Office of Technology Management

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Technology Transfer: **What is it?**

It’s all about getting from HERE.....

to HERE

INTELLECTUAL PROPERTY!!

- Process of transferring UTHealth discoveries to the private sector for commercial development
- Link between research and commercialization
- Licensing is primary vehicle in academia
- Bayh-Dole Act 1980's
What is Intellectual Property (IP)?

A product of the mind that has commercial value.

- **Patent** (plants, utility, design)
- **Copyright** (music, graphics, written matter, software)
- **Trademarks** (name, sound, logo)
- **Trade secrets** (customer list, formula, know-how)
- **Software** (may be included in patents and copyrights)
- **Tangible Research Property** (biological materials, prototypes, databases, devices, equipment)

What is a Patent?

U.S. Constitution: Article I: Section 8, Clause 8:

- The Congress shall have power ... To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.

- ...patent law seeks to foster and reward invention... to promote disclosure of inventions... to stimulate further invention... and to permit free use of items in the public domain. U.S. Supreme Ct. (1979)
What does a Patent do?

the *right to exclude* others from “making, using, offering for sale, or selling the invention throughout the U.S. or importing the invention into the U.S.” for a period of 20 years from the date of filing the patent application.


Copyright

The exclusive right, granted by law, to the creator of a work to make, print, publish, perform/record and otherwise to control the use of a literary, dramatic, musical, artistic, or other work. May include software. Cost is minimal.
Trademark

“Words, names, symbol, device, slogan, packaging design or combination of these that serves to identify and distinguish one specific product from others. Includes sound, color combinations, or smell.”

Can be registered. Cost can vary

Intellectual Property Protection

- **Patent** - 20 years from filing of application
- **Copyright** - Lifetime of creator plus 50 years
  - Happy Birthday!
- **Trademark** - 20 years, extendable
- **Trade Secret** - Forever, if careful

Each protection strategy provides the owner with the ability to exclude others from using the technology unless licensed, for a specified time period.
Who owns IP?

The Board of Regents of the University of Texas System owns the IP when it is:

• created within an employee’s scope of employment; or

• created on UT System time, or with use of UT System facilities/resources; or

• Resulting from research supported by Federal Funds or 3rd party sponsorship or university gift.

What is a Invention?

• An invention is a solution to a technical problem

• Inventions are important, but not everything important is an invention.

• An invention starts with an idea, but must be more than an idea
  • Conception and reduction to practice
Patentable Inventions?

- Some inventions are patentable and some are not.
  - Judicial exceptions: abstract idea, law of nature or natural phenomenon, humans
- In the U.S., a patentable invention must be claimed as either a
  - machine
  - a composition of matter
  - Method or a process

2. A method of identifying a vulnerable atherosclerotic plaque in a living vessel comprising the steps of:
   - detecting a region along the luminal wall having a temperature that is higher than that of an adjacent region;
   - locating the vulnerable plaque based upon the higher temperature of the detected region.

- Must be new, useful, and non-obvious.

Can I patent this?

- Perpetual motion machine No
- Naturally-occurring culture of microorganisms No
- Enriched or pure culture of microorganisms Yes
- Human Gene No
- Word-processing application stored on a disk Yes
- Song stored on a disk No
- Genetically-engineered mouse Yes
- Genetically-engineered human No
- A new use for aspirin Yes?
- Medical or surgical procedure Yes, but
- Method of doing business Maybe?
- Diagnostic assay Maybe?
- Algorithm Maybe?
Just because you can?

Who is an Inventor?

• A person who conceives, produces or contrives something previously unknown by the use of ingenuity or imagination

• Co-inventors if each contribute to the inventive process, even if unequally

• Not necessarily co-inventor if only following directions
  • A co-author is not necessarily an inventor
  • Inventorship is dependent on the specific claims in an application
    • Co-inventors have equal rights (not as a percentage of contribution)

• A matter of LAW
Why do I care about IP?

• IP is a way to translate your research to the marketplace—OTM is your link to commercialization, i.e. through existing or new businesses, investors ($$), etc.

• Federal Grant Agencies require IP to be reported not only on your grant report, but through our office (iEdison)
  • Bayh-Dole Act 1980’s
    • Created environment for technology transfer from universities
    • Government reporting requirements for inventions made using federal funds

How does the IP process start?

OTM’s disclosure form (left), as well as a wealth of IP related information for inventors, can be found on OTM’s website:

www.uth.tmc.edu/otm
What does OTM do?

Discover
Disclose
Search
Protect
Market
License
Manage

The Commercialization Path

Assessing the Technology

Qualitative assessment of potential product
• The technology should lead to a useful, commercially valuable product
• Intellectual property protection; technology should be adequately protected; other IP must not block the path to commercialization
• Path-to-market; clear business model/strategy for generating profit
• Regulatory issues
• Commercial Partnership Opportunity
• Licensing: Big company vs. small company vs. start-up company
What additional information do we need to know for IP Protection?

• Is there Novelty/Obviousness
• Public Disclosures?
• Funding Sources
• License Agreements
• Sponsored Research Agreements
• Material Transfer Agreements
• Software Agreements
• Clinical Trial Agreements
• Inventors’ employment

What does OTM do?

Obtaining a patent is expensive!

• An average of $15,000+ in legal fees just to file a US patent application, $25,000 to issue
• An average of 3-5 years to prosecute a US patent
• An estimated $480,000 in legal fees to file and maintain US and standard foreign venues
Commercialization

- Valuation
- Negotiation
- Execution of Agreements
- Agreement Management

What’s the benefit to you?

At UTHealth, we distribute cash received from the licensing of your IP as follows:

- Creators 50%
- Patent fund/OTM 35%
- Your School 5%
- Your Department 5%
- Your Laboratory 5%
We Need Your Help!

• Talk to us (as EARLY as possible)
• Confidentiality
• Documentation/Record Keeping
• Assist with searching
  • Scientific Literature
  • Patents
  • Commercial potential
  • Licensee Identification
• Assist with patent prosecution
• Assist with licensing

Device Example: Portable Fluid Warmer

• 2 patents issued by the USPTO
• 1 startup company formed: EMIT Corporation
• FDA 510(k) clearance received in FY2011 to market the device as “HypothermX™ HX100”

Timeline*

- Prosecute Patent
- 1st Patent Issues
- Patent Maintenance
- Product Development
- FDA approval
- Product Sales

*not to scale

2004

2011
Device Example: Portable Fluid Warmer

Various fluid warmer prototypes over the years, from research prototype to FDA approved product for sale

Software Example: Patient Dashboard

- 1 issued patent in the United States
- patents pending in the United States and abroad
- 1 startup company formed: Decisio Health
- FDA 510(k) clearance received in FY2014

Timeline*

*not to scale

License Agreement

Product Development

FDA approval

Product Sales

2012

2014
Software Example: Patient Dashboard

Early prototype:

Software Example: Patient Dashboard

FDA approved version:
OTM By The Numbers

$4+ million  Annual Gross Revenue
$71+ million  Licensing Revenue (cumulative)
28+ New License/Option Agreements per Year
475+ Total License/Option Agreements (cumulative)
1700+ Patents/Patent Applications (cumulative)
45 New Patent Applications Filed Each Year
100+ Products on the Market

Portfolio Companies (UTHealth)
• 48 portfolio companies (cumulative); 27 active
• More than $250 M in capital raised to date
• 3 companies IPO/acquired with market cap >$3B : Volcano, LifeCell; PLx Pharma
• More than >1300 jobs created in private and 3 public companies

MORE Information

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Contact Us: We are here to help YOU!

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