



UNIVERSITY OF MARYLAND
VENTURES
UMVENTURES.ORG

CART-I Series: Part 1

UM Ventures Introduction and Intellectual Property Overview

Presenters:

Nancy Cowger, PhD – Director of Licensing
Rebecca Bettes, MS, MBA – Senior Licensing Officer
Dustin Lee, JD, MBA – Patent Attorney
Gail Knott - Senior Technology Transfer Manager

Part 1:

UM Ventures Introduction and Intellectual Property Overview

• *What you will learn about today:*

- UM Ventures Baltimore Overview
- Technology transfer process
- Invention disclosure
- IP policy
- Types of IP
- Compliance/Government reporting

Coming up for Day 2 & 3:

- Marketing Technologies
- Contracts
- Revenue Distribution
- Licenses & Start-Ups

What does the Technology Transfer team do?

- Protect intellectual property
- Support technology development
- Market & license inventions
- New venture development
- Develop and maintain partner relationships
- Compliance



UMB OFFICE OF TECHNOLOGY TRANSFER

*Protects, Maintains, Markets
and Commercializes University Intellectual Property*

Management

- Phil Robilotto

IP Protection & Compliance

- Shari Corin
- Bob McCarthy
- Dustin Lee
- Gail Knott
- Janice Ankeny
- Yelena Kovalets

Finance/Reporting

- Nancy Woon-Schaefer
- Kanchana Tirasuth

New Ventures

- Rana Quraishi
- Mark Lafferty
- Adam Kronk
- Alastair Mackay

Licensing & Marketing

- Nancy Cowger
- Mark Wozniak
- Melissa Blackman
- Rebecca Bettes
- Jeff Purnell

Research Alliances

- Linda Petrillo

Prototyping Lab

- Ryan Smith

EIR/Consultants

- *Rahul Singhvi*
- *Darryl Carter*
- *Santosh Venkatesha*
- *Steve Roller*
- *Ric Hughen*
- *Brad Young*

Intellectual Property



IP Group

- 150 disclosures annually

Licensing



Licensing Group

- 50 licenses annually
- 8-10 startups annually

Startups



New Ventures Group

- 3 NVI-supported startups

Investments



UM Ventures Group

- 13 investments in 9 companies
- 4 exits

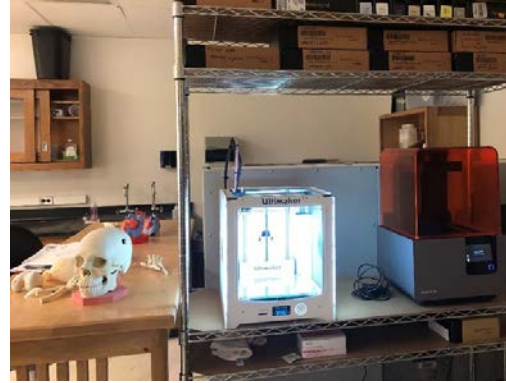
Protect, Maintain, Market
and Commercialize UMB Intellectual Property

Support for UMB Inventors & Startups



Business Management

- Strategy, management & accounting services
- Innovation suite for emerging companies opened 2017



UMVB Prototyping Laboratory

- Design, 3-D printing & tooling capabilities
- Facilitates rapid concept creation
- **Opened 2021** (Bressler Bldg)



UMVB Wet Laboratory

- Molecular & cell biology capabilities
- TRP expansion for UMB inventors (& Biorepository storage) – started 2019
- **Opened 2019** (UM BioPark; 650 ft²)



UMB STARTUP PORTFOLIO COMPANIES

What is Technology Transfer?

The process of transferring scientific findings from one organization to another for the purpose of further development and commercialization.

Taking discoveries generated in the lab and transferring that knowledge to industry, turning it into commercial products and applications



Technology Transfer Process: Idea to Product



NCI/FSU → BMS



Univ. of Minn → Pepin Heights Orchard Inc

Google

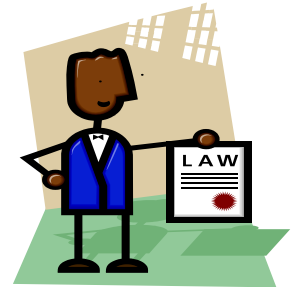
Stanford → Google



UMB → Harpoon → Edwards

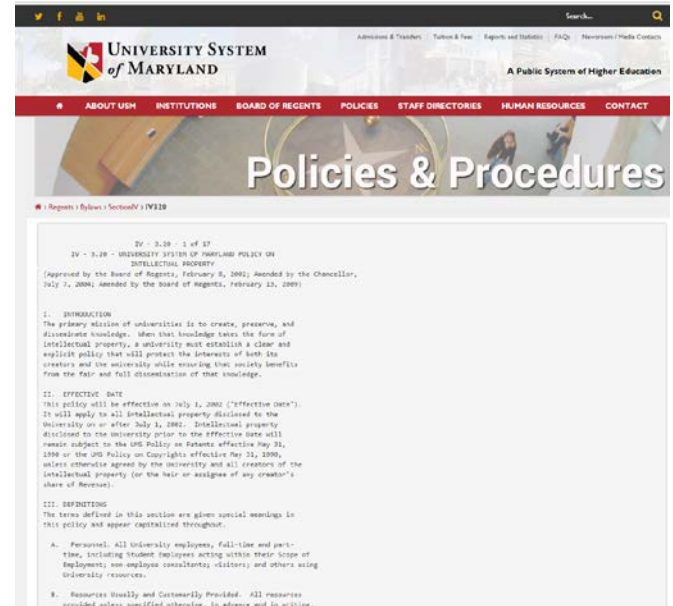
Bayh-Dole Act

- Under the 1980 Bayh-Dole Act (35 U.S.C. 200 *et seq.*), non-profits, including universities and small businesses, may elect to retain title to innovations developed under federally-funded research programs
- This right is balanced by the obligation to promote utilization, commercialization, and public availability of these inventions through, for example:
 - Publication
 - Patenting and licensing
 - Depositing new materials in databank or repository



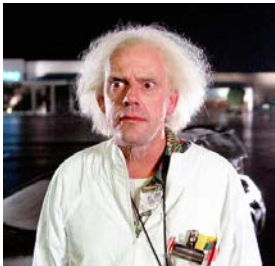
USM/UMB Intellectual Property Policy

- ❑ **What?** Protection of University Intellectual Property (IP)
 - ❑ **Who & Where?** All UMB faculty, staff and students, and others using UMB resources
 - ❑ **Why?** Implement federally-funded IP requirements (Bayh-Dole Act)
 - ❑ **How?** Inventors responsible to disclose inventions in a timely manner and to assign title to University
- Covers other types of IP (software, tangible research property..) to which UMB claims ownership
 - Specifies revenue sharing with the inventors



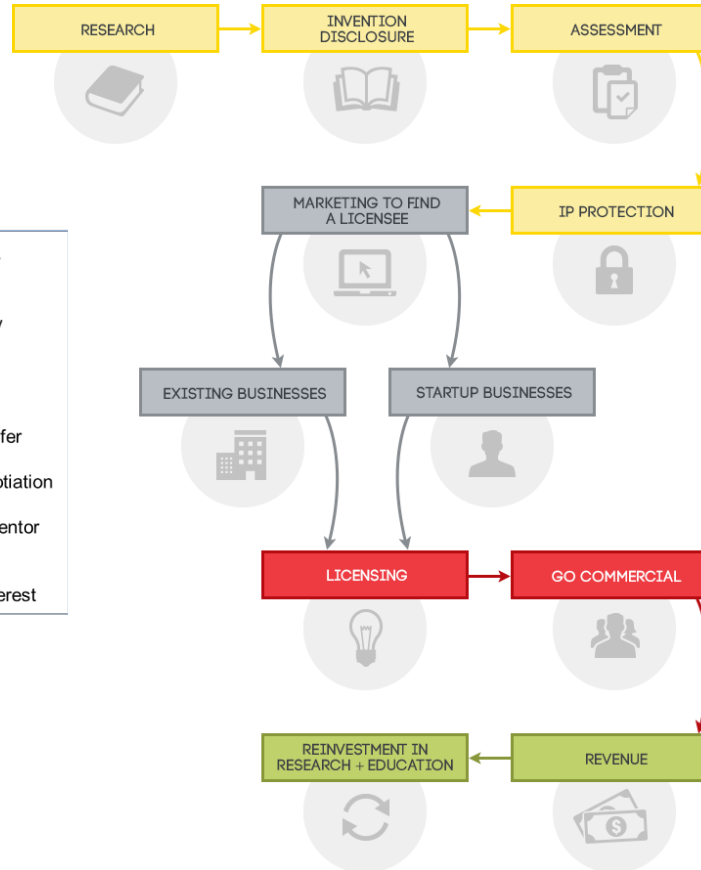
Technology Transfer Process: Idea to Product

REPORTING/COMPLIANCE



Marketing & Licensing:

- Confidentiality Agmts
- Consulting
- Material transfer
- Contract negotiation
- Degree of inventor involvement
- Conflict of interest



Protection Strategy:

Yes/No to file for Patent

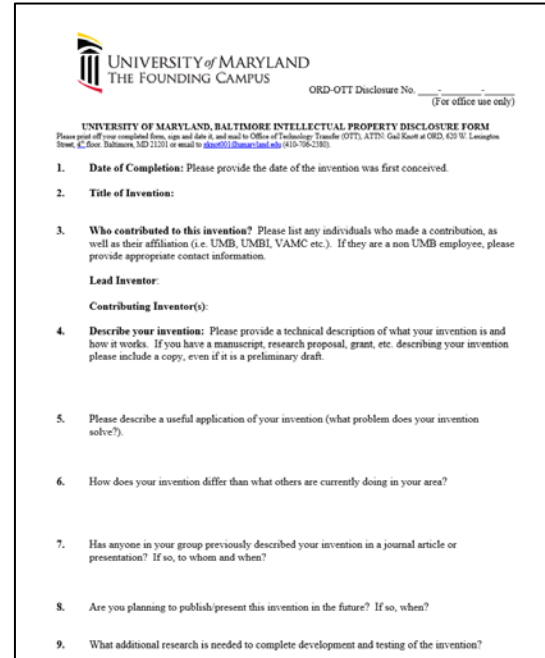
Other type IP protection


Tangible Research Property

To begin...the invention disclosure

*Separate forms for disclosing
Copyright OR Tangible
Research Property*

Find info & forms at:
<https://www.umventures.org/for-inventors/disclosures/baltimore>



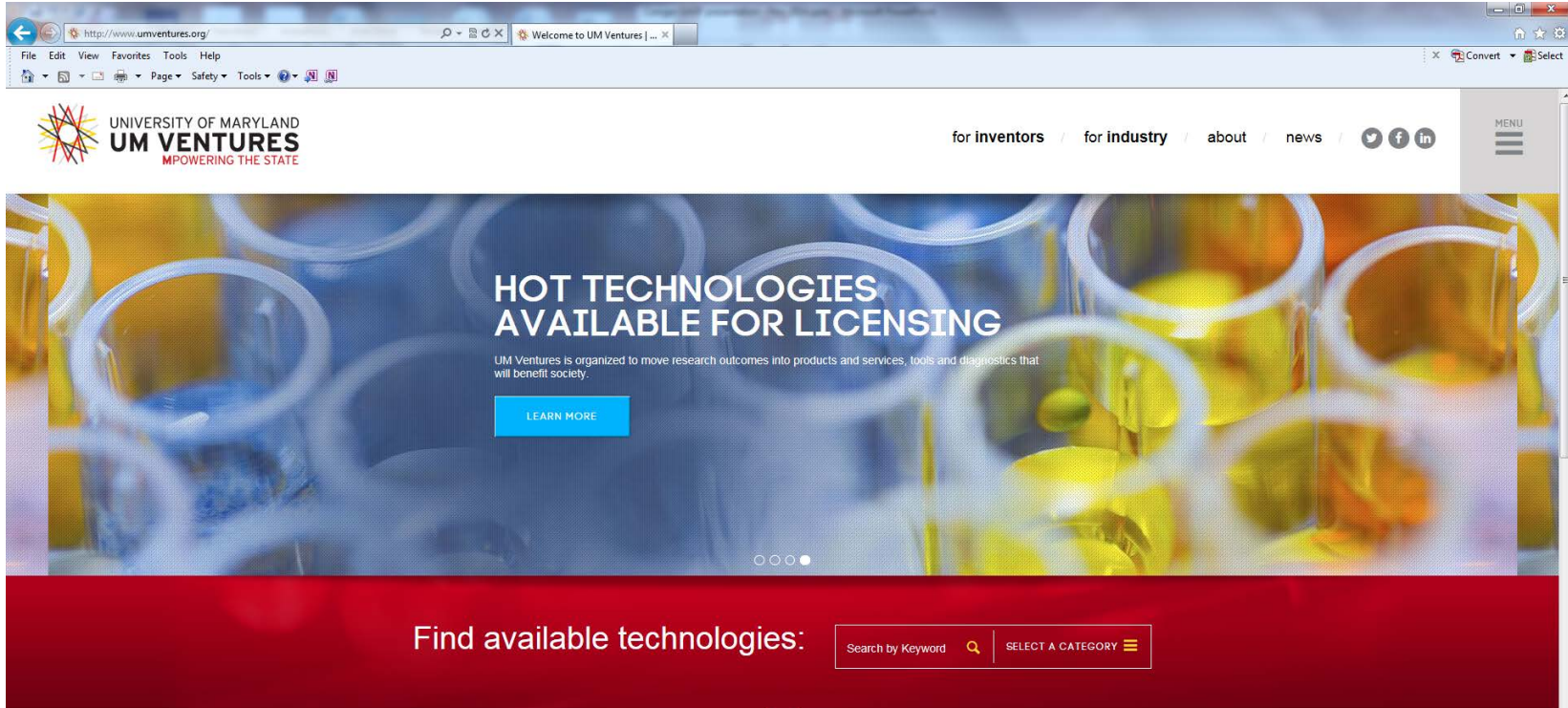
 UNIVERSITY of MARYLAND
THE FOUNDING CAMPUS

ORD-OTT Disclosure No. _____
(For office use only)

UNIVERSITY OF MARYLAND, BALTIMORE INTELLECTUAL PROPERTY DISCLOSURE FORM
Please print all form completed items, sign and date it, and mail to Office of Technology Transfer (OTT), ATTN: Gail Kiser at ORD, 630 W. Lexington Street, 4th floor, Baltimore, MD 21201 or email to ott@um.edu (410-526-2180)

1. **Date of Completion:** Please provide the date the invention was first conceived.
2. **Title of Invention:**
3. **Who contributed to this invention?** Please list any individuals who made a contribution, as well as their affiliation (i.e. UMB, UMBI, VAMC etc.). If they are a non UMB employee, please provide appropriate contact information.
Lead Inventor:
Contributing Inventor(s):
4. **Describe your invention:** Please provide a technical description of what your invention is and how it works. If you have a manuscript, research proposal, grant, etc. describing your invention please include a copy, even if it is a preliminary draft.
5. Please describe a useful application of your invention (what problem does your invention solve?).
6. How does your invention differ than what others are currently doing in your area?
7. Has anyone in your group previously described your invention in a journal article or presentation? If so, to whom and when?
8. Are you planning to publish/present this invention in the future? If so, when?
9. What additional research is needed to complete development and testing of the invention?

Our portal is UM Ventures website...



The screenshot shows a web browser window with the URL <http://www.umventures.org/>. The browser's address bar shows "Welcome to UM Ventures | ...". The website header includes the UM Ventures logo and navigation links: "for inventors", "for industry", "about", "news", and social media icons for Twitter, Facebook, and LinkedIn. A "MENU" button is visible on the right. The main content area features a banner with the text "HOT TECHNOLOGIES AVAILABLE FOR LICENSING" and a sub-headline "UM Ventures is organized to move research outcomes into products and services, tools and diagnostics that will benefit society." Below this is a blue "LEARN MORE" button. At the bottom of the banner are three small circles. Below the banner is a red section with the text "Find available technologies:" and a search bar containing "Search by Keyword" and "SELECT A CATEGORY".

Recent News

- Thursday, November 6, 2014
BBJ: West Africa Ebola Outbreak Pushes
Baltimore Commando Research into

Upcoming Events

- Thursday, November 20, 2014
Bioscience Day Professor Venture Fair
Friday, November 24, 2014

Receive Tech Alerts

Sign up to receive current new technology announcements and other UM Ventures news.

UMB Invention Disclosure Process

The screenshot shows a web browser window displaying the UMB Inventors website. The browser's address bar shows the URL <http://www.umventures.org/for-inventors/disclosures/umb>. The website header includes the University of Maryland UM Ventures logo and a navigation menu with links for [for inventors](#), [for industry](#), [getting started](#), [about](#), and [news](#). Below the header is a banner with the word "INVENTORS" and a sub-link for [Home / For Inventors / Submit A Disclosure](#). The main content area is titled "UMB Inventors" and features a "How to Disclose" section. This section has two main options: "SUBMIT A DISCLOSURE (ONLINE)" and "SUBMIT A DISCLOSURE (PAPER)". The online option is highlighted with a red arrow. Below the online option, there is a list of radio buttons for different disclosure forms: [Copyright Disclosure Invention Form \(MS-Word\)](#), [Intellectual Property Disclosure Form \(MS-Word\)](#), and [Tangible Research Property Disclosure Form \(MS-Word\)](#). A second red arrow points to the "Intellectual Property Disclosure Form" option. To the left of the main content, there is a sidebar with a "FIND TECHNOLOGIES" section and a "SEARCH NOW" button. The footer of the page contains information about OTT (Office of Technology Transfer) and its contact details.

UNIVERSITY OF MARYLAND
UM VENTURES
MPowering THE STATE

[for inventors](#) | [for industry](#) | [getting started](#) | [about](#) | [news](#)

INVENTORS

Home / For Inventors / Submit A Disclosure

- Overview
- Getting Started
- Whom to Contact
- Process
 - Submit a Disclosure
 - College Park Inventors
 - UMB Inventors
 - Funding for New Ventures
 - Starting a Company
 - Resources
 - Programs for Students
 - FAQs

FIND TECHNOLOGIES

Search through the hundreds of innovations that are available for licensing.

SEARCH NOW

UMB Inventors

UNIVERSITY OF MARYLAND

How to Disclose

SUBMIT A DISCLOSURE (ONLINE)

An online disclosure form is available via [myUM portal](#). Once you log-in to the portal, on the left side of the screen under the enterprise menu, click on UMBz. You may [download brief instructions](#) for submitting an online disclosure via UMBz. Only UM personnel can have an access to myUM portal. If you need to obtain a myUM portal login, select the "First Time User" link on the myUM portal page, or contact the CITIS helpdesk at help@umaryland.edu. Submitting the online form will ensure that your disclosure has been entered into OTT's system immediately and accurately.

For an inventor who has an appointment with the U.S. Department of Veterans Affairs (VA), please complete and submit the [VA Certification of Invention Form](#) along with the UM disclosure form.

SUBMIT A DISCLOSURE (PAPER)

You may submit a disclosure by completing one of the following forms:

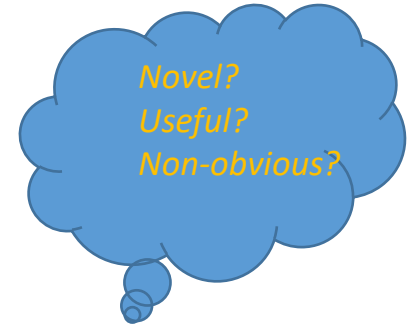
- [Copyright Disclosure Invention Form \(MS-Word\)](#)
- [Intellectual Property Disclosure Form \(MS-Word\)](#)
- [Tangible Research Property Disclosure Form \(MS-Word\)](#)

OTT requires signatures from all inventors. Once you have submitted the form online or completed the downloaded form, please print and have all inventors sign and date. Then, email or mail a copy to OTT, attention Gail Knott, Office of Technology Transfer, ORD, 620 West Lexington Street, 4th floor, Baltimore, MD 21201

Disclosure of invention to OTT

(Before public disclosure!)

- Describe your invention
- Who are the inventors?
- What problem does your invention solve?
- How does your invention differ than what others are currently doing?
- Has anyone previously described your invention in a journal article or presentation?
- Are you planning to publish/present this invention in the future?
- Funding or financial support?



Inventor Meeting

Attendees

- Inventors
- IP Attorneys
- Licensing Officers



Purpose

- Opportunity to learn more details of possible invention and who contributed
- Develop short and long term IP protection strategy including research priorities
 - Public Disclosure plans
- Identify funding sources
- Commercialization leads



Intellectual Property

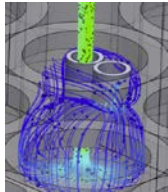


INTELLECTUAL PROPERTY SUPPORTED BY UM/B



What We Support

- ✓ Inventions and Software
 - ✓ Scope of Employment
 - ✓ Created by Sponsored Research
 - ✓ Use of University Resources
- ✓ Tangible Research Property
- x Academic Papers and Books
- ? Technology-Mediated Instruction Materials



What We License

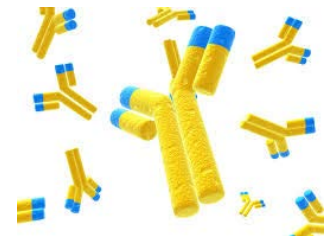
- Patents
- Copyrights
- Data
- Tangible Research Property (TRP)
 - Research materials and tools

United States Patent [14] US00010966A
Epp et al. [11] Patent Number: **5,176,965**
[12] Date of Patent: **Jan. 5, 1993**

[54] **FUEL CELL MEMBRANE ELECTRODE AND SEAL ASSEMBLY**
[57] **Abstract**
A fully supported membrane assembly for an electrochemical fuel cell is provided. A flat and sealed layer of porous electrically conductive sheet material, such as carbon fiber paper, has a solid polymer ion exchange membrane impregnated therebetween. The layers of sheet material cover and support the membrane over substantially its entire surface area. The layers of sheet material are coated with a resin to render them electrochemically active. The layers of sheet material and the membrane are bonded together to form a consolidated assembly. Openings are formed in the layers of sheet material and the membrane to accommodate the passage of fluids through the assembly. Stacks are formed by superimposing the layers of sheet material with a sealant material which generally circumscribes the fluid passage openings and the electrochemically active portions of the assembly. Alternatively, grooves are formed in the surfaces of the electrodes during assembly from the membrane, and sealant material is deposited into the grooves. The grooves generally circumscribe the fluid passage openings and the electrochemically active portions of the assembly.

[57] **Abstract**
A fully supported membrane assembly for an electrochemical fuel cell is provided. A flat and sealed layer of porous electrically conductive sheet material, such as carbon fiber paper, has a solid polymer ion exchange membrane impregnated therebetween. The layers of sheet material cover and support the membrane over substantially its entire surface area. The layers of sheet material are coated with a resin to render them electrochemically active. The layers of sheet material and the membrane are bonded together to form a consolidated assembly. Openings are formed in the layers of sheet material and the membrane to accommodate the passage of fluids through the assembly. Stacks are formed by superimposing the layers of sheet material with a sealant material which generally circumscribes the fluid passage openings and the electrochemically active portions of the assembly. Alternatively, grooves are formed in the surfaces of the electrodes during assembly from the membrane, and sealant material is deposited into the grooves. The grooves generally circumscribe the fluid passage openings and the electrochemically active portions of the assembly.

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4,279,930 7/1981 Street et al. 429/26
4,904,542 2/1989 Vandenberg et al. 429/26
FOREIGN PATENT DOCUMENTS
118366 12/1984 European Pat. Off. 429/26
374762A 3/1986 European Pat. Off. 429/26
0129172 5/1989 Japan 429/26
OTHER PUBLICATIONS



PATENT BASICS

Utility Patent

- Machine, manufacture, composition of matter, or process
- Monopoly of *up to 20 years*
 - Initial fees + Maintenance fees @ 3.5, 7.5, and 11.5 years
- Grants a property right to the inventor/owner
 - Claims establish the “boundaries” to exclude others
 - Incentive to encourage investment and diffusion of knowledge
 - *Not* a right to make, use, sell the patented invention!
- Country specific
 - No “international patent”

Design Patent

- Ornamental design of a functional item
- Monopoly of 14 years

Plant Patent

- An invented or discovered and asexually reproduced a distinct and new variety of plant
- Monopoly of 20 years

United States Patent Gammie

(10) Patent No.: US 7,635,386 B1

(45) Date of Patent: Dec. 22, 2009

(54) **METHODS AND DEVICES FOR PERFORMING CARDIAC VALVE REPAIR** 2006/0167541 A1* 7/2006 Lattouf 623/2.11
2007/0112422 A1* 5/2007 Dehdashian 623/2.11
2009/0005863 A1* 1/2009 Gietz et al. 623/2.18

(75) Inventor: James S. Gammie, Stevenson, MD (US)

FOREIGN PATENT DOCUMENTS

(73) Assignee: University of Maryland, Baltimore, Baltimore, MD (US)

WO WO 2006/078694 7/2006

* cited by examiner

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 296 days.

(21) Appl. No.: 11/683,282

(57) ABSTRACT

(22) Filed: Mar. 7, 2007

Related U.S. Application Data

(60) Provisional application No. 60/780,521, filed on Mar. 7, 2006.

(51) Int. Cl. A61F 2/24 (2006.01)

(52) U.S. Cl. 623/2.11; 623/904

(58) Field of Classification Search 128/808; 607/9; 623/2.1-2.37, 904

See application file for complete search history.

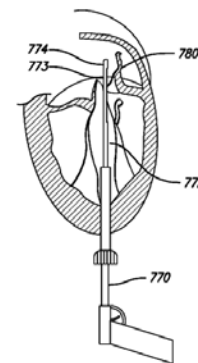
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U.S. PATENT DOCUMENTS


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7,291,168 B2 * 11/2007 Macoviak et al. 623/2.36
7,294,148 B2 * 11/2007 McCarthy 623/2.36
2005/0140993 A1* 7/2005 Pokorney 606/185
2006/0106698 A1* 5/2006 Lattouf 623/2.11

The present invention is directed to methods and devices for repairing a cardiac valve. Generally, the methods involve a minimally invasive procedure that includes creating an access in the apex region of the heart through which one or more instruments may be inserted so as to repair a cardiac valve, for instance, a mitral or tricuspid valve. Accordingly, the methods are useful for performing a variety of procedures to effectuate a repair. For instance, in one embodiment, the methods are useful for repairing a cardiac valve by implanting one or more artificial heart valve chordae tendinae into one or more cardiac valve leaflet tissues so as to restore the proper leaflet function and thereby prevent regurgitation. In another embodiment, the methods are useful for repairing a cardiac valve by resecting a portion of one or more cardiac valve leaflets and implanting one or more sutures into the resected valve tissues, which may also include the implantation of an annuloplasty ring. In an additional embodiment, the methods are useful for repairing an edge to edge bow-tie repair (e.g., an Alfieri repair) on cardiac valve tissues. Devices for performing the methods of the invention are also provided.

23 Claims, 9 Drawing Sheets



DISCLOSURE TO PATENTABILITY ANALYSIS



ORD-OTT Disclosure No. _____
(for office use only)

UNIVERSITY OF MARYLAND, BALTIMORE INTELLECTUAL PROPERTY DISCLOSURE FORM
Please print off your completed form, sign and date it, and mail to Office of Technology Transfer (OTT), ATTN: Gail Scott at ORD, 424 W. Lexington Street, C Room, Baltimore, MD 21201 or email to ip@umb.edu (410-326-2180).

- Date of Completion:** Please provide the date of the invention was first conceived.
- Title of Invention:**
- Who contributed to this invention?** Please list any individuals who made a contribution, as well as their affiliation (i.e. UMB, UMBI, VAMC etc.). If they are a non UMB employee, please provide appropriate contact information.

UMB IP DISCLOSURE

- Please describe a useful application of your invention (what problem does your invention solve?)
- How does your invention differ than what others are currently doing in your area?
- Has anyone in your group previously described your invention in a journal article or presentation? If so, to whom and when?
- Are you planning to publish/present this invention in the future? If so, when?
- What additional research is needed to complete development and testing of the invention?

Questions to Answer

- Timing matters
 - When did you create the technology?
 - When did you discuss it?
- Focus on the technology
 - What is the technical problem?
 - What is the technical solution?
- Focus on the market
 - What is the problem to be solved?
 - Who will pay you to solve it?
- People and Organizations
 - Who contributed to which IP?
 - Who do they work for?

Patentability Requirements

- Subject Matter Eligibility (*useful*)
- Novelty (*identical*)
- Non-obviousness (*similar*)

Requirements of the Patent Application

- Written Description (*what it is*)
- Enablement (*how it works*)
- Best mode (*how it works best*)

Patent Inventorship

- Contribution to conception or reduction to practice

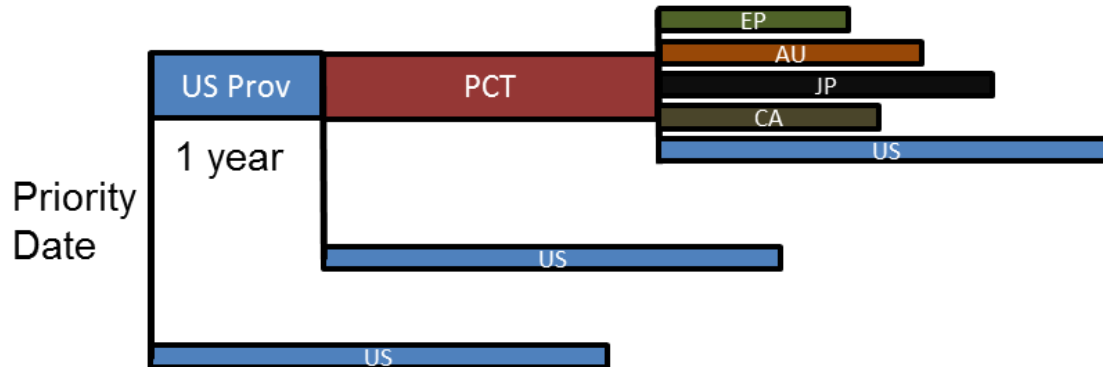
UTILITY PATENTS IN THE PATENT PROCESS

Provisional Patent Applications (*US only*)

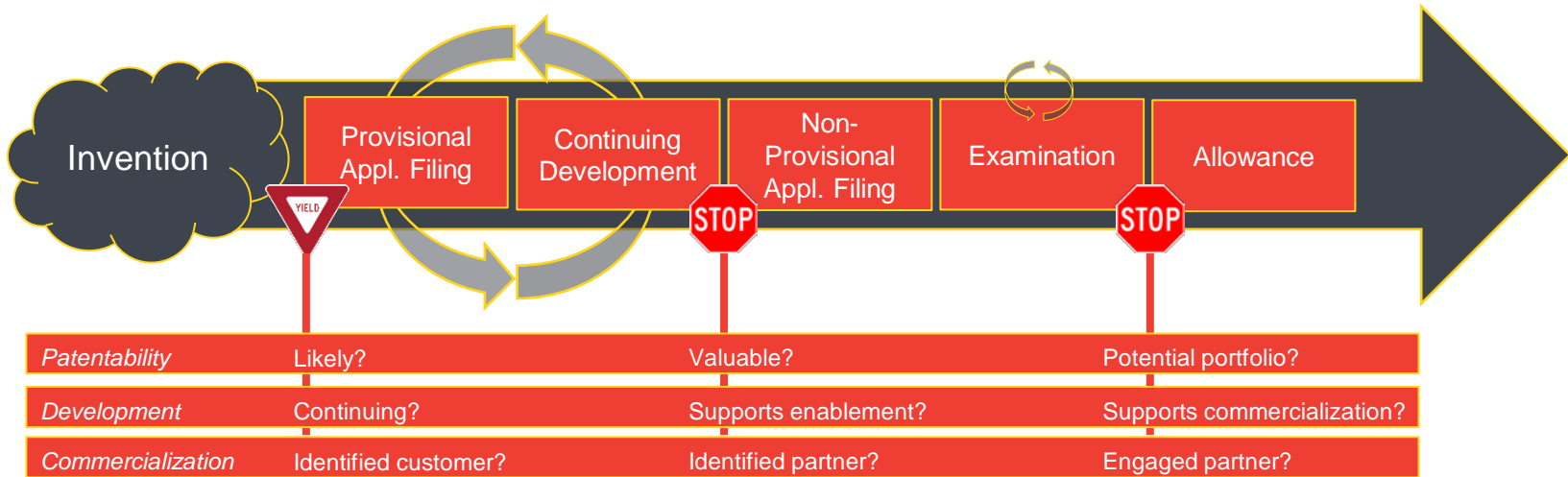
- Temporary application (12 months)
- *Never* examined and will *not* become an issued patent
- Puts a “stake in the ground” for future non-provisional patent applications
- Held at the USPTO in confidence
 - Abandoned after 12 months if no claim of priority
- Very limited formal requirements
 - Only as valuable as the included description
- “Patent Pending”

Non-Provisional Patent Applications (*US, PCT, Foreign*)

- Examined for patentability by a patent examiner
- Can claim the benefit of previous patent applications
- Published 18 months after *earliest* priority date
- Very strict formal requirements
- Other types for developing a patent portfolio
 - PCT or foreign applications, Divisionals, Continuations, Continuations-in-Part
- “Patent Pending”



PATENT PROSECUTION AND ANALYSIS



Continuous Engagement with Inventors

PATENT RESEARCH TIPS

- Common Patent Tools
 - Google Patents (patents.google.com)
 - USPTO (www.uspto.gov)
 - Espacenet (EPO) (worldwide.espacenet.com)
 - WIPO (patentscope.wipo.int)
- Inventors are *not* required to search for prior art
 - Examiners will always perform their own search
 - Better to focus on your technology than other's prior art
- Prior art includes *everything* published, marketed, or presented prior to the filing date
 - e.g., Issued patents, abandoned patent applications, articles, sales brochures, products, Wikipedia, YouTube videos, etc.
 - Don't hide or ignore known prior art!

UNITED STATES
PATENT AND TRADEMARK OFFICE



KEY COMPONENTS OF A UTILITY PATENT

(1) **United States Patent** (10) Patent No.: **US 7,635,386 B1**

US 7,635,386 B1

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unless otherwise indicated herein or otherwise clearly contradicted by context. The use of any and all examples, or exemplary language (e.g., "such as") provided herein, is intended merely to illuminate better the invention and does not pose a limitation on the scope of the invention unless otherwise claimed. No language in the specification should be construed as indicating any non-claimed element as essential to the practice of the invention.

Preferred embodiments of this invention are described herein, including the best mode known to the inventors for carrying out the invention. It should be understood that the illustrated embodiments are exemplary only, and should not be taken as limiting the scope of the invention.

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Zussa, C., Polesel, E., et al., "Seven-year experience with chordal replacement with expanded polytetrafluoroethylene in floppy mitral valve," (1994) *Thorac Cardiovasc Surg* 108(1):37-41.

Zussa, C., Polesel, E., et al., "Surgical technique for artificial mitral chordae implantation," (1991) *Card Surg* 6(4):432-438.

What is claimed is:

1. A method for repairing a defective mitral or tricuspid valve, comprising:

creating an access in an apical region of a heart through which a defective cardiac valve is accessed;

introducing a device through said access; and

repairing said cardiac valve by use of said device, wherein the repairing comprises

Specification
 Description to fully, clearly, and concisely enable any person skilled in the art

Claims
 Establish the boundaries of the owners' right to exclude

US 7,635,386 B1

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9. The method of claim 1, wherein the method comprises the use of endoscopy.

10. The method of claim 1, wherein the introduction of the device is performed in conjunction with sonography or direct transblood visualization.

11. The method of claim 1, wherein said repairing comprises:

anchoring the one or more artificial chordae to a tissue in the apical region of the heart.

12. The method of claim 11, wherein the apical tissue is internal to the heart.

13. The method of claim 11, wherein the apical tissue is a papillary muscle, a papillary connective tissue or an endocardial tissue in the lower ventricle.

14. The method of claim 11, wherein the apical tissue is the epicardium.

15. The method of claim 11, further comprising determining an optimal configuration of the one or more artificial chordae before anchoring the artificial chordae.

16. The method of claim 15, wherein the determining comprises the use of sonic guidance.

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17. The method of claim 15, wherein the artificial chordae are anchored to the apical tissue subsequent to said determination.

18. The method of claim 1, wherein the repairing comprises the application of a vacuum.

19. A method for treating a defective mitral or tricuspid valve, comprising:

percutaneously accessing an apical region of a heart with a catheter-based device; and

repairing a cardiac valve by use of said device, wherein the repairing comprises replacing at least one chordae tendineae, and

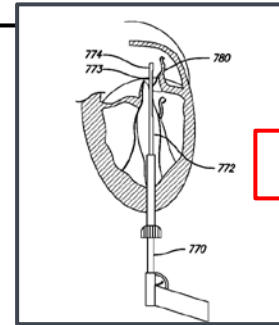
wherein the replaced chordae tendineae comprises a suture with one or more leaflets of the heart.

20. The method of claim 19, wherein said accessing is done endovascularly via an antegrade approach.

21. The method of claim 19, wherein said accessing is done endovascularly via a retrograde approach.

22. The method of claim 19, wherein said accessing is done via direct access through a transmyocardial approach.

23. The method of claim 19, wherein the replacing comprises anchoring a neochord to the apical region.



Figures

COPYRIGHTS

- Protects original *expressions* of creative ideas
- How we protect inventions with copyrights
 1. “Common law copyright”
 - Created the instant the material is made
 - Protects bundle of rights
 2. Federal copyright registration
 - Same protections as “common law”
 - Most useful for *enforcement*
 - Minimal review process
- Copyright “author” ≠ Scholarly “author”
 - Copyright author = **Anyone who has made a *creative contribution to the *original work*
- Licensable exactly like a patent
- Notice – Using the “©” Symbol
 - Helps others know that work is protected
- Length of protection depends on creator (>70yrs)

How a Copyright is Made

1. Original work → *New DICOM s/w*
2. Tangibly fixed → *Saved on PC*
3. By an author → *UMB faculty*

Bundle of Rights in a Copyright

- Reproduction
- Performance
- Make derivatives
- Display publicly
- Distribution
- Broadcast

Example Copyright Notices

- Copyright 2022, University of Maryland, Baltimore. All rights reserved.
- © 2022, University of Maryland, Baltimore
- © 2022 UMB
- © 2022

OTHER TYPES OF INTELLECTUAL PROPERTY

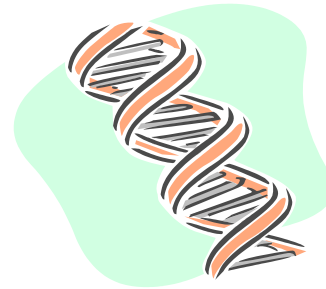
- Trademarks and Service-marks
 - Protects marks that *identify the source* of goods or services to *the goods or services* used in commerce
 - Images, symbols, words, sounds, smells
 - Different levels of protection based on distinctiveness
 - Federal (“registered”) and state protections
 - USPTO and individual states
 - Based on use in commerce
- Trade Secrets and Know-How
 - Protects *commercially valuable* information as long as the information *remains secret*
 - Requires measures to keep information secret
 - Physical safeguards, IT protections, CDAs/NDAs, employment agreements and policies, etc.



TANGIBLE RESEARCH PROPERTY (TRP)

Unique research tools created at UMB

- Chemicals/Drugs
- Cell lines
- DNA constructs (e.g. plasmids)
- Transgenic animals
- Microorganisms (e.g. viruses, bacteria)
- Proteins, Monoclonal antibodies



TRP's are valuable and licensable – commercial partnership

TANGIBLE RESEARCH PROPERTY TIPS

- How to Share Tangible Research Property
 - A Material Transfer Agreement (MTA) should always be in place before sending proprietary materials to a third party
- Request a new MTA via myUM portal
- Contact Stephanie Deasey in CCT with questions at x62463 or sdeasey@umaryland.edu
- UMB storage options available through the Biorepository

Compliance



Reporting IP



U.S. Department of Health & Human Services | National Institutes of Health

NIH National Institutes of Health
Office of Extramural Research

Grants & Funding
NIH's Central Resource for Grants and Funding Information

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Lobbying Guidance for Grantee Activities

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Sharing Policies

Intellectual Property Policy

Division of Extramural Inventions & Technology Resources (DEITR) in the NIH Office of Extramural Research

Regulations

Inventions arising from federally funded research projects are required by Bayh-Dole Act (the Patent and Trademark Law Amendments Act). The universities) to retain ownership of the inventions made under federal government the license to practice the subject invention. In turn, the commercialization upon licensing for the benefit of public health. Read

Key Provisions

The contractor or grantee or cooperative agreement awardee (i.e. the

- Report each new invention to the federal funding agency within
- Decide whether to retain ownership of the technology and notify disclosure (i.e. elect to own the invention)
- File for patent (or plant variety protection, in the case of plants),
- Provide a license to the government to also practice the subject
- Keep government informed of progress in patenting or commen
- Report any commercialization, licensing efforts, or other efforts

Invention Reporting System

- **Interagency Edison (iEdison)** - A system for the electronic rep used by more than 30 federal agencies for invention and patent detailed information on navigating iEdison, FAQs, and more.
- **Edison Report-Lite (ERL)** - A tracking feature of iEdison for age

Resources

- **Timeline for Reporting** - Chart detailing the responsibilities of the
- **Utilization Reporting** - Brief PowerPoint presentation about utili utilization report, and the importance of utilization reporting.
- **Extramural Inventions and Technology Resources** - Webinars

Notices

Related Resources

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UNIVERSITY SYSTEM of MARYLAND

A Public System of Higher Education

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Policies & Procedures

Regents | Policies | Section IV's IV310

IV - 3.28 - 1 of 37

IV - 3.28 - UNIVERSITY SYSTEM OF MARYLAND POLICY ON INTELLECTUAL PROPERTY

(Approved by the Board of Regents, February 8, 2002; Amended by the Chancellor, July 7, 2004; Amended by the Board of Regents, February 13, 2008)

I. INTRODUCTION

The primary mission of universities is to create, preserve, and disseminate knowledge. When that knowledge takes the form of intellectual property, a university must establish a clear and explicit policy that will protect the interests of both its creators and the university while ensuring that society benefits from the fair and full dissemination of that knowledge.

II. EFFECTIVE DATE

This policy will be effective on July 1, 2002 ("Effective Date"). It will apply to all intellectual property disclosed to the University on or after July 1, 2002. Intellectual property disclosed to the University prior to the Effective Date will remain subject to the USM Policy on Patent effective May 31, 1998 or the USM Policy on Copyright effective May 31, 1999, unless otherwise agreed by the University and all creators of the intellectual property (or the heir or assignee of any creator's share of proceeds).

III. DEFINITIONS

The terms defined in this section are given special meanings in this policy and appear capitalized throughout.

A. Personnel. All University employees, full-time and part-time, including Student Employees acting within their Scope of Employment; non-employee consultants; visitors; and others using University resources.

B. Resources Usually and Customarily Provided. All resources provided unless specified otherwise, in advance and in writing.

Summary of Federal Funding Compliance Requirements Managed by OTT

- Disclose to U.S. Government within 60 days
- Elect/waive title within 2 years
- File patent within 1 year of electing title
- Provide confirmatory license
- Must list federal support in patent application
- Share licensing revenues with inventor(s)
- Preference to small business licensees
- U.S. manufacturing for products sold in U.S.
- Report invention utilization annually





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System Notification

iEdison 4.00.00

iEdison (which stands for Interagency Edison) helps government grantees and contractors comply with a federal law, the Bayh-Dole Act. Bayh-Dole regulations require that government funded inventions be reported to the federal agency who made the award.

iEdison is interagency because it provides a single interface for grantees and contractors to interact with any participating agency.

iEdison makes it easy to learn about the law and its regulations and report an invention or patent funded by any of the agencies listed on the right.

iEdison Overview

What's New

Bayh-Dole Act (37 CFR 401)

Invention Reporting Timeline

Frequently-Asked Questions

iEdison is used for invention and patent reporting by the following agency offices below.

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For a complete list, go to [here](#)

For any required agency specific forms, click on the agency link.

Compliance: Invention Reporting

U.S. federal law mandates that all recipients of federal grants or contracts must report details of inventions and patents that have been made through such awards [37CFR Section 401]

Add Utilization Report

All fields marked with an asterisk (*) are required. Fill out the fields below and then choose "Submit" to save your changes.

Reminder: This information is cumulative for all inventions that have had title elected or have been licensed without being patented, including any patents arising from invention report number 7654321-99-0020. This utilization report is for the twelve month reporting period starting on the first day of the month that has been selected for your institution.

COMPLIANCE:

Invention Utilization Reports – an annual obligation

Utilization Report

Invention Title	This is a test
Invention Report Number	7654321-99-0020
Grantee/Contractor Organization	DAN'S INSTITUTION (7654321)
Reporting Year	2000
*Please indicate the latest stage of development of any product arising from this invention, according to the following categories:	<div style="border: 1px solid #ccc; padding: 2px;"> --Choose One-- --Choose One-- Commercialized Licensed Not Licensed </div>
If any product arising from this invention has reached the market, what was the calendar year of the first commercial sale?	<input type="text" value=""/> (YYYY)
In the designated reporting period, what was the total income received as a result of license or option agreements? Do not include specific patent costs reimbursement.	\$ <input type="text" value="0.00"/>
In the designated reporting period, did the grantee organization/contractor or any of the exclusive licensees request a waiver of the U.S. manufacturing requirements?	<input type="radio"/> Yes <input checked="" type="radio"/> No
If yes, how many such waivers were obtained?	<input type="text" value="0"/>
Please provide the commercial name of any FDA-approved products, utilizing this invention, that have first reached the market during the designated reporting period.	<div style="text-align: right; border: 1px solid #ccc; padding: 2px; display: inline-block;">Add Commercial Product</div>
In the designated reporting period, how many exclusive licenses and/or options have been awarded?	<input type="text" value="0"/>
Number of Domestic Manufacturing Licenses	<input type="text"/>
In the designated reporting period, how many non-exclusive licenses and/or options have been awarded?	<input type="text" value="0"/>
In the designated reporting period, how many licenses and/or options of any type were awarded to small businesses (<500 employees)?	<input type="text" value="0"/>
Total Gross Sales	\$ <input type="text" value="0.00"/>

Submit Reset Cancel

Please note: Commercial names should be limited to FDA-approved products that first reached the market during the designated reporting period. Please remove the "Public" checkmark from any FDA-approved product that you do not want to appear on a publicly available list of products arising from your funding agreement.

Other IP reporting and compliance

- Corporate (OTT works with CCT)
 - Sponsored Research & Clinical Trial Contracts
- Foundations & Other Non-Profits (OTT works with SPA & funding partner)
 - Ex. Gates Foundation, LLS
- State and other government funding
- License Agreements
- MTAs
- Data Sharing Agreements
- Other Research Collaborations

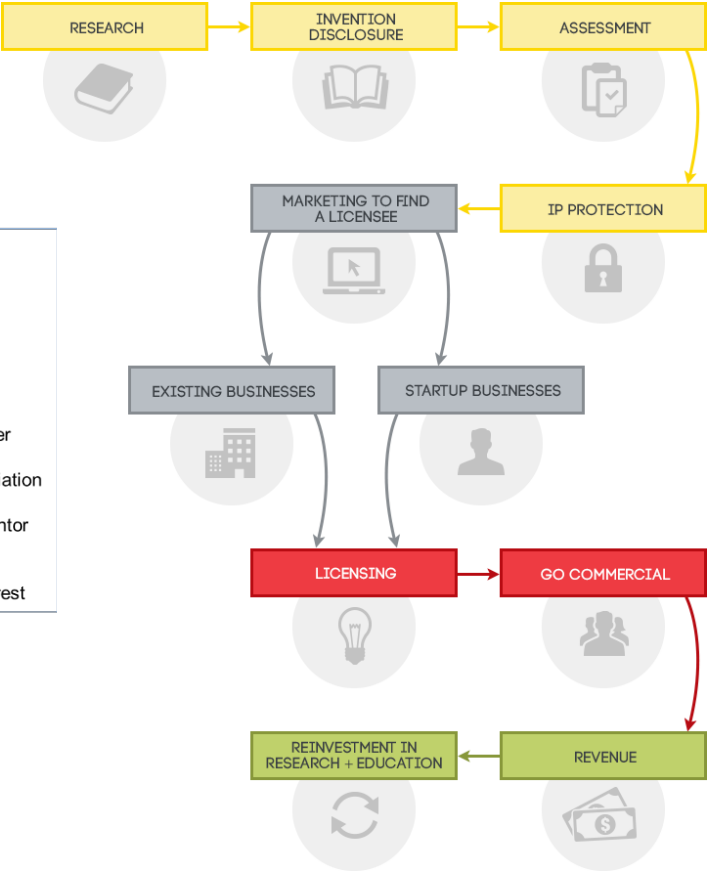
Technology Transfer Process: Summary

REPORTING/COMPLIANCE



Marketing & Licensing:

- Confidentiality Agmts
- Consulting
- Material transfer
- Contract negotiation
- Degree of inventor involvement
- Conflict of interest



Protection Strategy:

- Yes/No to file for Patent
- Other type IP protection
- Tangible Research Property

Thank you!

Questions?



Coming up for Day 2:

- Marketing Technologies
- Contracts
- Inventor Revenue Distribution

Coming up for Day 3:

- Start-Ups
- Resources and Funding for Entrepreneurs
- Campus Events and Initiatives

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