

THE UNIVERSITY OF GEORGIA

GUIDE TO PATENTS FOR FACULTY AND STAFF

PREPARED BY INNOVATION GATEWAY

The University of Georgia Guide to Patents for Faculty and Staff is designed to provide University of Georgia faculty and staff members with information about protecting intellectual properties that result from their scientific and creative activities. Innovation Gateway's role in patenting and marketing intellectual properties is also described.

Faculty and staff members can benefit in several ways when an intellectual property is patented and licensed to a commercial establishment. These may include, but are not limited to, income from license fees and royalties, consulting fees, and research support. Arrangements with private establishments do not preclude dissemination of research findings. For further information about the contents of this booklet or any aspect of the subjects addressed here, please call Innovation Gateway at 706-542-1404 or gateway@uga.edu.

REPORTING INVENTIONS

University of Georgia faculty and staff members agree, as condition of employment, to abide by the [Intellectual Property Policy of the University of Georgia](#). The policy requires that all inventions made during the course of an inventor's activities as an employee of the University be formally reported to Innovation Gateway through an Invention Disclosure. This can be done using our convenient online disclosure tool, [Sophia](#).

In addition to writing a precise description of the invention in the invention disclosure portal, scientists should take special care to list all the inventors, defined as those who made a creative contribution to the inventive concept. Individuals who carried out work at the direction of those creating the concept ordinarily should not be designated as inventors.

It is important to submit an Invention Disclosure as soon as an inventive concept can be fully and precisely described, even if a physical embodiment of the idea has not been realized. If the invention meets the requirements of patent law and appears to be commercially attractive, a patent application may be filed ahead of the actual reduction to practice.

INCOME DISTRIBUTION FROM LICENSED PATENTS

All income generated from the licensing of patents or proprietary information is divided among the inventor (referred to as the "originator" in the [University of Georgia's Intellectual Property Policy](#)), the sponsoring academic department, and the [University of](#)

[Georgia Research Foundation.](#)

After licensing, legal, administrative, and other expenses are subtracted from the gross income, the net income is distributed on a quarterly basis as follows: the first \$10,000 to the originator; then 25% to the originator; 10% to the originator's research program; 10% to the department/unit; 15% to the University of Georgia Research Foundation (Innovation Gateway) operations, and 40% to the University of Georgia Research Foundation Research Fund.

THE ROLE OF THE RESEARCH FOUNDATION

The Board of Regents of the University System of Georgia has designated the [University of Georgia Research Foundation](#), through Innovation Gateway, as the sole entity at the University of Georgia responsible for protecting intellectual properties and for the transfer of technology developed through the University of Georgia's research programs or by University personnel. Thus, in addition to assuming responsibility for protecting intellectual properties, Innovation Gateway also assumes responsibility for marketing intellectual properties and proprietary information to industry, and for reviewing intellectual property agreements related to industry-sponsored research. The ongoing objective of Innovation Gateway is to provide services to the research community and through those services to enhance the University's programs and goals as a research institution. **If you think you have an invention that may be patentable, contact Innovation Gateway at 706-542-1404 or at gateway@uga.edu.** After an Invention Disclosure is received, an appointment will be set up to discuss and evaluate your innovation.

IDENTIFYING POTENTIALLY PATENTABLE INVENTIONS

To identify potentially patentable inventions, scientists should review their work periodically in the context of [United States patent law](#), which states that patents may be granted on:

- **A process**, such as a method of using specific molecules for the diagnosis of viral diseases;
- **A machine**, such as a new instrument for the synthesis of oligonucleotides;
- **An article of manufacture**, such as an assay kit for an infectious disease, or class of diseases;
- **A composition of matter**, such as a new molecule (characterized by amino acid sequence or basepairs), or a new chemical compound;
- **New and useful improvements** of the above;
- **Any distinct and new variety of plant** which is sexually or asexually reproduced;
- **Any new, original, and ornamental design for an article of manufacture.**

If an innovation fits into one of these categories, United States patent law also requires that it be:

- **New (or novel):** The invention must be demonstrably different from any existing prior art; this means it cannot be described in prior “public disclosures,” which include publications and/or availability of the invention to the public as a commercial product.
- **Useful:** The invention must be useful in ways which represent improvements over existing products and/or techniques.
- **Non-obvious:** The invention cannot be obvious to a person of “ordinary skill” in the art; non-obviousness usually is demonstrated by showing that practicing the invention yields surprising, unexpected results.

Each of these three criteria is open to interpretation. Establishing novelty and/or usefulness often relies on arbitrary value judgements. For example, it may not be clear that a new gene-sequencing instrument is “demonstrably different” from other existing models, or that the use of a new hybridoma for narrow research purposes is sufficiently significant to be called a “useful” improvement over existing techniques.

Despite the possible variety of definitions of novelty and usefulness, the concept of “non-obviousness” is the most complex of these three patentability requirements. It is subject to broad and often inexact interpretation. For example, it might be argued that a new method of controlling protein production in bacteria is obvious in the face of prior art because it relies on a collection of well-known, existing and proven concepts. Conversely, one could argue that the same method is not obvious because certain specific elements of the method yield surprising, unexpected results. Judging what is obvious to one of “ordinary skill” in an art is rarely straightforward, especially in technologically complex fields.

These three criteria are usually the focal point of the patent office’s evaluation of patent applications. In particular, “obviousness” is most frequently cited by patent examiners as the reason an invention is not patentable.

Finally, patent law states that inventions may be patented if they have been reduced to practice, even if a physical embodiment of the invention has not been realized. Therefore, some extrapolation about an inventive concept can be included in a patent application.

The extent of permissible extrapolation, however, may be the subject of dispute with the Patent Office. For example, an invention which claims a broad class of chemical compounds is rarely granted a patent, unless evidence is presented that several different representative members of the class have actually been made. A claim even to a single new compound usually must include a detailed description of its actual synthesis in order to receive patent protection. In the case of machines or mechanical devices, the requirements of the patent office are much less strict.

ASSESSING COMMERCIAL ATTRACTIVENESS

The attractiveness of an innovative idea to companies capable of developing it into a commercial product is determined by two critical factors:

- 1) The idea must be protectable, preferably through broad, valid patents, so that the company developing and marketing it can control its use and sale for the life of the patents (20 years from the earliest priority filing date).
- 2) The idea must benefit a substantial segment of society and appeal to a potential market large enough to justify a commercial organization's investment in its development, manufacture, and marketing; the resulting product or process must be profitable.

In reviewing work for potentially patentable ideas as described in the preceding section, scientists should also consider these two additional factors.

APPLYING FOR A PATENT

[Invention Disclosures](#) will be reviewed by Innovation Gateway to determine:

- the probability that meaningful patent protection can be achieved, and
- whether the idea has sufficient commercial appeal to be the basis of a partnership with a company capable of producing and marketing products or processes based on the invention.

When an invention is judged to be both patentable and commercially attractive, a U.S. patent application will be drafted and filed. In most cases, the first filing will be a U.S. provisional patent application. This application does not mature into an issued patent but rather establishes an early effective filing date, provides additional time for an inventor to broaden proof-of-concept data, and allows the inventor to disclose their invention publicly. A provisional patent application must be converted into a non-provisional patent application (such as a U.S. utility patent application or an international patent application) within one year of the provisional filing date, otherwise the provisional patent application is automatically abandoned. Patent applications are submitted to the [United States Patent and Trademark Office \(USPTO\)](#) on behalf of the inventor and the University by outside patent counsel. Patent applications consist of:

- an abstract;
- the “specification,” a text section which explains the invention’s history, describes it in broad terms and teaches the public how to make and use it;
- the “claims,” which are precise, numbered statements describing exactly what the inventor claims as the invention.

In approximately 1-3 years (the timing of which depends on the backlog of patent applications in the USPTO unit that is examining the application), the patent office issues its first “office action” or reply to the initial patent application. This first office action usually rejects most or all of the inventor’s claims of invention on the grounds of obviousness; several references (either issued patents or scientific papers) are cited to support this contention. The inventor and patent attorney then must argue that the

references do not render the invention obvious. This basic give-and-take continues until a patent is either granted or denied; the entire process takes years.

PUBLICATION AND PATENT RIGHTS

It is the policy of the University of Georgia that faculty members must remain free to disseminate the results of their research as they wish. However, faculty members should be aware of how publication or public disclosure may affect patentability. Innovation Gateway is available to help clarify questions in this area.

In terms of patent law, publication or public disclosure of an invention means the nonconfidential transfer of knowledge — orally or in writing, by exhibits, demonstrations, or public use of the invention — which would permit others skilled in the art to duplicate it without undue experimentation. Abstracts, theses, typewritten papers, slides, and projected material which are distributed or discussed at non-confidential meetings, conferences, seminars, or forums are examples of what may constitute publication or public disclosure.

In the United States, patent applications may be filed up to one year after an invention's first public disclosure.

In contrast, most foreign countries require patent applications be filed before there is any public disclosure of an invention. Further, because most foreign countries have very broad definitions of public disclosure, even the most casual disclosures of inventions can eliminate the possibility of patent protection.

Despite these strict rules, if a U.S. patent application is filed before any publication, most foreign countries permit filing of corresponding applications for up to one year after the U.S. filing date, even if a publication of the invention was made after the U.S. filing. Therefore, a U.S. patent application filing prior to any publication preserves both U.S. and foreign patent rights.

Scientists with questions about whether their planned presentations will constitute public disclosure, or about the impact of such disclosure on patent rights, may contact Innovation Gateway at 706-542-1404 or gateway@uga.edu.

INNOVATION GATEWAY

Room 808

Boyd Graduate Studies Research Center

Athens, GA 30602-7411

706-542-1404

gateway@uga.edu