

Technology Transfer at The University of Tennessee: Inventions, Disclosures and Maturation Grant Program

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Technology Transfer: Health Science Center (Memphis) Office



UTRF Upcoming Seminars 2012–2013

Patent Basics
Licensing Agreements
Technologies in Demand

Technology Transfer: Health Science Center (Memphis) Office



Technology Transfer

A process to move knowledge and inventions from UT to an external partner to create products and services for public benefit.

Technology Transfer and the Role of UTRF

Our Mission

- Protect, manage and commercialize UT inventions
- Support the UT research enterprise
- Develop and support an entrepreneurial culture
- Contribute to state and regional economic development

Our goal is to find partners for all viable inventions

- A partner strongly committed to turning the invention into a marketed product.
- A partner with the financial and personnel resources to develop, manufacture, and sell the product.
- A partner who is willing to pay the university a fair price for the invention.

UTRF Services

- ❑ Technology evaluation (formal and informal)
- ❑ Patent drafting and prosecution
- ❑ Licensing agreements (startups and others)
- ❑ Royalty collection and distributions
- ❑ Confidentiality Agreements
- ❑ Register copyrights or trademarks
- ❑ Material transfer agreements
- ❑ Sponsored research agreements
- ❑ Annual maturation grant competition
- ❑ Education(seminars, workshops)

Bayh-Dole Act

- ▶ Enacted on December 12, 1980
- ▶ Controls ownership of federally funded inventions with regard to small businesses and non-profits.
- ▶ Allocates rights as between federal contractors and Government
- ▶ Allows federally funded entities to “elect to retain title to any subject invention*”....

*any invention of the contractor conceived or first reduced to practice.....under a funding agreement

Bayh-Dole Act

▶ Basic Purpose

- Promote the utilization and commercialization of inventions arising from federally supported research for public benefit
- Promote academic–industry collaborations

Effects of the Bayh-Dole Act

Before

- US owned 28,000 patents
- Less than 5% of patents were licensed
- Only granted non-exclusive licenses
- Never assigned ownership
- Technology not being developed

After

- More than 5,000 new university based startups since 1980
- Patents issued to universities increased from 495 in 1980 to 3,278 in 2005
- Private research support to academia grew 76% from 1980–2006
- Paved way for development of federally funded technology

What is an invention?

Almost anything can be an invention.

- ▶ Research tool
- ▶ New drug
- ▶ New treatment using existing drugs
- ▶ Medical device
- ▶ Biomarker
- ▶ Diagnostic test

Each of these will have a different value, but they all can be commercialized.

Invention Disclosure Process

Inventor

- Prepare Invention Disclosure (<http://utrf.tennessee.edu>)
- Submit disclosure to Research Administration via PAMS



**Research
Administration**

- Disclosure evaluated for conflicts or sponsor obligations
- Invention assigned to UTRF for commercialization



UTRF

Invention Disclosure Form

1. TITLE OF THE TECHNOLOGY.

2. DESCRIBE THE TECHNOLOGY BRIEFLY

- If necessary, attach a manuscript, a drawing, an abstract, or any other materials that would assist in the understanding of the technology.

3. CONTRIBUTORS/AUTHORS/POSSIBLE INVENTORS.

- Contributor(s) whose *primary* affiliation at the time of invention
 - was at The University of Tennessee.
 - was *not* at The University of Tennessee.

Invention Disclosure Form

4. LIST ALL SOURCES OF FUNDING OR SPONSORSHIP OF THE WORK WHICH LED TO THE INVENTION.

- Agency name Contract or grant no.
 - Principal Investigator Dept.
 - Type of Funding: Federal University Private Other
- Did you use any material in the development of this technology that was acquired from a third party and was subject to a Material Transfer Agreement?
- During the period of time when this technology was being developed, did any of the contributor(s) receive salary support from the Department of Veterans Affairs (“VA”)?
- Were any VA funds or facilities used in the course of work which led to this invention?

Invention Disclosure Form

5. DISCLOSURE. *Please include both past disclosure and anticipated future disclosure of the technology.*

- Conferences/Journals.
- Theses and dissertations.
- Abstracts for grant applications.
- Offer for sale or public use.
- Has any embodiment of this technology been offered for sale (i.e., has a “thing” embodying the technology or capable of performing the technology been offered for sale)?
- Has any embodiment of this technology been used publicly?
- Has any other disclosure of the invention (written or oral) been made to a third party who is not bound by a written obligation of confidentiality?

Invention Disclosure Form

6. WITNESS.

- *This individual should be sufficiently knowledgeable in the field to enable him or her to understand the invention.*
- *A faculty member or research associate in the same department is usually a good choice if he or she is not listed as a contributor to this invention.*

Invention Disclosure Form

7. ALLOCATION OF RIGHTS IN THE INVENTION.

- After discussion with the other UT contributors, specify your percentage of the income accruing to the UT contributors as a result of this technology.
- Check either “Yes” or “No” in the “Duty of Employment” category by your signature.
 - *The University of Tennessee does not claim rights in technology that is not developed in performing the duties of employment by the University or with substantial use of University funds or facilities. That determination is made on an individual basis with regard to each contributor.*
 - *By checking “Yes”, you are asserting that in your opinion, your contribution to this technology was made in performing the duties of employment by the University or through the substantial use of facilities or funds provided by the University.*
 - *By checking “No”, you are asserting that in your opinion, your contribution was not made in the course of University employment or with substantial use of University funds or facilities.*

Invention Disclosure Form

8. COMMENTS BY DEPARTMENT HEAD:

- *Signature of Dept. Head*

9. COMMENTS BY DEAN:

- *Signature of Dean*

UTRF Disclosure Evaluation

Invention Disclosure

- Assigned to case manager who talks to PI, studies invention
- Assessed for novelty, protectability, and commercial potential
- Go/no-go decision made and communicated back to inventor

If a go:

- Patent attorney selected to draft patent application
- Manager prepares marketing material (with input from PI) and starts marketing the technology to potential licensees
- License is negotiated
- Active licenses are monitored to assure compliance by licensee

Evaluation Criteria – Technical Merit

- ▶ What data is there on the invention?
- ▶ Is there a prototype?
- ▶ Is the invention in a “Hot” area?
- ▶ Is this a core or platform technology, or is it an incremental advance?

Evaluation Criteria - Protectability

- ▶ Prior public disclosure?
- ▶ Extent of prior art?
- ▶ Could infringement be detected?
- ▶ Would there be freedom to operate?
- ▶ How broad could a patent be?

Evaluation Criteria - Commercial Potential

- ▶ Is there a clear product?
- ▶ Does it solve a significant problem?
- ▶ Will the customer pay for it?
- ▶ What is the market size?
- ▶ What are competitive products?
- ▶ Who are likely licensees?
- ▶ What are legal and regulatory barriers?

Evaluation Criteria - Inventor

- ▶ What industry relationships does the inventor have?
- ▶ What is the funding status for further research on the invention?
- ▶ Has UTRF worked with the inventor before? If so, what was the outcome?
- ▶ What does the inventor want?

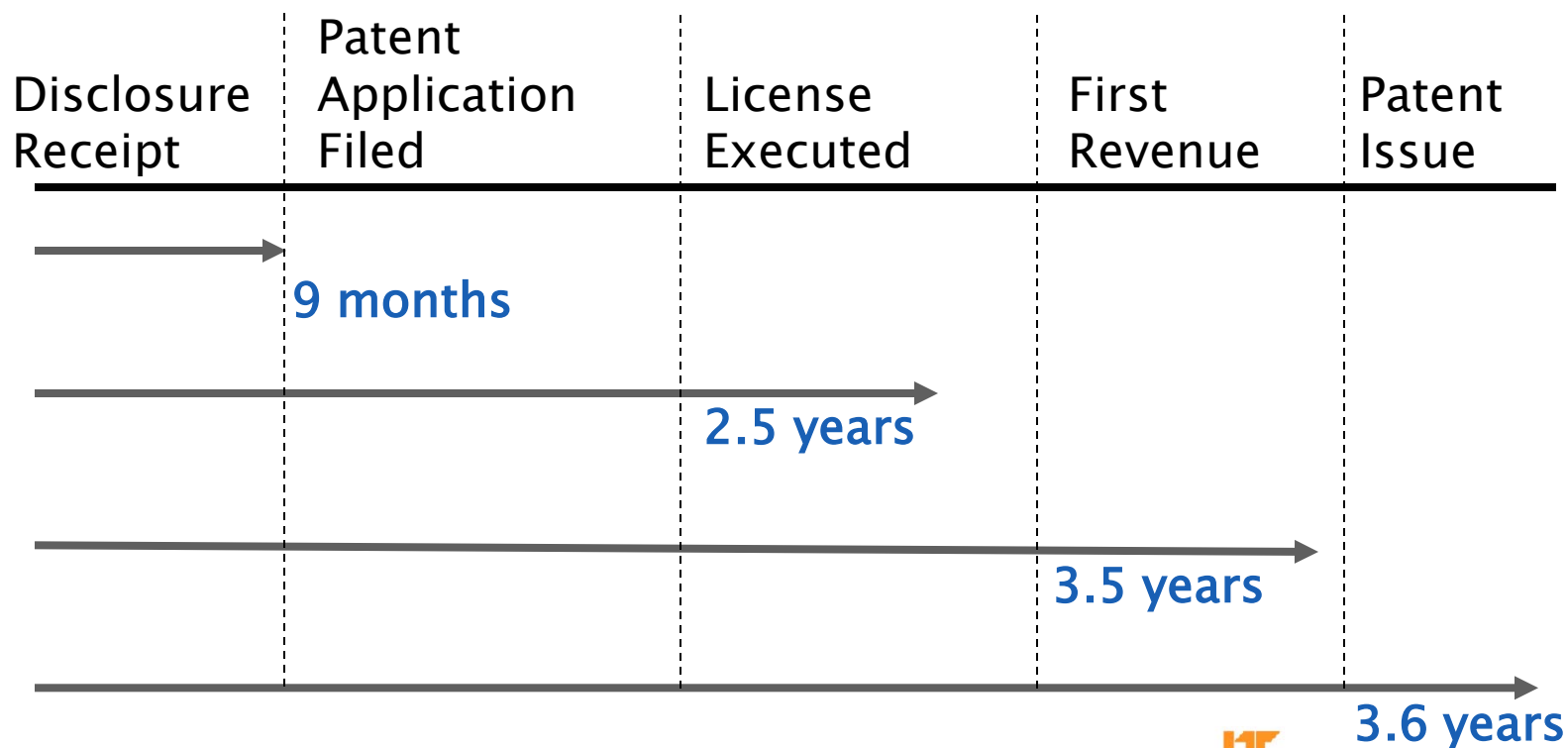
Teaming for Success

Inventor participation is critical for successful licensing or business start-up.

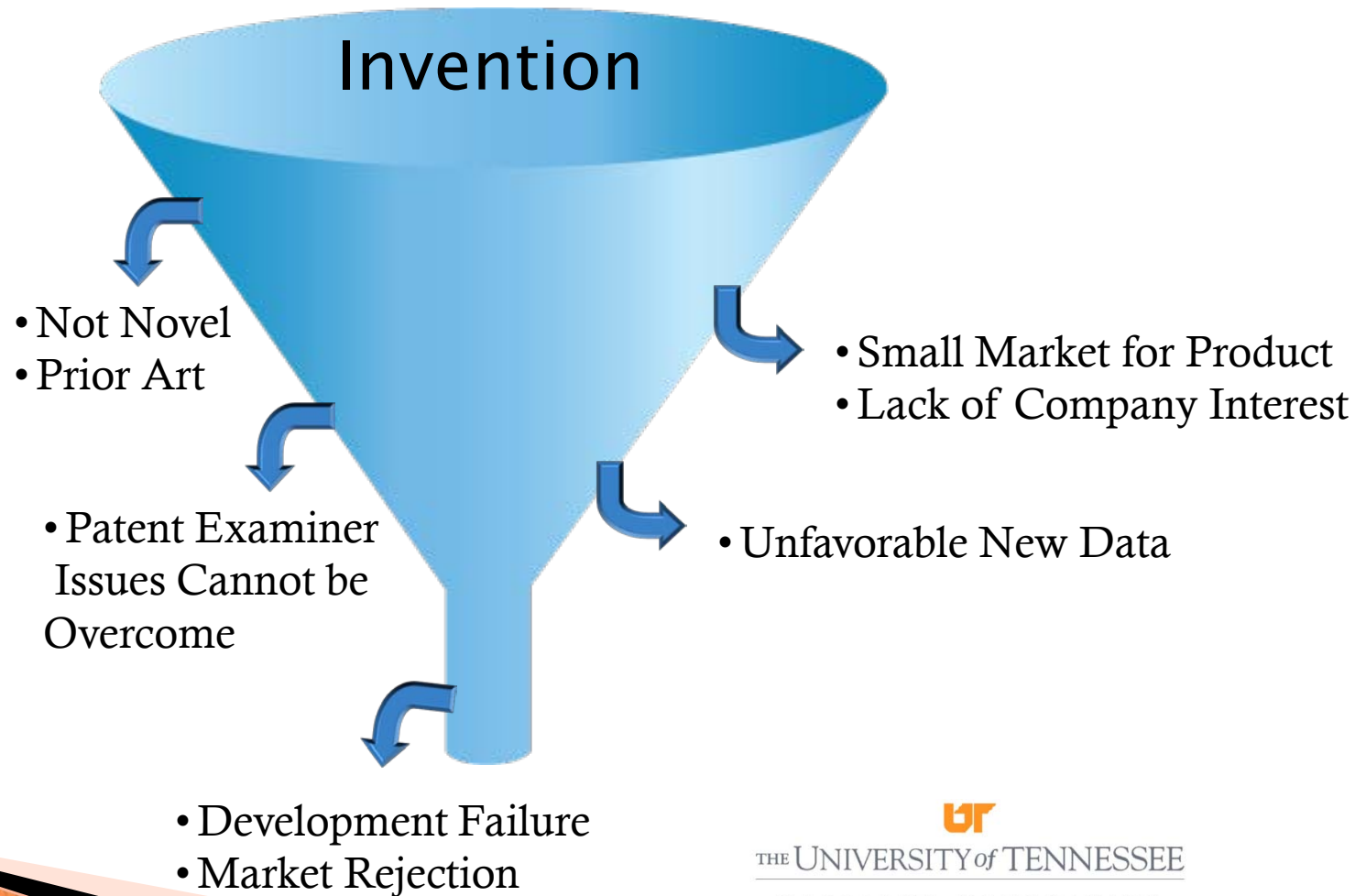
- The inventor is the single most important source of valuable leads:
 - Researcher to researcher contacts
 - Industry relations
- The inventor is the expert:
 - Help us make sure that patent applications fully and accurately describe the invention
 - Let us know what the key advantages are, so that we can market effectively
 - Most licensees desire to build a relationship with the PI (may be formal or informal) more than with the technology transfer office

UTRF Historical Commercialization Timelines

Mean time from Receipt of Disclosure



Possible Fallout Reasons



Royalty Sharing

- ▶ UTRF covers all expenses (patents, legal fees, marketing) and no money is asked of the inventor.

Revenue*	Inventor	UTHSC	Department	UTRF
1 st \$5000	100%	0%	0%	0%
\$5K-\$1M	40%	15%	15%	30%
\$1M+	35%	20%	20%	25%

* The inventor receives 100% of the first \$5000 of gross revenue, but all other distributions refer to net revenue (i.e., after UTRF expenses are subtracted).

FY 2012 Metrics for UTRF

FY 2012	ALL UT	UTHSC
Invention Disclosures	144	24
Total Filed Patent Applications	78	35
Patents Issued	38	23
Licenses & Options	23	12
Revenues	\$1,407,000	\$351,000
Expenses Incurred	\$499,000	\$153,000
Inventor Payments	\$657,000	\$159,000
Maturation Grants	\$120,000	\$60,000
Start-up Companies	9	5

When to Contact UTRF

It is essential to protect your idea before it is presented to the public.

Contact UTRF:

- ANYTIME!
- Before presenting in a public forum
- Before publication in any media

UTRF Sixth Annual Maturation Funding Program

- The program helps UT researchers further develop technologies that have potential for commercial success.
- Up to \$15,000 in *direct* costs will be awarded to the highest ranking proposals.
- **Proposals are due into the Office of Research Administration (through TERA PAMS) by close of business October 16, 2012.**

Maturation Funding Program Guidelines

- Open to all UT researchers, faculty, staff and students at all campuses and institutes.
- Projects **MUST** be related to an existing UT invention/creation disclosure, OR a proposal can be accompanied by a new UT invention/creation disclosure.
- All proposals should generate new data that validate the technology and increase its commercial readiness. They should clearly describe how the expected results will increase the commercial opportunities for the technology.
- Proposals that only generate basic research results should not be submitted.

Maturation Funding Program Proposal Requirements

- Proposals should describe the technology and its existing data, plan of work, expected results, budget, and an assessment of how the expected results will increase the commercial opportunities for the technology.
- Funds should be directed to labor, materials, and services necessary to achieve the proposed deliverable(s).
- Indirect costs are not allowed.
- Funds may not be used for PI salary, but may be used for student, post doc, or technical staff support.
- Proposal should not exceed 3 pages, excluding references, which may be included as a 1–page appendix. Therefore, the proposal plus the appendix must not exceed 4 pages.

Maturation Funding Program Judging Criteria

- Demonstration of a path for commercial development
- Market potential
- Stage of development

Additional details can be found on the UTRF website:

<http://utrf.tennessee.edu/techtransfer/offices/hsc-technology-maturation-fund.shtml>.

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