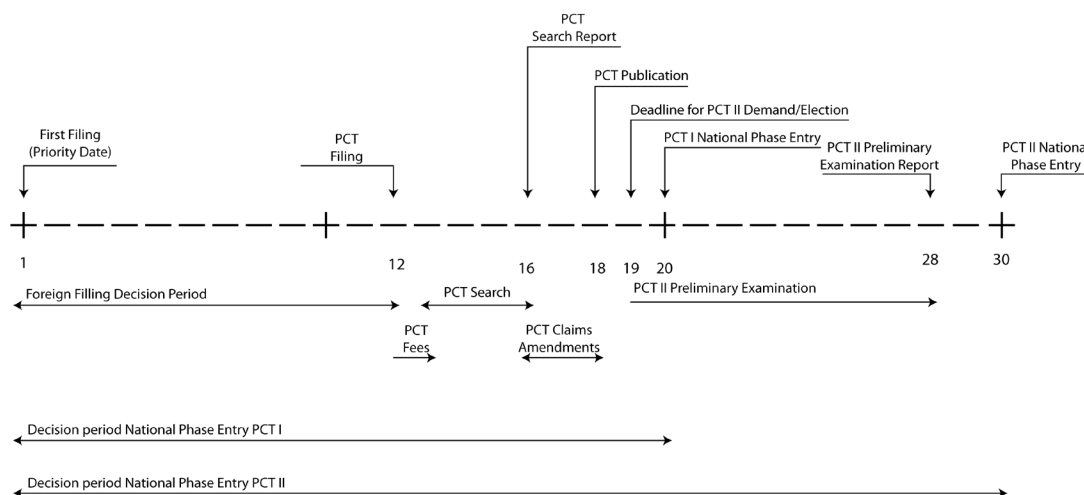
Non-Provisional Patent Application

A non-provisional patent application is a fully crafted utility application that proceeds through the patent prosecution process. Non-provisional applications contain a complete description of the invention (specification), at least one patent claim, drawings when necessary, and a declaration from the inventor claiming inventorship to the invention.

The initial patent application for a given invention is called the parent application and may contain any number of patent claims. However, over the course of prosecution the patent examiner from the U.S. Patent & Trademark Office (USPTO) may determine that more than one invention is being claimed, thus restricting immediate prosecution activity to only one set of claims contained in the application. This restriction process is quite common and effectively begins the subdivision of the invention into several inventions, and possibly into several applications. This collection of related inventions is known as a patent family. Any claims not initially selected for prosecution in the parent application may be deferred for prosecution to a later date. Process diagrams of patent prosecution in varying degrees of complexity are provided in Appendix A.

International Patent Application

The most cost effective way to initiate the international patent process is to file a universal PCT application (associated with the Patent Cooperation Treaty), which is accepted by most nations. The PCT must be filed within twelve months from first priority filing. It allows the university to designate all member nations for a relatively small fee. However later, within 30-31 months from the date of first priority filing, the countries of greatest interest will need to be identified for any continuing interest in the very costly international patent process known as National Phase Entry. Typically the University will not proceed with National Phase filing without the financial support of a corporate sponsor or licensee.



Documentation and Laboratory Notebooks

Good laboratory records and documentation are valuable proof of a discovery/invention, preservation of experimental data and observation, and a record of the successes and failures of the original experiment. A laboratory or idea notebook is a valuable tool for providing this permanent written record of the mental and physical activities involved in discovery of an invention. For maximum effectiveness, the laboratory notebook should be sufficiently detailed to document the process and allow for re-creation of experiments or other processes that resulted in the invention. This is important for preserving and maintaining maximum intellectual property rights. In addition, the notebook should have enough information that a technically sophisticated outsider, reviewing the work later, can understand what was done without help from the researcher who made the original entries. Federal granting agencies require that all research data including laboratory notebooks are property of, and maintained by, the university even if an investigator leaves the university's employment. Entries in a laboratory notebook should be consistent, chronological and complete. Effective laboratory notebooks should routinely incorporate the following elements:

Physical Notebooks

should be hard bound with each page consecutively pre-numbered. No page or spaces should be skipped over for later entry of data, information or thoughts. Inadvertent gaps should be crossed through and notated with an explanation. Entries into the notebook should be in indelible ink. External charts, labels or other materials should be permanently glued into your notebook. Large quantities of computer-generated data should be bound and witnessed on every page.

Signature and Witness Corroboration

Periodically the notebook should be signed and dated by the researcher or inventor and corroborated in writing by a witness who is technically competent to understand the entries. Each page of the notebook should be signed and dated by the researcher and the corroborator. Corroboration should be completed at least once every two weeks. Many labs host periodic "Notebook Witnessing Days" in order to keep their records up to date.

Although electronic laboratory notebooks offer practical advantages over a written notebook, the courts have not yet fully addressed the legality of electronic records. However, many organizations manage electronic laboratory notebooks by printing electronic data on a regular basis then signing, corroborating and dating in the same manner as traditional laboratory notebooks. Others store data in an optical format (Write Once, Read Many or WORM). Although this may be more reliable than other electronic notebooks, it does not remove the witnessing requirements.

Premature Public Disclosure

Premature public disclosure of an invention in either written or oral form, may create challenges to obtaining patent protection. Such public disclosures include but aren't limited to published articles, abstracts, posters, seminar descriptions, grant proposals, theses and dissertations, as well as public demonstrations, offers to sell, and sale of products incorporating the invention.

Inventorship and Authorship

While these terms may sound similar, inventorship and authorship are very different. Inventorship is a legal concept that recognizes individuals who contribute to conception of an invention, as defined by the patent claims. Conception involves the mental part of the inventive act, but does not necessarily require the individual to reduce the invention to practice. So, for example, a student or laboratory technician who follows standard laboratory procedures to conduct a routine experiment in response to direction provided by a faculty mentor would not necessarily be considered a co-inventor to any resulting invention unless the student or technician also contributed to conception of some aspect of the idea behind the invention. Because inventorship is clearly defined by law, individuals may not be added to, or eliminated from, a patent without a rational evaluation of their contribution to conception of at least one of the claims identified in the patent. Inaccurate recognition of an inventor on a patent can result in invalidation of an issued patent. Authorship, on the other hand, is founded in academic tradition and its interpretation varies among individuals, departments and schools. Typically, authorship includes individuals who participate in the intellectual aspect of experimental design, data analysis, and manuscript preparation, but has been known to extend to others with less involvement as a matter of generosity and courtesy.

V. Technology Transfer Process

Invention Ownership

Unless otherwise provided for in a written agreement signed by an authorized university official, the university owns all right, title and interest in inventions that are conceived or conceived and reduced to practice with the aid of university facilities, staff or students, or with funds administered by the University.

Invention Disclosure

Disclosure of inventions to ECU is important for a variety of reasons. First, ECU has a duty to review and respond to inventions that are developed with institutional resources. Second, ECU is required to comply with federal regulations governing inventions developed with federal grants. Accordingly, ECU must submit periodic reports to the federal government about the status of federally funded inventions. Third, OTT can provide valuable guidance of the technology transfer process.

The technology transfer process considers many factors that relate to successful development and commercialization of a university invention, for example stage of development, market potential, industry interest, IP strength, and commercialization options. Initiation of the process begins with an informal, yet confidential, conversation with ECU's Office of Technology Transfer (OTT). This informal pre-disclosure of the invention allows the inventor to offer an explanation about the invention and perspective on the value of the invention. It will also provide OTT an opportunity to gather additional information about such things as publication history and competing products that will enable it to conduct a preliminary patent and market assessment of the invention. Upon review of these assessments, OTT and the inventor will decide whether to formally document the invention by completing a Report of Invention and then bring it before the University Committee on Intellectual Property / Patents for patent consideration.

Intellectual Property Strategy

Intellectual property protection is a consideration for successful commercialization of many inventions. While establishing intellectual property protection isn't necessary for all inventions, such as cell lines and antibodies, making an active assessment of intellectual property options is a valuable process. Products meeting large market needs, such as new drugs or medical devices, will not gain industry interest without first demonstrating a solid patent portfolio. The cost to develop a new therapeutic can reach \$1Billion so maintaining market exclusivity in the form of patent protection is vital for successful commercial partnerships. Investment in international patent protection can be exponentially more costly than U.S. patent protection alone so understandably ECU's financial resources aren't typically made available for international patent applications without a committed industry partner willing to take responsibility for patent costs. Determining an intellectual property strategy depends on publication history, stage of development of the invention, potential

for industry partners, and likelihood for strong patent protection. for industry partners, and likelihood for strong patent protection.

Commercialization Strategy

ECU’s strengths in research and teaching do not necessarily translate to expertise in development of commercialized products so finding the right partner to move an invention through the commercialization process is important. Notably, commercialization partners must be fully vested in the process. These partners may take the form of an international or national industry leader, or an established mid or small business. However, there are instances when development of a new business entity may be the most advantageous approach toward producing a new product. Regardless of the size of the entity, the partner must be equipped with relevant expertise, resources, and business acumen. A thorough technical and market assessment of the invention will help determine commercialization options and validate an optimal strategy with viable partners.

Industry Partnerships

Established industry connections provide the greatest advantage toward developing a successful business partnership and license agreement. Industry research sponsors are typically provided a first option to negotiate a license agreement for commercialization of a university invention. Other times our inventors have established technical relationships with different industry representatives through consulting or other avenues that are helpful in establishing new licensing opportunities.

License Negotiation

Regardless of the type of company seeking a license from ECU, certain criteria must be established prior to entering into a license agreement. The Office of Technology Transfer will negotiate terms of a license agreement with the business partner that emphasize documented diligence toward commercial development of a product through development milestones. Financial terms typically in the form of royalties, fees, patent cost reimbursement, and /or a stock position in the company will also be negotiated. The Office of Technology Transfer can engage the services of outside legal and business experts to facilitate effective license negotiations.

Income Generation

While generating public benefit is a significant driver for commercializing ECU’s intellectual assets, financial remuneration is also important. Income generated as a result of licensing activities is distributed to inventors and associated departments and schools according to an established income distribution formula. The formula also recognizes recovery of institutional investment in patents and other commercialization expenses. Income earned, less expenses incurred (net income) is distributed as follows:

	1st \$1000 (Gross Receipts)	Next \$100,000 (Net Receipts)	Greater Than \$101,000 (Net Receipts)
Inventor(s)	100%	50%	40%
Department(s)	n/a	15%	15%
School/College(s)	n/a	5%	5%
Invention Management Fund	n/a	25%	30%
Division of Research & Graduate Studies	n/a	5%	10%

VI. Licensing

The type of license selected for partnering with a commercialization partner will depend on a variety of factors, including intellectual property portfolio, industry sector, and market niche. Regardless, the primary goal of the University is to make the invention available for the greatest public benefit.

Types of Licenses

Exclusive License

An exclusive license allows the university to grant exclusive rights to make, have made, use, sell, have sold, or import an invention to a single commercialization partner. Exclusive licenses are granted in exchange for financial (i.e. royalties) or other benefits.

Non-Exclusive License

A non-exclusive license allows the university to grant rights to make, have made, use, sell, have sold, or import an invention to more than one business entity. Typically, non-exclusive licenses are granted in exchange for financial benefits but they are typically lower financial terms than found in exclusive licenses.

Field of Use License

A field-of-use license grants rights in the invention only for specific fields identified in the license agreement. For instance, it is possible to provide an exclusive field-of-use license to one educational company whose market interest is primary schools, while granting another field-of-use license to a another company whose market interest is the higher education sector. This effectively allows the University to grant a license to several different companies, each with an expertise in different niche markets, thus expanding its public benefits to a larger audience.

Know-How License

A know-how license grants a non-exclusive right to practice unpublished knowledge and expertise. For instance, the university may license an unpatented monoclonal antibody for sales in a research reagent catalog but the knowledge required to make the antibody is typically conveyed separately under a know-how agreement.

License Terms

License terms vary with each invention, partner and product. In particular, financial terms vary according to the target market, industry, stage of development of the invention, and financial capabilities of the licensee. However, certain terms are universal to most license agreements to assure that the licensee will practice the invention with diligence and good faith. Typical license terms define:

- Exclusivity, whether the license is exclusive, non-exclusive or restricted in some other manner;
- License product or rights conveyed to the licensee;
- Financial terms, which may include license fees, milestone payments, annual fees, royalties; minimum annual royalties, and shares of stock;
- Diligence milestones, to assure that the licensee is actively developing the product for commercialization. Milestones generally require the licensee to achieve an outcome by a pre-defined date. Payment of fees may also be associated with diligence milestones.
- Reporting requirements to assure that the licensee is meeting the requirements of the license agreement.

In addition to the above, license agreements typically reserve the right of the inventor to perform continuing research in his/her field, to publish according to academic standards, and to allow other academic and non-profit institutions to perform non-commercial research.

VII. Other

Consulting

One commonly accepted form of expanding knowledge beyond the walls of academe is through consulting arrangements with industry. Faculty are encouraged to apply their knowledge in situations that are relevant to today's society. To the extent that it doesn't violate terms of confidentiality, industry consulting arrangements also allow faculty to bring their exposure to industry needs and practices to the classroom so students may benefit also. While consulting arrangements are valuable experiences, certain requirements must be maintained. First, faculty are reminded that they must disclose their consulting practices to the university according to institutional policy. Second, faculty should carefully read and thoroughly understand their consulting agreements before signing. Consulting agreements typically require the faculty member to agree to terms of confidentiality to preserve the company's confidential information. While this seems to be a logical requirement, care should be given that these terms do not restrict the faculty member from using their knowledge outside of the consulting arrangement. Care should also be given to assure that university intellectual property rights are not affected by the consulting agreement. The university is not typically a party to faculty consulting agreements, but upon request, the Office of Technology Transfer is able to offer comment on consulting agreements, if time allows.

Starting Up a Business

In some instances, inventors may wish to start up their own company for the purpose of licensing, then developing and commercializing, their invention. Faculty start-up companies are not uncommon among research institutions, but the process is complex and time consuming, so it requires a firm commitment. Prior to entering into negotiations for a license agreement with a start-up company, a business plan must be developed and reviewed by ECU for completeness and quality. Given that most academic inventors are not experienced in new business development, it may be useful to take advantage of resources that are available for entrepreneurs such as ECU's Entrepreneurial Initiative, the North Carolina Small Business Technology Development Center (SBTDC), and North Carolina's Center for Entrepreneurial Development (CED). Disclosure of the new business venture is a requirement of ECU's Conflict of Interest and Conflicts of Commitment policies.

Responsibilities

Inventor

Duty to Disclose: As a condition of employment or enrollment with ECU, all university inventors are required to disclose university inventions to the Office of Technology Transfer.

Sign Necessary Documents: University inventors are required to execute contracts, assignments, waivers or other legal documents necessary to vest in the university any or all rights to university inventions.

Facilitate Patent Prosecution: Inventors committed to the process must review and offer data, expertise, and comment on the drafting and prosecution of patent applications. This may include discussions with ECU's patent counsel, and on occasion meeting with the patent examiner, when necessary.

Diligence in Continuing Research: The process requires more than just a duty to disclose inventions, but also a duty to continue to perform research and publish research findings to further document proof of concept. This may take the form of performing more basic research or it may require translational research. If unable to perform translational research, then additional resources will be sought to facilitate the process.

Facilitate the Licensing Process: Scientific expertise from the inventor is often-times critical in engaging with interested industry representatives. Inventors may be asked to facilitate technical discussions about the invention.

Maintain Confidentiality: Inventors must diligently comply with the terms of confidential disclosure agreements with industry partners.

Office of Technology Transfer

- **Meet With Inventors:** OTT will meet with university inventors to learn about inventions and discuss challenges and opportunities.
- **Perform Patent and Market Assessments:** With information provided from inventors, OTT will perform patentability and marketability analyses for inventor consideration, and if deemed reasonable, for consideration by the University Committee on Intellectual Property Patents.
- **Manage ECU's Patent Portfolio:** OTT is responsible for working with patent counsel and the inventor to develop a strategy for filing, prosecuting and managing university patents and patent applications.
- **Seek and Develop Partnerships:** OTT will diligently identify potential partners for evaluation and development of ECU inventions.
- **Manage ECU's License Portfolio:** OTT is responsible for ECU's portfolio of license agreements and will assure compliance with diligence, financial and other license terms.
- **Collect and Distribute License Income:** OTT is responsible for managing income earned from license activities, including but not limited to collecting fees and royalties, and disbursing license income in accordance with the license income distribution policy.
- **Represent ECU:** OTT will attend relevant trade shows and conferences to represent ECU inventions and key areas of interest to the university.

Office of Research Integrity and Compliance (ORIC)

reviews and evaluates disclosures of conflicts of interests and develops conflict of interest management plans. ORIC is also responsible for human research protections and research HIPAA compliance.

Copyright Management

The Copyright Management Officer will facilitate ownership determinations of copyrightable works.

Trademark Management

Use of established ECU trademarks is managed by ECU's trademark licensing program. Management of trademarks associated with licensed patents and copyrights is managed by the Office of Technology Transfer. Other university trademarks are managed by the Office of The University Attorney.

Entrepreneurial Initiative

ECU's Entrepreneurial Initiative will evaluate and consider proposals from individuals interested in exploring new business development opportunities that are related to ECU inventions. Selected projects will receive concentrated attention in the development of a thorough market assessment and preliminary business plan.

Resources

Patents

U.S. Patent and Trademark Office
MicroPatent
Delphion Research Intel. Property Network
Faxpat and Optipat

Pharmaceutical/Biotech Information

Biospace
BioWorld Online
North Carolina Biotechnology Center
Yahoo! Business to Business Pharmaceutical Listing
NetSci's Pharmaceutical Companies YellowPages
Hoover's Company Capsules: Pharmaceuticals
BioPharmaLink
Recombinant Capital

Library/Research Resources

Joyner Library
William E. Laupus Health Sciences Library

Grant Resources

PIVOT (Community of Science - COS)
AAAS GrantsNet
European Science Foundation
Funders Online (European Funding Opportunities)
The Foundation Center



VIII. Contact Information

East Carolina University

Office of Technology Transfer

2200 S. Charles Blvd.
Greenville Centre, Suite 2500
Greenville, NC 27858
(252) 328-9549

Entrepreneurial Initiative

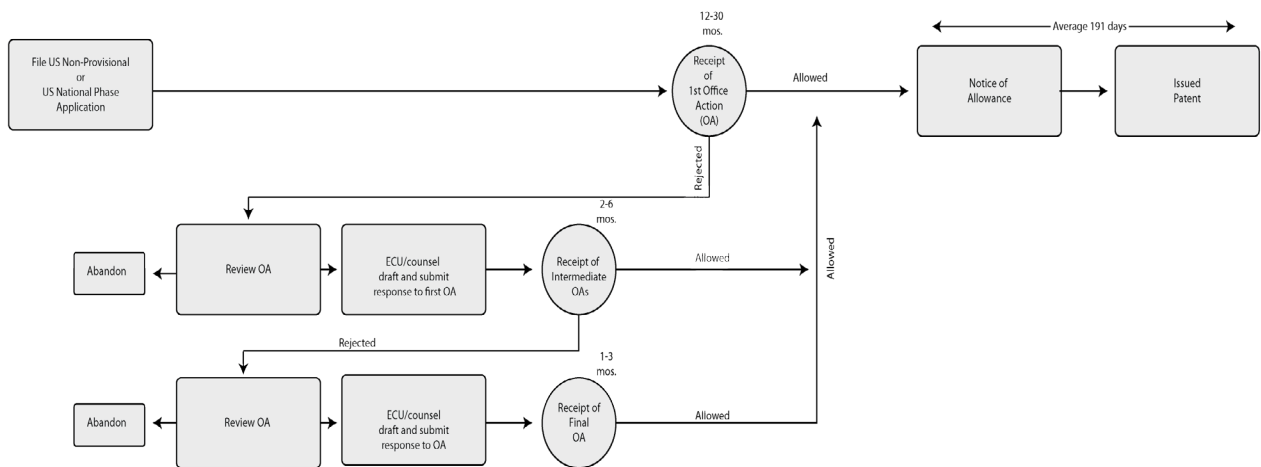
First Street
Willis Building
Greenville, NC 27858
(252) 737-1345

Small Business Technology Development Center (SBTDC)

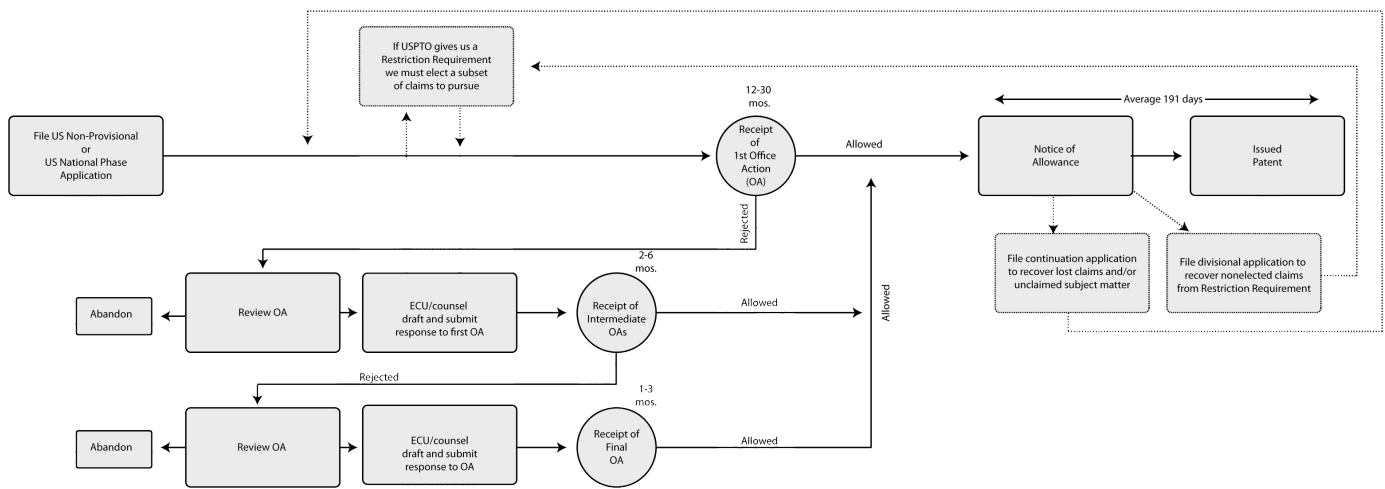
First Street
Willis Building
Greenville, NC 27858
(252) 737-1385

Copyright © 2012 East Carolina University
Revised 2013

Appendix A Simple Patent Prosecution Process Diagram



More Complex Patent Prosecution Process Diagram



Complex Patent Prosecution Process Diagram

