I. **Introduction** .................................................................................................................. 1

II. **Iowa State University Research Foundation, Inc.** ....................................................... 2-3

   The mission of ISURF .......................................................................................................... 3

III. **General information on Intellectual property** ...... 4-10

   *What is a patent?* .............................................................................................................. 4

   *What is an invention?* .................................................................................................... 5

   *Am I an inventor?* .......................................................................................................... 5-6

   *Can my invention be patented?* .................................................................................... 6

   *In which patent category will my invention be placed?* ............................................. 6-7

   Provisional patent applications ......................................................................................... 7-8

   Characteristics of patentable inventions ......................................................................... 8-9

   Reasons for an invention being unpatentable ................................................................ 9-10

   *Can I publish without forfeiting the right to patent protection?* ............................... 10-11

   Foreign patents .................................................................................................................. 11-12

   Infringement of patents .................................................................................................... 12

   *What is copyright?* ........................................................................................................ 12-14
# Table of Contents (continued)

What is a trademark? ............................................................... 14

What is a service mark? .......................................................... 14

What is a trade secret? .......................................................... 15

What is know-how? ............................................................ 15-16

Record keeping ..................................................................... 16-17

Biological materials ............................................................. 17-19

Computer software .............................................................. 20-23

IV. Confidentiality agreements ............................................. 23-24

V. Licensing of intellectual property to industry ............. 24-26

VI. Overview of university Intellectual Property Policy .. 26

Authority ............................................................................... 26

Responsibility ....................................................................... 26

Title to intellectual property ............................................... 27

Benefit sharing ..................................................................... 27-28

VII. Inventor/creator responsibilities .................................. 28

Disclosure .............................................................................. 28-29

Record of invention .............................................................. 29
Table of Contents (continued)

Post disclosure responsibilities ................................................. 29-30

*How much will I be involved in patent application preparation and follow up?* ........................................... 30

Rights of sponsors ..................................................................... 30-31

Inventions arising through consultation ........................................ 31

VIII. **ISURF’s obligations to inventor/creators** .................... 31-32

IX. **Invention disclosures** .......................................................... 32

Processing the invention disclosure .............................................. 32-33

Review of the disclosure ................................................................. 33-35

Patent prosecution ........................................................................ 35

X. **Summary** ......................................................................... 36

XI. **Contact** ........................................................................... 36
I. Introduction

The information provided in this handbook reflects the university’s tradition for creating, preserving, and disseminating knowledge while at the same time providing a basis for protecting intellectual property resulting from those activities. Emphasis is placed on patent and copyright protection with special attention also being given to the handling of computer software and biological materials.

The transfer of innovative ideas from conception to the marketplace is a complex and generally costly endeavor. Companies capable of commercializing products or processes generally require protection by patents or other means before risking the investment required to support development, manufacturing, and promotion. Without intellectual property protection there would be little incentive for such companies to commercialize inventions. Thus, it is often the case that to get the results of research used, intellectual property protection is required.

When intellectual property is commercialized through a license to a company, a number of benefits may flow to the inventor or creator of that intellectual property, his or her department, and the university. These can be in the form of income from fees, royalties, research support, equipment, other gifts, consulting arrangements, or opportunities for collaboration.
II. Iowa State University Research Foundation, Inc.

The Iowa State University Research Foundation (ISURF) owns and manages certain intellectual property for Iowa State University. Intellectual property ownership is assigned to ISURF, according to the university’s policies, by inventors or creators who are employees* of the university or students obligated to assign under university funding contracts.

In some cases, collaborative research projects result in intellectual property that may be jointly owned with another institution. ISURF will work with the other institution to prepare an inter-institutional agreement to address issues of patenting, licensing, and division of royalties. Generally, the institution where the bulk of the work has been carried out will take the lead in patenting and licensing the technology.

We wish to acknowledge the Center for Advanced Technology Development (CATD) and the Center for Nondestructive Evaluation (CNDE) of the Institute for Physical Research and Technology (IPRT) which have solicited and recommended several technologies for licensing. Also, the Committee for Agricultural Development (CAD) affiliated to the College of Agriculture and the Agricultural Experiment Station collaborate with ISURF in the commercialization of plant germplasm.

*Faculty, staff, graduate assistants, postdoctoral fellows, and visiting scholars and scientists.
The mission of ISURF
ISURF’s mission is to benefit society through Iowa State innovations.

The Foundation was incorporated in 1938 as the Iowa State College Research Foundation and was largely concerned with patenting activities. Today, ISURF manages disclosed intellectual property including patents, copyrights, trademarks, proprietary germplasm materials and their licensing for the university. ISURF operates to achieve the following major objectives:

To maximize benefits from Iowa State innovations
To ensure that the results of Iowa State’s research and scholarly activities will have the maximum possible beneficial effect for Iowans and the larger public; and

To provide financial rewards for innovation
Consistent with the first objective, to manage intellectual property to allow inventors/creators and the university to benefit financially.

By working closely with the university’s Office of Intellectual Property and Technology Transfer (OIPPT), ISURF administers its license portfolio to provide sufficient income for the intellectual property management operations of the university. With Iowa State innovations, ISURF strives to promote and facilitate university research, enhance recognition for the university, stimulate economic development, and improve public welfare.
III. General information on intellectual property

Intellectual property refers to intangible creations resulting from creative use of the intellect. It is a sort of “mental real estate” that has definable boundaries capable of being protected by means that are dependent on the type of property involved. Intellectual property can be transferred to others through a license. While ideas per se are not intellectual property and not protectable from use by others, once reduced to practice or tangibly expressed, they become intellectual property, protectable by patents, copyrights, trademarks, and trade secrets law.

Employees of Iowa State University are required to assign any invention developed during the course of their research at the university to ISURF. In return, ISURF, through OIPTT, will market that invention and, depending upon the terms of any applicable research agreement, will share net royalty income with that employee and his or her department. ISURF evaluates, protects, and transfers inventions to the marketplace through licensing to companies. These companies make and sell products using the invention and pay royalties to ISURF. Through this process, ISURF contributes to the fulfillment of the university’s commitment to the extension of applied knowledge for the public good.

What is a patent?
In its most basic terms, a patent is an agreement between an inventor and the public (through the federal government) which provides that in return for a full public disclosure, the inventor is granted the right for a fixed period of time to exclude others from making, using, selling, or
importing the described invention (a “legal monopoly”). The most common type of patent is the utility patent which provides protection for a term of 20 years from filing, provided maintenance fees are paid.

A patent is far more than just a legal document. It is also a technical publication in that it describes prior knowledge in the area of the invention and contains a complete written description of the invention, allowing others to re-create it.

What is an invention?
To be patentable an invention is limited to the discovery or creation of a new material (either a new manufactured product, a new composition of matter, or a genetically engineered product), a new process, a new use for an existing material, or an improvement of any of these. In certain circumstances, computer software is also considered a patentable invention.

Am I an inventor?
By law, inventorship is based strictly on specifically identifiable intellectual contributions to the patentable elements of an invention.

Only a person who has made a patentable invention may file or have filed on their behalf an application for a patent. While ownership of the patent rights may be transferred, by assignment or otherwise, and such assignment may appear on the patent or in the patent file at the U.S. Patent and Trademark Office (USPTO), inventorship remains constant.

A co-author or someone who actively participated in the project might not be a co-inventor for patent purposes. To be an inventor, an
“inventive step” is required. For example, an assistant who carries out the directions of another in constructing an innovative new device is not a co-inventor unless that assistant adds some ideas and/or modifications which go beyond those expected of a person with normal abilities in that position. Incorrect claims of inventorship can result in an invalid patent.

Unlike the common practice in publications of listing senior and junior authors, patents do not differentiate between inventors. The patent laws treat all inventors as equal. The order of inventors’ names on a patent is not necessarily indicative of their contribution to the invention.

**Can my invention be patented?**

It can be difficult to determine which, if any, part of a complex research outcome might constitute a patentable invention. To avoid overlooking patentable inventions, you should disclose to ISURF any development from a project that has progressed beyond the initial idea stage, and seems even remotely novel and useful, even if it is incidental to the objectives of the project. In doing so, expertise inside and outside the university can be applied to identifying and protecting that which is patentable.

**In which patent category will my invention be placed?**

The patent law provides for the granting of patents in three major categories:

*Utility patents.* These are granted to any person who invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new use or improvement thereof. “Process” means an operation or
method. “Manufacture” refers to articles that are made. “Composition of matter” relates to chemical and metallurgical compositions and may include combinations of elements as well as new chemical compounds. A utility patent is the most common type of patent and the one that will usually be applicable to your invention. It is valid for 20 years from the date of filing.

Design patents. These are granted to any person who has invented a new, original, and ornamental design for an article of manufacture. The design patent protects only the appearance of the article, and not its structure or utilitarian features. Design patents are valid for a period of 14 years from the date of issuance.

Plant patents. These are granted to any person who has invented or discovered, and asexually reproduced (reproduced by means other than seeds), any distinct and new variety of plant, including mutants, hybrids, and newly found seedlings, other than tuber-propagated plants or plants found in an uncultivated state. They are valid for a period of 20 years from the date of filing.

Patent-like protection for developers of new and distinctive seed-reproduced plants (e.g., hybrids) is provided by the Plant Variety Protection Program. Plant variety protection certificates are issued by the Department of Agriculture, not the Patent and Trademark Office.

**Provisional patent applications**
The option to file a provisional patent application has been available since 1995. A provisional patent protects the invention for a period of one
year, after which time it must be converted to a full patent application if the original date of filing ("priority date") is to be preserved. The priority date is important because the patent office will search to see what “prior art” may be available which already describes (or would teach one “skilled in the art”) to learn your invention. A provisional application which is not converted loses its priority date so that art which is developed between the provisional filing date and any new filing date now becomes relevant to determine the patentability of the technology. A provisional patent application is much less expensive to file than a full (utility) patent application and far less formalized information may be submitted. ISURF files provisional patents when we (i) want to delay the actual application to prolong the effective patent life by a year without jeopardizing the priority date, (ii) are not sure of the commercial value of the technology, (iii) want to preserve the right to file a full application because of a pending or previous public disclosure by the inventors, or (iv) want to provide an additional year for further research on a developing technology.

**Characteristics of patentable inventions**

An idea alone is not sufficient to constitute a patentable invention; it must be reduced to practice by building a working prototype, carrying out the process or demonstrating that the invention is suitable for its intended purpose. Further, to be patentable an invention must meet the following three tests:

1. It must be new.
2. It must be useful.

3. It must be nonobvious.

These tests entail very specific considerations that are part of the continuously evolving patent law. Additional requirements that must be met for a patent to be valid include those of (i) enablement (the patent must provide sufficient detail so as to make it possible for a person with ordinary skill in the art to build or develop it without exercising any inventive faculties), (ii) best method (the patent must disclose the expected way in which the invention will work best), and (iii) non-abandonment (the inventor must diligently pursue development of the invention and prosecution of a patent application).

**Reasons for an invention being unpatentable**

Under U.S. patent law, the main reasons for an invention being unpatentable include the following:

1. The invention does not involve sufficient departure from what was known before in the art (it is not new and nonobvious).

2. The invention is not the proper subject matter of a patent, i.e. it is just an “idea” (not enabling
and therefore not useful).

3. The inventor abandoned the invention for a period of time (lack of diligence).

4. A year or more prior to filing the patent application, the invention was disclosed to the public through publication, enabling oral presentation, display, samples and/or prototypes, or other form of description or access; or was sold or offered for sale; or was used commercially.

NOTE: Item 4 is of particular concern when seeking foreign patent rights since, unlike the United States, which provides a one-year grace period between the first public disclosure of an invention and the filing of a patent application, most other countries do not provide for any grace period. Thus, if your invention is publicly disclosed anywhere in the world even one day before you file a U.S. patent application, you lose the right to obtain a valid patent in most other countries of the world, even though you may obtain a U.S. patent.

Can I publish without forfeiting the right to patent protection?
Yes, If you follow these guidelines:

1. File an invention disclosure through ISURF before any public disclosure. This usually requires at least a month’s lead time so that ISURF can review the disclosure and, if appropriate, file a patent application on your behalf. In every case, you should disclose your invention to ISURF at the earliest possible time, making sure that the date of your planned public disclosure is
clearly indicated.

2. Use a confidentiality agreement with the intended audience. ISURF can assist you with this. (Obviously this won’t work with any large and/or random group.)

3. Do not provide any “enabling” information to anyone not covered by a confidentiality agreement. A public disclosure which enables the duplication of the invention by one with ordinary skill in the art will defeat patentability. Thus, any oral or written communication should give only a glimpse of the technology and omit any technical details that are essential to re-creating the invention. You may consult ISURF on this.

4. When in doubt, mark descriptive information as confidential. This is not a guarantee of protection, but it could make a difference. For example, on the first page of a grant proposal that contains patentable information include a caption such as the following:

**CONFIDENTIAL**

THIS PROPOSAL CONTAINS POSSIBLY PATENTABLE SUBJECT MATTER ON PAGES X–Y.

BY ACCEPTING THIS PROPOSAL, RECIPIENT AGREES TO KEEP THE INFORMATION THEREIN CONFIDENTIAL.

List only those pages containing pertinent technical details; then write the word CONFIDENTIAL on the top of each such page.

**Foreign patents**

Nearly every country has its own set of patent laws and the issuance of a patent by one country provides no protection outside that country. To obtain patent protection in another country, a
patent application must be filed in compliance with the patent law of that country. Rather than file in each individual country, most of the world’s industrialized countries, are party to the Patent Cooperation Treaty (PCT) which allows an application within one year of the U.S. filing date. This procedure will delay by up to 30 months from the U.S. filing the need to file separate applications in any of the participating countries. A PCT filing protects the right to file an application in each participating country while retaining the filing date of the U.S. patent application.

**Infringement of patents**
The infringement of a patent involves the unauthorized making, using, or selling, or offering to sell a patented invention within a country where a patent has issued and during the term of its protection. Unauthorized importation for sale of a product into a country with a valid patent also constitutes infringement. If a U.S. patent is infringed, the holder of the patent rights may sue for relief in federal court. In such a suit the defendant may question the validity of the patent which would then be decided by the court. Where a plaintiff prevails, damages may include lost profits, a reasonable royalty, prejudgment interest, and in certain cases, enhanced damages and attorneys’ fees.

On occasion, the court has found that all or parts of an issued patent are invalid and has thereby nullified that portion of the patent.

**What is copyright?**
A copyright is an exclusive right (subject to fair use rules) granted by the federal government to the owner of an original work of authorship to do
and to authorize others to reproduce, distribute, perform, and/or display the protected work. The term of protection is life plus 70 years for an individual and 95 years from the publication date for an organization, (or 100 years from the creation date, whichever is longer). The copyright form of intellectual property protection is used primarily for such things as books and other written works, plays, video performances, sculptures, paintings, musical recordings, musical compositions, multimedia works and the like. Copyrights also cover elements of computer software, whether or not they are also patented.

A copyright is a specific form of intellectual property protection that protects original works of authorship. It does not protect discoveries, principles or concepts, but only the author’s interpretation or expression of these elements. A copyright is automatically operative the moment the work is expressed in a tangible, fixed medium and does not require a formal application process. However, registration with the Copyright Office of the Library of Congress must occur before an infringement suit can be filed. Although not required, a copyright notice provides a reminder to the public that the copyright holder intends to assert his or her rights in the material. An example of the notice follows and should be placed at the beginning of the work.

Copyright © [year of publication]  
[name of owner]  
All Rights Reserved

The [year of publication] is the year in which the
work was first published. Each year of revision should appear in the notice, for example, if the first year of publication is 1990, and revisions were made in 1991, 1992 and 1993, the notice should appear as Copyright ©1990, 1991, 1992, 1993 [owner], all rights reserved or, when years are consecutive, Copyright ©1990–1993 [owner], all rights reserved.

**What is a trademark?**
A trademark (or “mark”) includes any word, name, symbol, or design adopted and used by an individual or organization to distinguish its goods from those of others. Adoption and use of a mark confers rights that may be used to prevent others from using a confusingly similar mark. A mark may be registered federally at the Patent and Trademark Office and/or in individual states. To qualify for federal registration, the mark must be used in interstate commerce. Federally registered trademarks supersede state registrations and provide the strongest and broadest protection. They are designated by using a superscript ® symbol. Prior to registration many trademark owners use a superscript ™ symbol to indicate a claim to ownership. Brand names are typically registered trademarks, and universities often register their names, athletic logos or campus landmarks. The term of protection for a trademark is indefinite as long as it remains in regular use.

**What is a service mark?**
A service mark is the same thing as a trademark except that it identifies and distinguishes services rather than products, for example, BURGER KING, AMERICAN AIRLINES.
What is a trade secret?
Once a patent has been issued, all information in the approved application becomes available to the public. Patents have a limited term after which the public has unlimited access to the invention. In those cases where the inventor does not want to share certain information with the public, that information may be kept as a trade secret. Trade secrets exist as long as they are not disclosed to those who do not have a duty to hold the secret confidential. A trade secret is a fragile form of intellectual property protection since someone could independently come up with the same information and not be in violation of the trade secret. On the other hand, a trade secret has an unlimited life span, as long as no one who is not under a duty to keep a trade secret confidential has access to the trade secret, and as long as no one independently obtains the information in the secret. The best known example of a trade secret is the formula for Coca-Cola®. Generally, to maintain a trade secret, positive measures must be employed to keep it a secret. Given the role and mission of the university it is seldom, if ever, involved with trade secrets.

What is know-how?
Know-how, including the expertise and knowledge of university employees and staff, is a body of knowledge outside the public domain that has commercial value. It can be licensed just like
other forms of intellectual property. Laboratory techniques and other forms of know-how, however, are rarely the subject of separate, formal agreements (mostly because of the lack of legal protection); but provision for their use may be included as a separately identifiable part of a patent license, or technology license, or sponsored research agreement.

**Record keeping**

Good record keeping is generally sound methodology for the laboratory, but it is absolutely crucial for effective patenting, especially when there is a dispute over the validity of a patent or who, among competing inventors, is the one entitled to the patent (in the United States, the first to invent). Good principles to follow for effective invention-related record keeping are given below.

1. Maintain an ongoing record of research activities and thought in a bound notebook with numbered pages.

2. Make all entries in permanent ink. Date and sign all entries daily.

3. Make entries as work proceeds and if there is a time lapse explain the reason.

4. Write coherently and legibly; label charts and graphs; enter conclusions as factual statements making reference to information which supports the conclusions.

5. Securely glue additional materials relevant to the research (such as photos, graphs, charts, computer printouts, etc.) to pages in the notebook and make reference to these materials in
the comments. Sign and date each additional item glued in.

6. Have your research notebook witnessed periodically by two persons with at least some understanding of the subject matter who are not directly involved with the research and who are not close relatives. Obtain witnesses’ signatures on a regular ongoing basis (at least within a 2- to 4-week cycle). Obtain witnesses’ signatures immediately if you feel that something important or new has been described. Write on the bottom of each page the legend “Witnessed and Understood” with a place for two signatures and two dates.

7. If portions of a page are left blank after an entry, draw a diagonal line through the blank portion. Never leave entire pages blank.

8. NEVER ERASE any part of an entry and NEVER REMOVE any materials once glued into the notebook. If an error has been made or if later information changes or qualifies a previous entry, either draw a single line through the information to be changed (leaving it still readable) and enter and date the new information, or make a new entry referring to the information to be superseded and where in the notebook it can be found.

**Biological materials**

In some cases, biotechnology research produces innovative results that cannot be easily protected by patents. These include biological materials such as clones, plasmids, gene fragments, DNA probes, hybridomas or monoclonal antibody cell lines, as well as laboratory techniques (know-how).
Regardless of the patent status of biological materials and/or know-how, they may be scientifically valuable to other researchers and/or industry. Thus, appropriate steps need to be taken to protect their intellectual property value. Occasionally, researchers unfamiliar with methods for protecting biological materials resort to informal understandings. Although such informality keeps things simple and collegial, it can also create difficulties regarding the legal meaning and enforceability of any subsequent agreement if it is contested. A simple one- or two-page letter of agreement called a Materials Transfer Agreement (MTA) can cover the transmission of biological materials to another investigator in an academic institution for research purposes only.

For transmission to a commercial organization, OIPTT or the Office of Contracts and Grants will prepare the agreement. If an invention disclosure has been submitted to ISURF, ISURF must sign and transmit any MTA.

NOTE: To protect biological materials when they are transmitted to others, researchers should take the precautions that follow.

1. If the biological material appears to constitute an invention or have commercial use, inform ISURF and file an invention disclosure.

2. If the biological material results from an externally-funded research agreement, consult with ISURF prior to transmittal, so that contractual obligations and regulations affecting ownership, disposition of rights, and distribution and use of the biological materials can be determined.
3. Use formal agreements for distribution of biological materials. Such agreements generally require users to treat the material as proprietary, and includes a statement of ownership and disclaimers of product warranty or liability.

4. **DO NOT** release biological materials for research and/or evaluation purposes to any users or industry representatives without first labeling the container or related materials in the manner that follows:

**PROPRIETARY MATERIAL**

THIS CONTAINS PROPRIETARY MATERIAL WHICH IS THE PROPERTY OF (THE INVENTOR/ISURF). THIS MATERIAL IS FURNISHED ONLY TO THOSE AUTHORIZED TO USE IT FOR SUCH RESEARCH AS SPECIFIED IN CERTAIN WRITTEN AGREEMENTS. BY ACCEPTING THIS MATERIAL, THOSE AUTHORIZED AGREE THIS MATERIAL WILL NOT BE USED IN WHOLE OR IN PART FOR OTHER PURPOSES WITHOUT THE WRITTEN PERMISSION OF (THE INVENTOR/ISURF).

5. Document the release of materials thoroughly. Record the names, addresses, and phone numbers of recipients, identify the material, and date(s) of release. Be sure of the terms of release. Careful documentation is necessary to demonstrate that no unauthorized, undocumented release of the biological material was made, and that all possible efforts were made by the inventor and the university to protect the material, if commercial application is possible in the future.

**NOTE:** Nonbiological materials also require the use of an MTA if they are not protected by a patent application or an issued patent. All
transfer agreements should contain language requiring the transferee to keep the materials confidential.

**Computer software**
The term “computer software” is used here to designate computer programs in the broadest sense and is meant to include user’s manuals and other explanatory material that accompany computer programs and computerized data bases. Also included are microcodes, subroutines, operating systems, and high-level language application programs in whatever form expressed (machine or assembly language, source or object code) or embodied (chip architecture, ROM, disk or tape storage, program listings).

The primary goals in protecting and managing software are to promote and control its distribution for the benefit of the public, ensure the integrity of the work, protect the rights of the author, and (where it doesn’t conflict with the other goals), produce a financial return. Although certain components of software can be copyrighted and in some cases patented, the statutory situation regarding its protection is constantly changing and oftentimes confusing. The steps for obtaining copyright protection for computer software are the same as those for other copyrightable works. Copyright protection alone, however, is not always adequate protection for software because it protects the expression of ideas only, not the ideas themselves. Consequently, elements of software can sometimes be utilized without infringing the copyright on the software. Thus, from a commercial perspective, copyright protection for software is sometimes not adequate.
The limited protection offered by copyright law can be enhanced by designating software as “proprietary information” and requiring users to treat it confidentially. This requirement may apply to the software itself and to all accompanying materials (e.g., flow charts) that are readily usable by others, but not to the basic scientific concepts upon which the software is based.

When distributing software, you should take the following protective measures:

1. Make a disclosure to ISURF if the software results from use of substantial university resources or an externally funded research project so that any contractual obligations and regulations can be determined and honored.

2. Make certain that the appropriate copyright notice is prominently displayed on the work, that is, on all displays of the programs as well as on all tapes, disks, manuals, and associated materials.

3. DO NOT release software for loan, review, sale, lease, in-house use, or other purposes without an agreement and without having affixed one of the labels that follow to the tapes, disks, manuals, or other components of the software:

**PROPRIETARY INFORMATION NOTICE**
THIS DISK (TAPE) CONTAINS PROPRIETARY INFORMATION WHICH IS THE PROPERTY OF (THE AUTHORS/OWNERS). THIS DISK (TAPE) IS FURNISHED TO THE AUTHORIZED USERS OF
When software has potential commercial value as well as educational or research value, the additional steps given below should be taken.

1. Use formal agreements for distribution to users outside and/or inside the university who want to use the software for research/testing purposes only. Such agreements generally include a requirement that users treat the software as proprietary information. Examples are available from OIPTT.

2. Formal agreements are also used for distribution outside the university for commercial purposes. Such agreements generally also
include a statement of ownership, confidentiality language, financial terms including license fees and royalties, and disclaimers of any product warranty and liability. Drafting such agreements and negotiating license terms is the responsibility of OIPPT.

3. In general, do not make commitments to install software in any license or other distribution agreement, whether formal or informal without thoughtful and careful consideration.

4. Document each release thoroughly by recording the names, addresses, and phone numbers of the recipients as well as the number of copies and dates of release. Retain copies of all letters or other agreements stating the terms of release. Thorough documentation can be very useful in the event future commercial distribution is desired, or defense against infringement becomes necessary.

**IV. Confidentiality agreements**

When working with corporations that are interested either in sponsoring research at the university or in licensing university-owned intellectual property, it may be necessary to share proprietary information, in which case a confidentiality (nondisclosure) agreement will be required to protect the interests of both parties. The confidentiality agreement usually represents an interim form of protection until more permanent protection (e.g., a license agreement or patent) is obtained. The confidentiality agreement facilitates professional discussion and collaboration as well as commercialization efforts.
A confidentiality agreement becomes a legal contract between the signatory parties which governs how certain confidential information will be used and protected by the receiving party. OIPPT will provide an appropriate agreement form to protect university information disclosed to outside parties.

V. Licensing of intellectual property to industry

The university, as a public entity established to create, preserve, and disseminate knowledge, does not normally engage in commerce except when this is directly supportive of its mission. Yet, as already mentioned, the university may have title to or rights to benefit from technology, know-how, biological and/or technical materials, patents, and other intellectual property. In order to utilize this intellectual property in the private sector, the university, through ISURF enters into formal relationships with private companies by way of option and/or license agreements.

A license is an agreement whereby the university or ISURF retains ownership of certain intellectual property, and the private company is granted permission or rights to make, use and/or sell a certain product, design, process, or service or to perform other specified actions that utilize the intellectual property. A license may extend for
a few years or for the life of the intellectual property rights involved. By making and selling products or services that utilize the university’s intellectual property, companies create jobs, build factories, earn money, and pay taxes, thereby contributing to the economic health and growth of the state and nation.

When licensed intellectual property provides a financial benefit to private companies, the university asks to share in that benefit. This sharing takes the form of an up-front payment upon issuance of the license (issue fee), and ongoing payment linked to actual sales of the products or services (royalty fee). These monies received by the university are the source of funds used to pay inventor’s and college’s royalty shares, patent prosecution expenses and other expenditures.

Terms and conditions for licensing agreements are negotiated on a case-by-case basis by OIPTT. No two licensing agreements are exactly alike.

Occasionally, a company will request an option for a license while it or the inventor conducts further tests of an invention’s efficacy for a particular application. In some cases, a license or option agreement is negotiated at the same time that a separate research funding agreement with the sponsor is arranged. Consulting agreements and/or additional research activities may also be part of the license agreement so that the inventor’s knowledge and/or laboratory can be used to assist in transferring the technology covered by the license agreement.

If a private company contacts you directly for
information on and/or access to some intellectual property you have created, refer the company representative to ISURF so that appropriate steps can be taken to protect both your rights and those of the university. ISURF and OIPPT staff are available to work with the inventor or creator in pursuing the activities listed below that can lead to a license agreement:

1. Disclosing early and effectively any potentially transferable intellectual property that has been created.

2. Obtaining appropriate and adequate protection for the intellectual property.

3. Identifying a match between the intellectual property and a company and establishing contact with an appropriate person in the company.

4. Negotiating successfully a license agreement which results in a win-win arrangement for the parties involved.

VI. Overview of university intellectual property policy

Authority
In 1982, the Board of Regents approved the current “Patent Policy” for this university. Details may be found on the ISURF Web site, http:www.public.iastate.edu/~isurf
In addition, the Faculty Handbook and the Office Procedure Guide include information on intellectual property policies and procedures.

Responsibility
The implementation of these policies resides with the Vice Provost for Research and Advanced Studies.
**Title to intellectual property**

In some cases, intellectual property developed by a university employee belongs to that person. However, the university or ISURF have ownership interests and employees will be required to assign ownership to ISURF under the following circumstances:

1. The project giving rise to the intellectual property was funded in whole or in part by any agency of the federal government or by another extramural sponsor.

2. The intellectual property arises within the scope of a specific employment assignment or activity and thus falls under the copyright “work for hire” category.

3. The creator of the intellectual property requests the university to assist in its protection or promotion (e.g., by pursuing a patent or a licensing agreement).

4. Substantial university resources were used in the development or creation of the intellectual property.

**Benefit sharing**

Generally, ISURF shares the economic benefit of any intellectual property assigned to it with those who are the recognized inventors or creators of that intellectual property, uses some of the
income to pay legal, patent and administration costs, and reinvests a portion of the income for further research. By policy, fees and royalties earned on intellectual property are paid to ISURF. ISURF retains 15 percent for management and operations. Once direct costs incurred in patenting, licensing and protecting the intellectual property are paid and any royalty-sharing obligations are honored, the remainder (net royalties) is divided equally among the inventor, the college and ISURF. ISURF uses its portion for intellectual property and technology transfer activities; colleges determine the use of their portions within ISU guidelines and inventors are free to use their portions as they choose. If there is more than one inventor, they must agree among themselves as to how their royalty income is to be apportioned. If royalty income is not to be shared equally, this information must be provided to ISURF in writing, signed by all inventors in order that royalty checks may be issued for the correct amounts.

VII. Inventor/creator responsibilities

Disclosure

Each employee who believes he or she may have created an invention should contact OIPTT at 294-4740 to obtain an Intellectual Property Disclosure and Record Form (IPDR). Alternatively, the form may be downloaded from our
Web site (www.public.iastate.edu/~isurf). Return the completed form to OIPTT. Prompt disclosure is always very important. Federal law requires, and university contracts may require, prompt disclosure. The inventor, the university, and the involved sponsors can lose very significant rights if disclosure is not made promptly.

**Record of invention**
The IPDR will cover such matters as identity of inventors; description of the invention; when the invention was first conceived; to whom disclosure has been made; date, place, and witnesses of the first and subsequent tests and the results of such tests; funding sources; and related publications and patents. If for any reason, not all of this information is available when a disclosure should be made, contact OIPTT at 294-4740 for advice as to what to do.

**NOTE:** The record of invention is supported by the recorded activity in the laboratory. Thus, a well-kept laboratory notebook should establish all the facts essential to the invention (see Record keeping, p. 16).

**Post disclosure responsibilities**
Following the initial disclosure to OIPTT, you should keep a detailed record of all activity directed to the improvement and development of the disclosed invention. The entries should be made frequently enough to indicate, without question, that you continued to exercise due diligence and did not abandon work on the particular problem. Any temporary interruption should be noted and explained. Likewise, any further improvements should be carefully documented. You should update ISURF as
improvements are made and as you make plans to publicly disclose the invention.

**How much will I be involved in patent application preparation and follow up?**

Your invention disclosure will be used by ISURF to begin the preparation of a patent application through one of our outside patent attorneys. The more complete the invention disclosure, the better. The attorney may also need copies of articles that you or others in the field have published or intend to publish. You will be expected to discuss the invention with the attorney and to review the patent application for completeness and accuracy until satisfied that it correctly describes the invention and that the claims are complete and accurate.

It is rare that a patent is granted without comments from the Patent Office as to the validity of some of the claims. Your input as an inventor in responding to these “Office Actions” will be vital in ensuring that the patent application is successful. Responses to Office Actions are coordinated by ISURF.

**Rights of sponsors**

The rights of extramural sponsors vary according to circumstances and are specified in the research agreement that is part of the funding arrangement. Generally they are entitled to the right to first negotiation of a license agreement with the
university for the technology they have funded.

**Inventions arising through consultation**

The university claims no right in or to any invention developed as the direct result of private consulting services by faculty performed in accordance with university guidelines and procedures as long as university time, materials, or facilities are not used in making the invention. The use of graduate assistants may give rise to rights by the university in the invention.

**VIII. ISURF’s obligations to inventors/creators**

Responsibilities move in both directions. Employee obligations to disclose and to assign their inventions to ISURF are matched by obligations that ISURF has to the employee for dealing with the disclosed invention.

ISURF has an obligation to review the submitted invention disclosure thoroughly and efficiently to determine its potential patentability and commercial potential.

Normally ISURF/OIPTT will decide to pursue one of the following options:

1. Market the invention under confidentiality in order to gauge commercial interest before filing a patent application.
2. Secure patent protection for the invention as needed and seek potential licensees.

3. Delay further action on protecting and/or commercializing the invention until subsequent work better defines the technology and its potential applications.

4. Assign rights back to the sponsor or, in certain circumstances, back to the inventor.

**IX. Invention disclosures**

**Processing the invention disclosure**

1. An ISURF number is allocated and entered into the database.

2. Inventorship is confirmed.

3. If the research was funded, the sponsor’s reporting requirements and rights are checked. (Please note that if you are an inventor working under a sponsored research agreement, you likely have certain duties under the agreement.)

4. The following are checked for completion:

   i. Detailed description of the intellectual property.

   ii. Background and prior art information.

   iii. Possible uses for the invention.

   iv. A list of companies or types of companies with potential interest in the technology.

   v. Details of public disclosure, if any.
If any information is missing or incomplete, the inventor will be contacted to supply this.

**Review of the disclosure**  
(Also see page 28.)

Following review of the disclosure by the Director and Disclosure Manager, (to be carried out within 60 days of the “file complete” date) any of the following decisions may be made:

1. Meet with inventors to review the technology in detail.

2. Hold for reduction to practice (invention needs more work).

3. Market the technology; determine level of commercial interest before filing a patent.

4. If sponsor has rights, hold for sponsor’s decision on licensing.

5. Market after provisional or regular patent application is filed.

6. Market and file provisional or regular patent application concurrently.

7. Release the invention to the sponsor or inventor.
Follow-through on decisions made during the disclosure review

a. Outcome of meeting with the inventor.

A written record of the meeting including the decisions reached with the concurrence and input of the inventor will be prepared and copied to the inventor and appropriate ISURF/OIPTT staff.

b. Marketing the invention.

1. Marketing strategy is discussed at the weekly marketing meeting.

2. A one-page non-enabling description of the invention (“marketing brief”) is prepared with the inventor’s input.

3. The marketing brief is mailed to target companies and posted on the Web site.

4. A list of the targeted companies is shared with the inventor for comment.

5. All inquiries from interested companies are responded to and if requested, detailed information is sent out once a confidentiality agreement is executed.

6. Contact between interested companies and the inventor is arranged as appropriate.

7. If a company loses interest, the reasons for this are determined if possible to provide feedback to marketing and to the inventor.

8. If the company shows interest, more company
information is collected and license negotiations are initiated.

9. If marketing is not successful, details of the invention are sent to a technology brokerage firm and feedback shared with the inventor.

10. Once a license has been executed, the inventors and their deans and chairs are notified.

**Patent prosecution**

Determining the type of patent application to file and the timing of filing depends upon a number of factors such as whether a publication has issued or is imminent or whether the invention has been otherwise disclosed, e.g., at a conference. There are a number of possible strategies:

1. Hold for reduction to practice and check periodically with the inventor for updates.

2. Hold for sponsor decision when the sponsor has option or license rights.

3. File a provisional or a regular application. Once a patent has been issued, copies are provided to the inventors, their deans and chairs, licensees and other interested parties.
X. Summary
Creative products of the intellect which can be protected and which can benefit the public may often be most readily and easily shared through the commercialization process. ISURF and OIPTT are committed to assisting employees in their efforts to deal with the various steps in protecting and commercializing their inventions. The starting point is to make a full disclosure to ISURF.

We are here to work with you through every step of the process.

XI. Contact
For additional information, please contact:

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Visit our Web site at: www.techtransfer.iastate.edu
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