



- **Research Ventures and Licensing** •

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**Corporate Sponsored Research and Licensing**

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**Presentation to: Office for Postdoctoral Careers**

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# Agenda

- Technology Transfer Overview
- Licensing Associate Profile
- Discussion

- Largest academic biomedical facility in the world
- ~1,900 Principal Investigators (MDs, PhDs, MDs/PhDs)\*

## Principal Investigators as of March '06

• MGH	975
• BWH	762
• McLean	132
• Spaulding	15
• <b>Total</b>	<b>1,884</b>

\* >5,000 total scientists involved in medical research

# PHS Research Enterprise: NIH Research Funding

- Since 1994, PHS Hospitals are the largest (MGH) and second largest (BWH) non-university recipients of NIH research funding
  
- 2005\* ranking among independent hospitals
  - FIRST - MGH
    - \$287 million
    - 694 awards
  - SECOND - BWH
    - \$253 million
    - 566 awards

\* Most current available data from NIH

# Technology Transfer Overview

- What is it?
- How does it get transferred?
- Who owns the technology?
- Who gets the money?
- What about funding for research?

# What is Technology Transfer?

- Transfer of technological innovation from one party to another for purpose of developing and commercializing useful products
  - From academia to industry: benefits and challenges for both — and for the investigator/inventor

# What Technology is Transferred?

- Intellectual Property
  - Inventions (usually patentable)
    - New, useful, not obvious
    - Determined by patent lawyers, patent office, courts
  - Copyrightable works - (mainly software)
  - Trademarks; trade secrets
- Tangible Research Property - (unpatentable biological materials)
- Intangible Research Property – (research results, know-how)

# More On Patents

- Legal right to exclude others
- To preserve patentability: disclose to technology transfer office before public disclosure (oral presentations, publication) because foreign patent protection may be jeopardized (US: one-year grace period; ROW: must be first to file).
- Loss of foreign patent rights can greatly impact the financial value of an invention

# Who Owns the Technology and Why?

- Intellectual Property, TRP: the hospitals  
 Unless: unrelated, no hospital resources, or made under approved consulting arrangement (and no hospital resources)
- Why?
  - Federal law: Bayh-Dole Act of 1980 permitting universities/hospitals to elect ownership of inventions made under federal funding
  - Obligated to have a written policy with its employees requiring disclosure and assignment of inventions and in return must share with the inventor(s) a portion of any revenue received from licensing the invention.
  - Institutional policy: Intellectual Property Policy

# How is Technology Transferred?

- Informally
- Formally- agreements
  - Licenses, material transfer agreements, confidentiality agreements, research agreements
  - Negotiated by technology transfer offices
  - Signed by authorized institutional representative-  
investigators not authorized

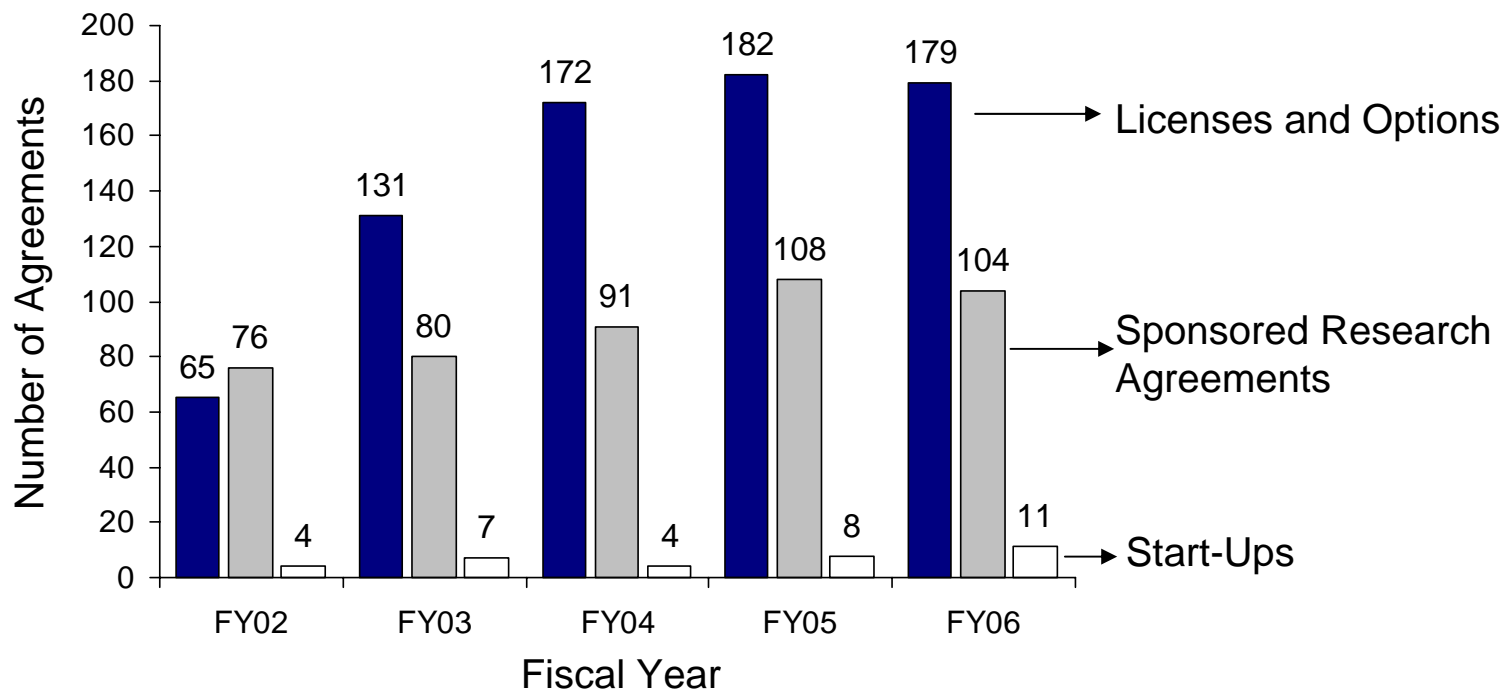
# PHS Technology Portfolio

- PHS currently has ~900 technologies available for licensing, and our portfolio is grows annually

	FY03	FY04	FY05	FY06
Invention disclosures received	132	146	164	277
US patent filings	145	151	153	172

## Research Ventures and Licensing (RVL)

### Annual Licenses & Options / Sponsored Research Agreements / Start-Ups



# Selected PHS Licensed Products

FY06 Licensing Income: \$328M

FY06 Royalty Income: \$69M

Embrel



Pepcid Complete



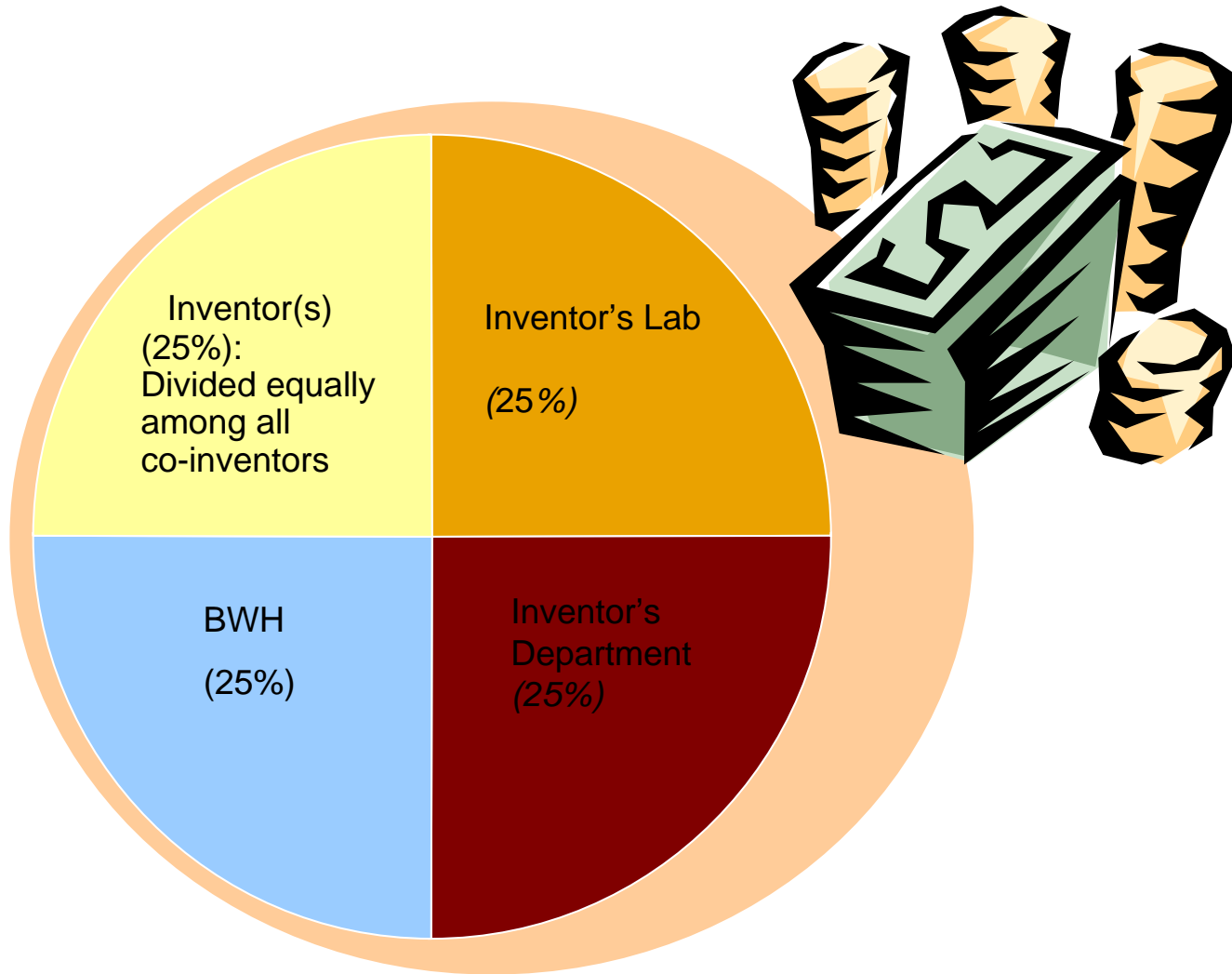
Hs CRP diagnostic

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# Who Gets The Money?\*



**\*After deducting unreimbursed patent/legal/marketing expenses**

# What About Funding For Research?

- Industry sponsored research
  - Part of license package, or separate
  - Academic rights (publication, collaboration, no secrecy of research results) preserved
  - Intellectual property rights narrowly defined
  - Commingling with government funds OK
  - FY06 PHS Corporate Sponsored Research Expenditures:  
>\$75MM

# Technology Transfer as a Career Path

- What is this profession all about?
- Where do these professionals work?
- What skills do I need?
- What do technology transfer professionals do?
- What are some resources?
- Where do I start?

# Where is the Technology Transfer Office?

(and what do they do?)

There are technology transfer offices at universities, medical schools, hospitals, government agencies and in industry. Most offices provide technology transfer, research support, licensing and start-up activities.

Not all technology transfer offices are called the same name or do all the same things!

- Intellectual Property Office
- Licensing Office
- Some are part of a university's Research Foundation
- OTL, TLO, TVO, OTTL, TCO, OTD
- Corporate Sponsored Research and Licensing (CSRL)

## CSRL is part of Research Ventures and Licensing (RVL)

***RVL Mission:** To support innovative research and the broad translation of Partners HealthCare science to the patient bedside*



## Research Ventures and Licensing (RVL)

- **CSRL (Corporate Sponsored Research and Licensing)**
  - *Provides technology transfer, research support, and licensing and start-up activities across MGH, BWH, and other Partners institutions*
- **BD (Business Development)**
  - *Markets intellectual property and establishes system-wide strategic alliances with the life sciences industries to leverage Partners' science base*
- **CIV (Center for Innovative Ventures)**
  - *Promotes a culture of entrepreneurship by educating PHS faculty and supporting the creation and financing of start-up ventures that result from inventions in PHS laboratories*
- **CSCR (Corporate Sponsored Clinical Research)**
  - *Negotiates agreements and budgets for industry-sponsored clinical research across PHS*

# What is a Technology Transfer Professional?

Someone who assists in the transfer of technological innovation(s) from one party to another for purposes of developing and commercializing useful products.

Different titles depending upon the office:

- Case Manager
- Licensing Manager/Associate
- Business Development Manager
- Intellectual Property Manager/Associate
- Industry Agreement Specialist/Associate

# Who are Technology Transfer Professionals?

We come from a variety of backgrounds (some in combination):

- Science - Ph.D., M.S., B.S.
- Business – M.B.A., Marketing
- Law – J.D., patent agent

# Technology Transfer as a Career Path

A Variety of Skills are Needed from:

- Science
- Law
- Business
  
- Such as:
  - Negotiating skills
  - Multi-tasking skills
  - Writing skills
  - Management Skills
  - People Skills
  - Decision-making skills
  - Delegation skills
  - Communication Skills
  - Evaluation Skills

# Technology Transfer as a Career Path

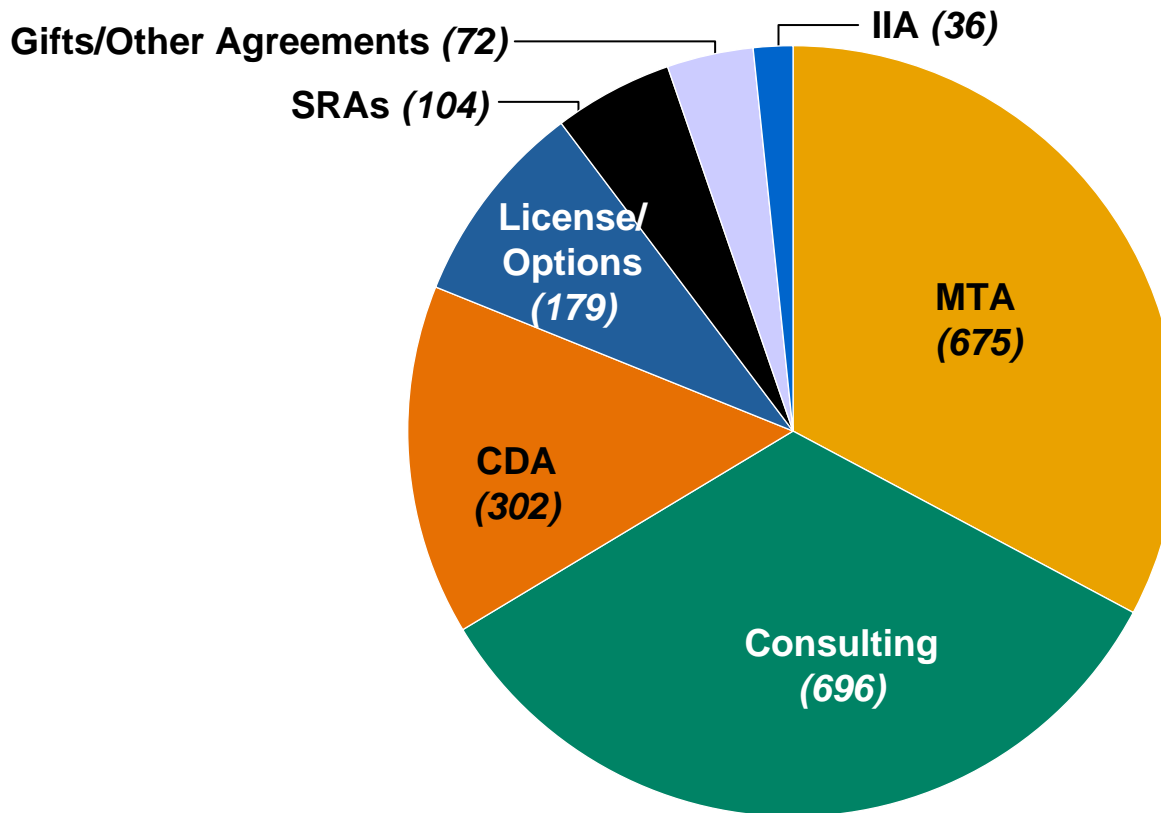
A Mix of Daily Activities related to:

- Science
- Law
- Business
- Such as:
  - Negotiating License Term Sheets and License Agreements
  - Reviewing Invention Disclosures and Filing Patents
  - Drafting and Negotiating Agreements (Research, Material Transfer, Confidentiality, Consulting, Interinstitutional, Other)
  - Managing Investigator Portfolios and Existing Licenses
  - Evaluating Potential Start Up Opportunities
  - Interface with OGC, Research Administration, VPs

# PHS CSRL Agreements in FY 2006

## FY2006 Executed Agreements

(Total =1794)



# Learn More about Technology Transfer

## Association of University Technology Managers (AUTM)

<http://www.autm.net/index.cfm>

- Bayh-Dole Act
- Public Benefits of Tech Transfer
- Licensing Surveys
- Issues in Technology Transfer
- **Look for a Job**

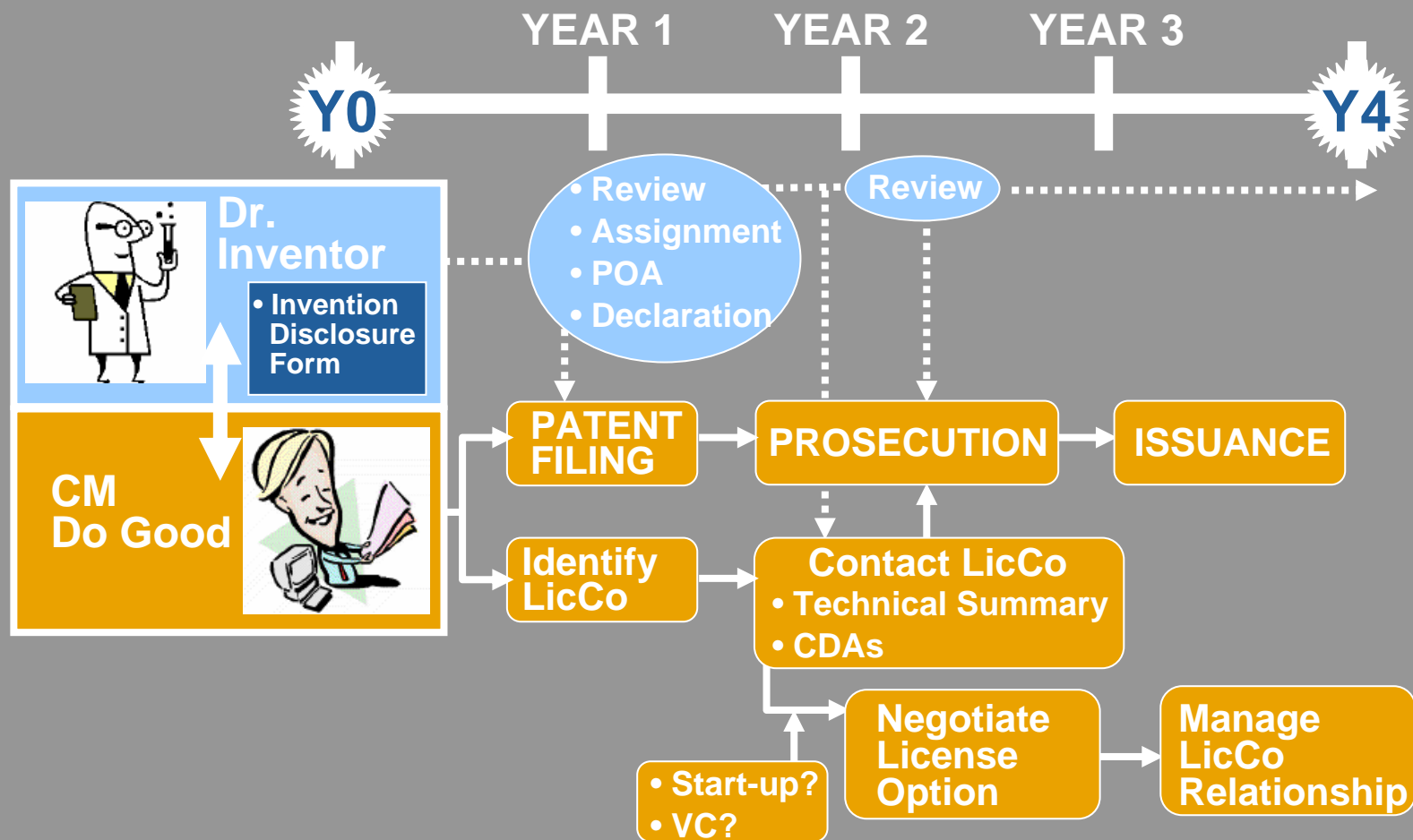
## Massachusetts Association of Technology Transfer Offices (MATTO)

<http://www.masstechtransfer.org/index.php>

- Local Events
- Local Members
- **Look for a Job**

# The Job Hunt

- No experience in technology transfer?
- Translate your Ph.D., post-doc, lab life into work experience by highlighting your skills
- Do an internship (usually unpaid)
- Go on informational interviews
- Go to local events and meetings
- Create a network



In case you're interested:

RVL Website <http://www.partners.org/rvl>

BWH CSRL Website <http://csrl.bwh.harvard.edu>

Intellectual Property Policy for Partners-Affiliated Hospitals  
and Institutions

[http://intranet.partners.org/OGC/IPPolicy/IP\\_Index.html](http://intranet.partners.org/OGC/IPPolicy/IP_Index.html)

**Questions?**

*Thank you*