Office of Technology Management

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What is Intellectual Property (IP)?

A product of the mind that has commercial value

i.e.

- **Patent** (inventions, discoveries, processes)
  Core Technologies
- **Software** (patentable or not)
- **Copyright** (literary works, art, music)
  Original, tangible, published or unpublished work
- **Trademarks** (product names, symbol, figure, logos)
  Acquire rights by usage, federal registration available
- **Trade secrets** (data, formulae, designs, drawings, lists)
  Necessary knowledge and unpatentable matter
- **Domain Names** (internet)
- **Know how** (individual knowledge)
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.

Why We Patent?

- IP is a way to **translate** your research to the marketplace

- **A large part or our Job is to provide public benefit** (Professional responsibility)
  - To help people, someone has to make and sell “your treatment”
  - Drug Development requires huge financial risk and you will need IP to secure funding.

  *If you don’t own it, you can’t sell it!*

- Provides commercial and public recognition
- Alternative source of funding for the lab

- **Federal Grant Agencies require** IP to be reported not only on your grant report, but through our office (iEdison)
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 device or apparatus)
  - a composition of matter (a combination of ingredients)
  - Method or a process (of operating something, of making something or using something).
  - a manufacture (a manufactured article)
- 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?
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 both 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
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Who owns IP?

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

- The IP is created within an employee’s scope of employment; or
- The IP is created on UT System time, or with use of UT System facilities; or
- The IP results from research supported by Federal Funds or 3rd party sponsorship.
Why do I care about IP or OTM?

- IP is a way to translate your research to the marketplace—OTM is your link to commercialization, i.e. through area 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?

Technology Report Form
Copyright Disclosure Form
Software Disclosure Form
Research Material Form

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
Office of Technology Management

Latest Technologies

Text Understanding in an Ontology Driven Platform, Including Data Collection and Processing

ABSTRACT: Systems and methods to aid in the collection, representation, and mining of data are disclosed. More particularly, embodiments as disclosed may utilize a unifying format to represent data obtained or utilized by a system to facilitate linking between data from different sources and the concomitant ability to mine such data. Specifically,
Forms and Instructions for Reporting a Technology

Technology Report Forms:

- Technology Report Form: **Patents**
  - Additional Creator Addendum Form-Technology

- Technology Report Form: **Software**
  - Additional Creator Addendum Form-Software

- Technology Report Form: **Copyright**
  - Additional Creator Addendum Form-Copyright

- Technology Report Form: **Research Material**
What does OTM do?

- File number, manager
- Assess the technology
- Prosecute
- Market
- License

Why? Obtaining a patent is expensive!

- An average of $15,000 in legal fees just to file a US patent application
- An average of 2-5 years to prosecute a US patent
- An estimated $480,000 in legal fees to file and maintain a patent application in the US and standard foreign venues
Assessment: what is OTM looking for?

- Novelty/Obviousness
- Public Disclosure
- Market
- Funding
- Sponsored Research Agreements
- Material Transfer Agreements
- Software Agreements
- Clinical Trial Agreements
- Inventors’ employment

Manuscripts
Abstracts
Posters
Seminars, including job interviews
Web Postings
Genbank
Conversations
Patents

Patent Rules in the US changed in March 2013!!!
Market

• Indications
• Money spent on similar products
• Competitors
• Potential licensees
Commercialization

• Marketing
• Valuation/Negotiation
• Execution and management of license
What’s the benefit to you?

Revenue distribution at academic institutions. At UT, we distribute as follows:

- Inventors 50%
- Patent fund 30%
- Your School 5%
- Your Department 5%
- Your Laboratory 5%
- OTM 5%
Your Responsibilities

• Disclose **(EARLY is possible)** to OTM
• Confidentiality
• Documentation/Record Keeping
• Assist with searching
  – Scientific Literature
  – Patents
  – Commercial potential
  – Licensee Identification
• Assist with patent prosecution
• Assist with licensing
Record Keeping

First to File
Detailed notes
Numbered pages
Dated
Signed
Witnessed
Example @ UTHealth: 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*

- 2004
  - Disclose to OTM & File App.
  - Contact Companies
  - Execute CDAs
  - License Agreement

- 1st Patent Issues

- 2011
  - Prosecute Patent
  - Patent Maintenance
  - FDA approval
  - Product Sales
  - Product Development

*not to scale
Example @ UTHealth: Portable Fluid Warmer

Various fluid warmer prototypes over the years, from research prototype to FDA approved product for sale
Example @ UTHealth: 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*

2012
- Disclose to OTM & File App.
- Contact Companies
- Execute COAs
- License Agreement
- Product Development

2014
- Prosecute Patent Applications
- FDA approval
- Product Sales ??

*not to scale
Example @ UTHealth: Patient Dashboard

Early prototype:
Example @ UTHealth: Patient Dashboard

FDA approved version:

iPhone™, Android™ Display

Android Tablet™, iPad™ Display
Contact Us: We are here to help YOU!

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UTHealth Technology Transfer

Office of Technology Management (OTM):
• Annual Gross Revenue > $4 million
• Cumulative licensing revenues exceed $61 million
• 25 average new license/option agreements per year
• 420 license/option agreements cumulative
• more than 1700 patents/patent applications
• File ~42 US patent applications each year
• more than 190 products on the market

UTHealth Portfolio Companies:
• 43 portfolio companies to date; 26 active; 7 with products on the market
• more than $173M in capital raised to date
• 4 UTHealth portfolio companies are ETF recipients
• 2 companies IPO/acquired with market cap >$2.9B: Volcano, LifeCell
• more than >1300 jobs created in private and 2 public companies
• 3 companies with recent regulatory approvals: two 510K FDA approvals, NDA FDA approval