



RESEARCH VENTURES & LICENSING

BUSINESS DEVELOPMENT | INNOVATION FUND | RESEARCH & LICENSING

The Technology Transfer Office as your Partner

February 28, 2008

Frances Toneguzzo, Director



Alignment of Goals

CSRL (Research and Licensing)

- Advance patient care
- Support cutting edge research
- Disseminate research results
- Advance institutional mission

Investigator

- Advance patient care
- Conduct and fund cutting edge research
- Disseminate research results
- Personal and professional advancement



Research Ventures and Licensing: Supporting research and translating inventions into Innovations

- High quality service to faculty and staff for support of research
- Protect, manage and license intellectual property
- Provide resources in the area of entrepreneurship
- Asset building
- Single coordinated interface with industry



Research Ventures and Licensing: Supporting research and translating inventions into innovations

RESEARCH VENTURES & LICENSING

Chris Colecchi, Vice President

Research and Licensing

Frances Toneguzzo -MGH

Brian Hicks - BWH

- Research support
- Technology transfer and licensing
- Protect and patent intellectual property

Innovation Fund

Bob Creeden

- Start-up ventures from PHS IP
- Entrepreneurship support for new ventures
- Innovation fund

Business Development

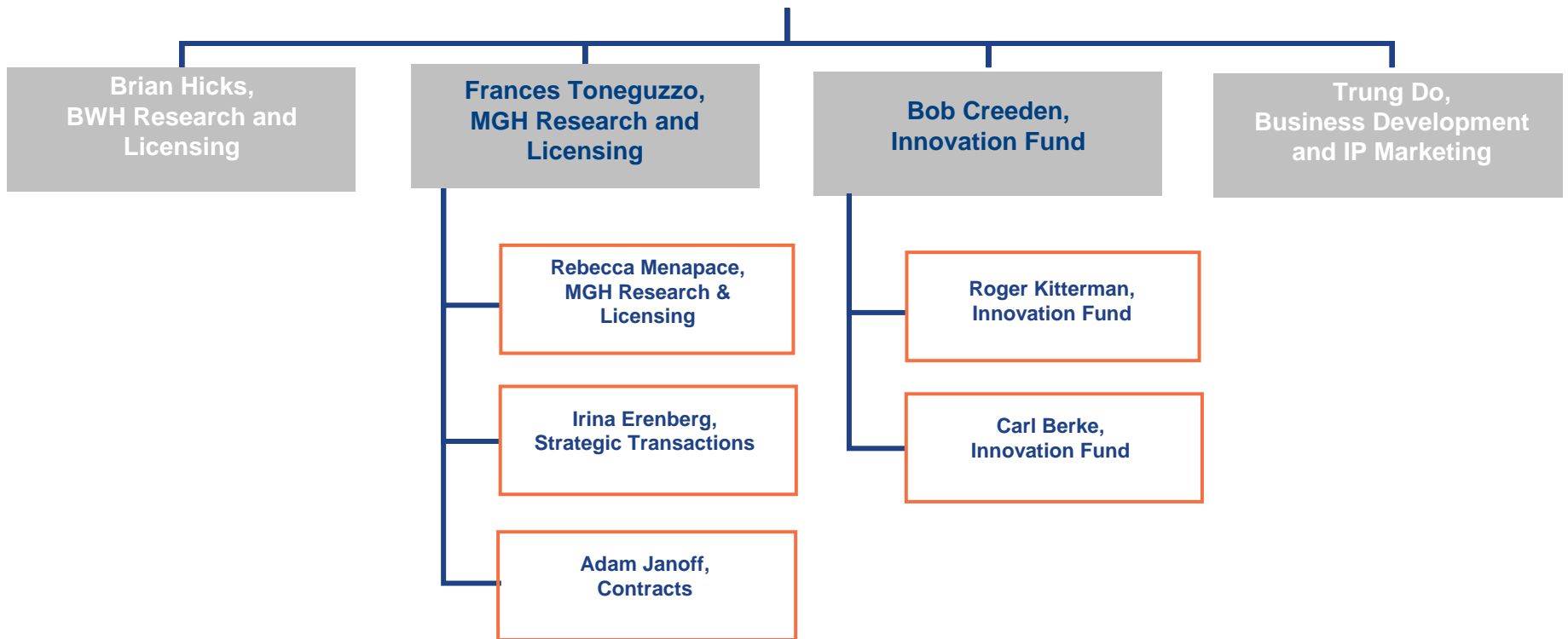
Trung Do

- Create Partners-wide strategic relationships with industry
- Facilitate out-licensing of technologies



RVL Division Directors

Chris Colecchi, Vice President, Research Ventures & Licensing (reports to Daniel K, Podolsky, MD, CAO, Partners HealthCare)





Services to Faculty and Staff

- **Manage Intellectual Property**
 - Intellectual Property Acknowledgement (*a.k.a. Participation Agreement*)
 - Patents
 - Copyrights
- **Negotiate Agreements for Commercialization of Intellectual Property**
 - Confidentiality Agreements
 - License Agreements
- **Start-up Opportunities**
 - Resource for preliminary contacts
 - Participation in initial venture capital meetings
- **Negotiate Research Agreements**
 - Sponsored Research Agreements
 - Material Transfer Agreements
- **Consulting**
 - Case Manager routes to outside counsel for review of MGH Investigators' personal consulting agreements for compliance with hospital IP policy and Harvard's conflict policies.



Agreements: Contracts Group Process

Investigator wants material, money or talk to a Company

Complete MTA/SRA/CDA Questionnaire (web site)

Agreements

CSRL Reviews and negotiates With other party

Investigator gets material, money or relationship with Company

The Agreement is signed By both parties CSRL signs on behalf Of MGH

Timeline can vary 2 days to many months

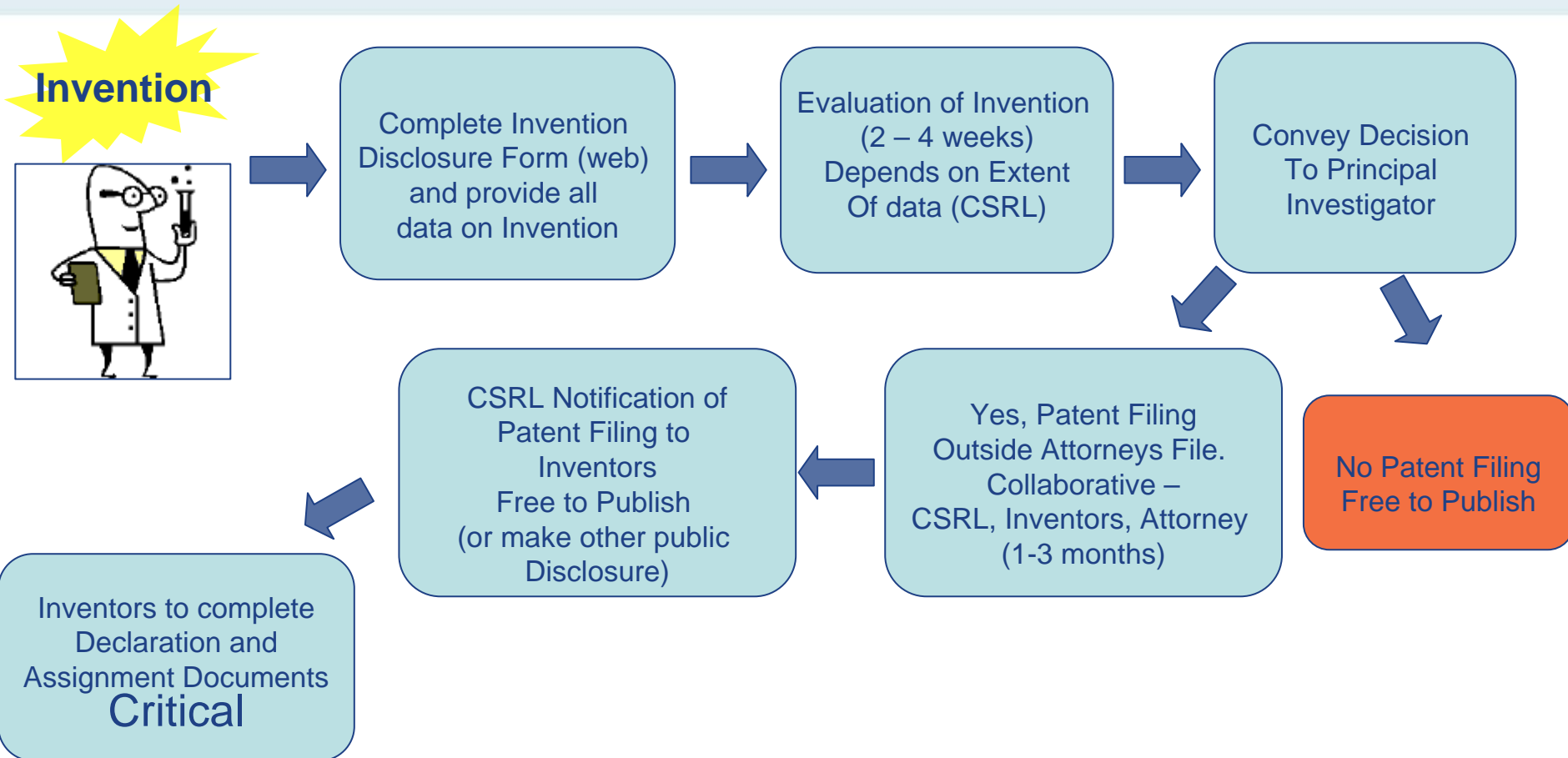


What Is an Invention?

- “The discovery or creation of a new material, a new process, a new use for an existing material, or any improvement of any of these”
- Criteria
 - Novel (new)
 - Utility (useful)
 - Non-obvious (yields surprising unexpected results)
- Examples
 - Devices, methods, processes, materials, software, chemical or biological compositions



Inventions: Process





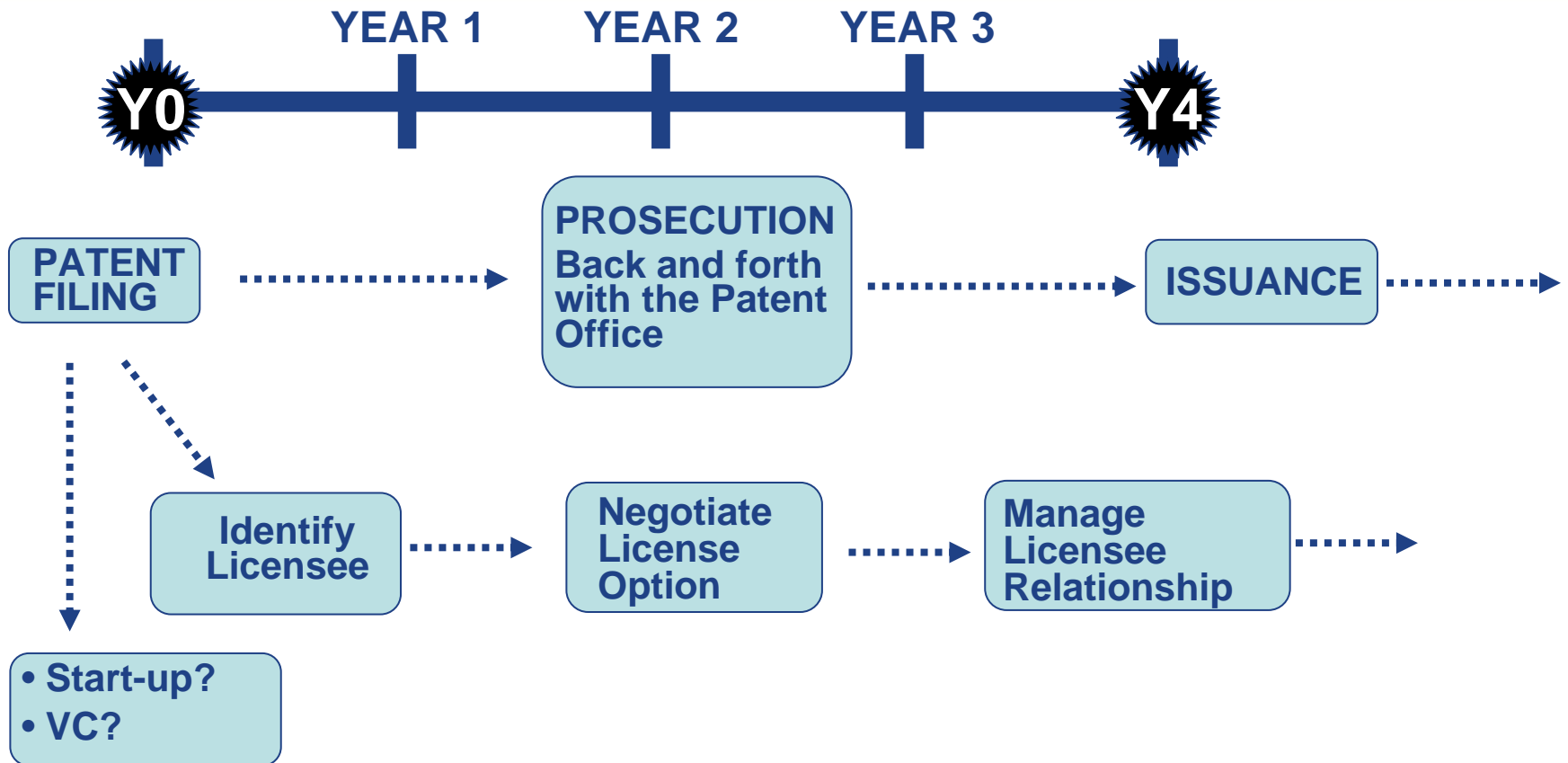
Inventions: Evaluation of Inventions (Case Manager)

Inventions

- Preliminary Screening for Appropriate Filing Content
- Evaluation of the Product and its Market
- Evaluation of Science Strength/ Evaluation of Institutional Issues
- Evaluation of Patent Position
- Additional Considerations



Invention: Process (continued)





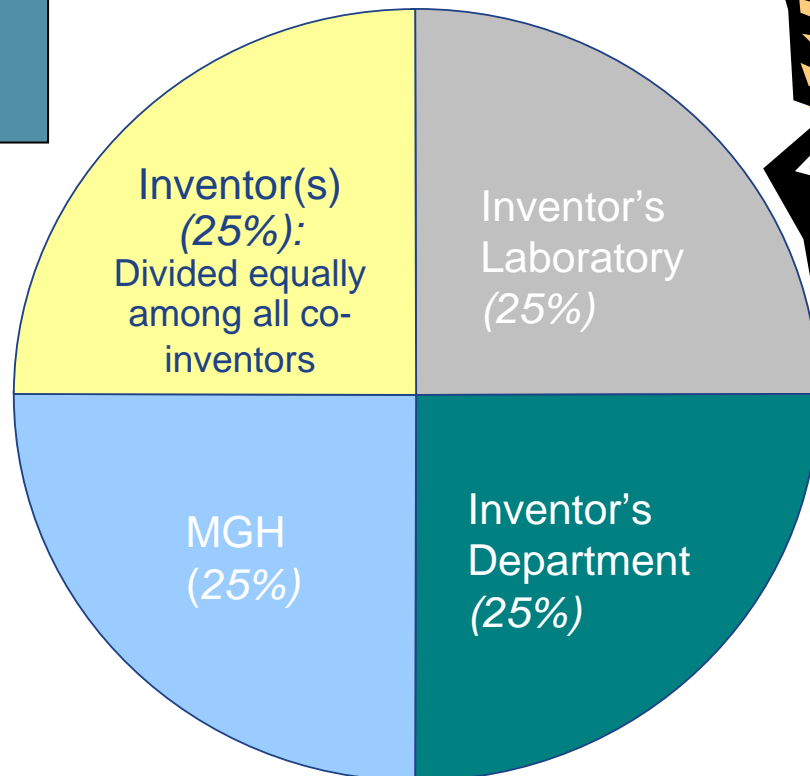
Finding a partner company: Marketing ^{Marketing / Licensing Revenue} and licensing

- Identify companies that may have an interest in the invention
 - Related product market analysis and reports
 - Inventor knowledge and experience
- Contact companies
 - Non-confidential disclosures
 - Disclosure of confidential information under a Confidentiality Agreement
- Negotiate license
 - Exclusive or non-exclusive
 - Royalties, up-front payments, milestones etc.
 - Due diligence provisions



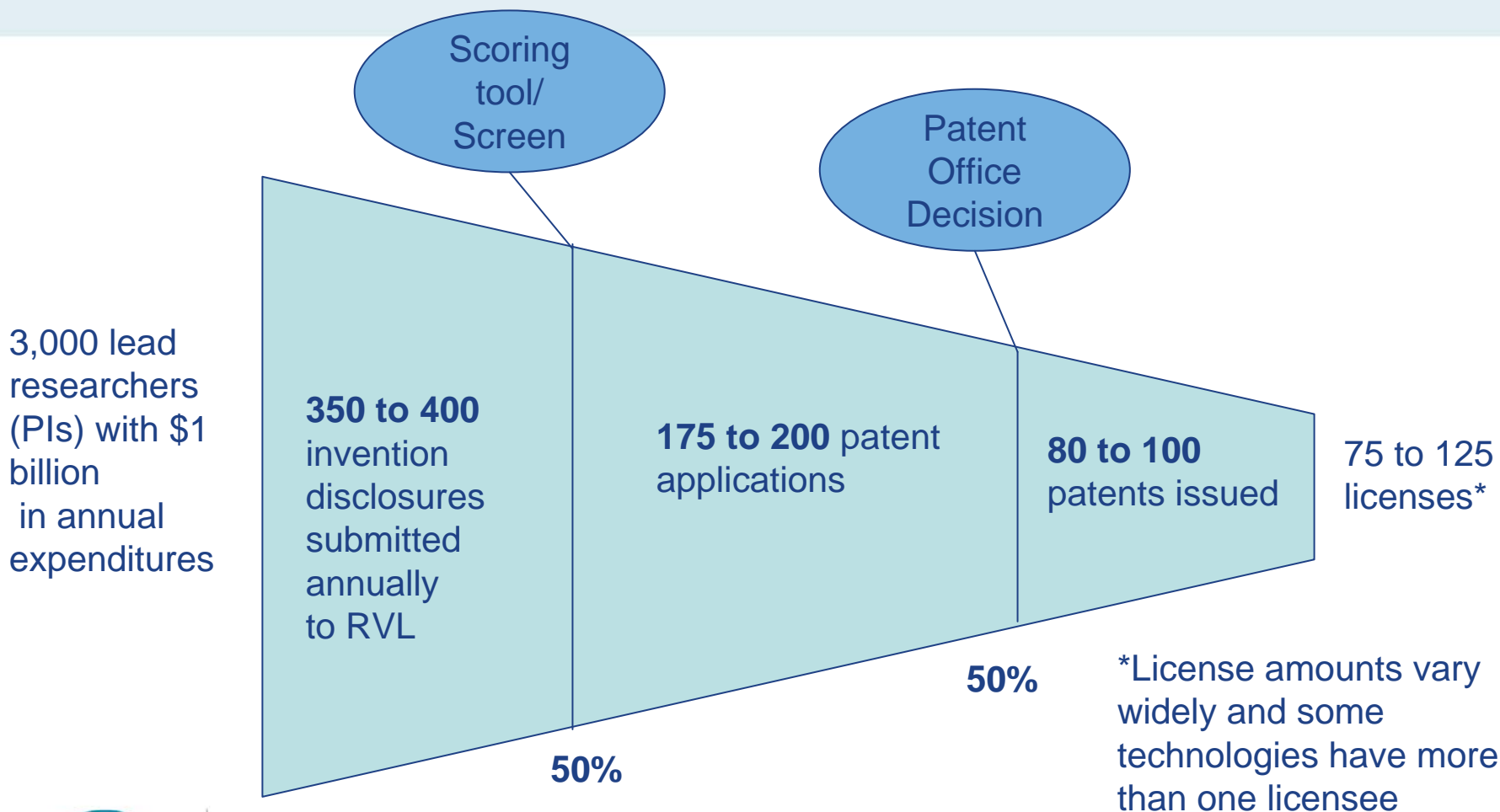
Distribution of License Revenue

Expenses incurred in IP protection or creation are deducted prior to distribution of License Income





From invention to issued patent (annual numbers)





MGH Research & Licensing Statistics: FY2007



Technology Transfer Activities	810
New Disclosures	275
New U.S. Patent Filings	129
Issued U.S. Patents	54
Confidentiality Agreements	179
Licenses and Options Executed	154
Interinstitutional Agreements	19

License Income	\$346,080,013
License and Option Fee	\$1,469,573
Maintenance Fee, Milestone Event, and Other	\$295,631,399
Royalties	\$48,979,041

Research Support Activities	923
Clinical Research Agreements	725
Sponsored Research Agreements	60
Material Transfer Agreements	416
Gift, Service and Other	46
Consulting Agreements	475

Research Income	\$41,481,000
<i>PRE-CLINICAL TOTAL</i>	<i>\$21,752,000</i>
Direct Costs (MTDC)	\$13,373,000
Indirect Costs	\$8,379,000
<i>CLINICAL TOTAL</i>	<i>\$19,729,000</i>
Direct Costs (MTDC)	\$15,738,000
Indirect Costs	\$3,991,000

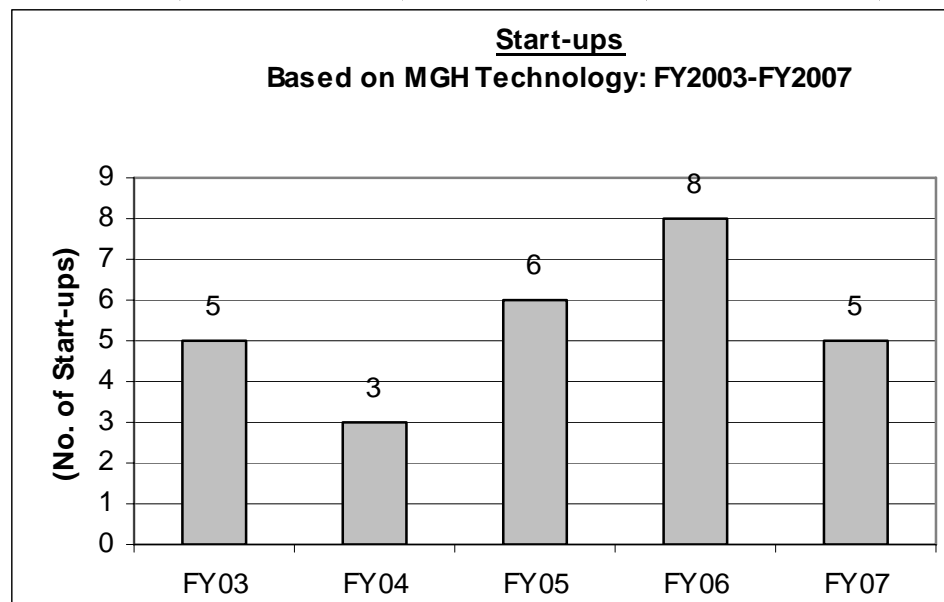


MGH Research & Licensing Statistics: FY2007



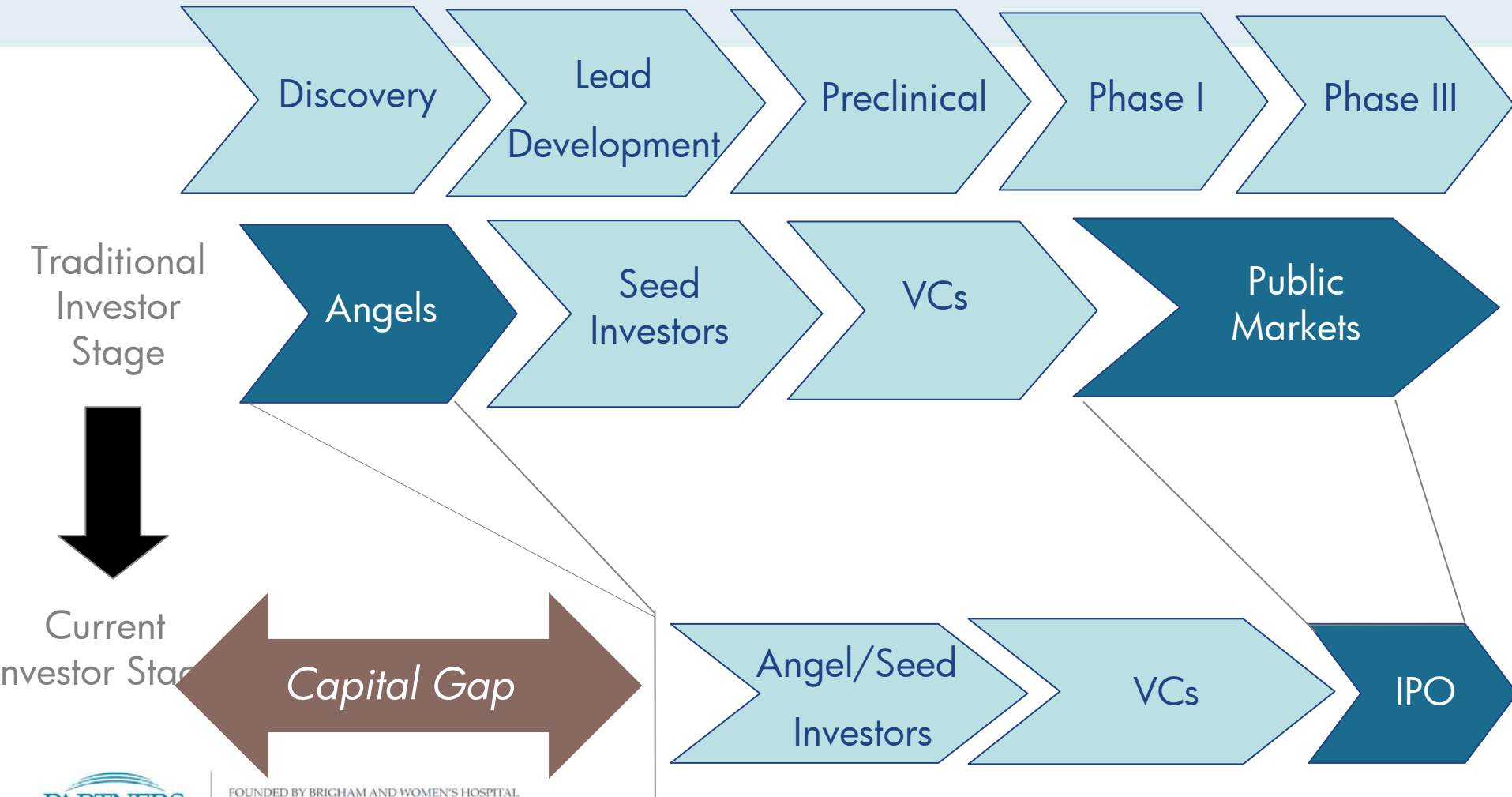
Executed License Agreements Licenses/Options/Others: FY2003-FY2007

Agreements	FY03	FY04	FY05	FY06	FY07
Exclusive Licenses	20	25	15	19	16
Non-exclusive License	24	39	36	36	46
End User Licenses	41	46	66	66	53
Options	17	12	20	6	22
Others	1	2	3	4	17
Total Executed Agreements	103	124	140	131	154





Disruption of the Investing Food Chain has Resulted in a “Capital Gap”





Meeting the challenges

- Research and Licensing: Strategic Transactions Group
 - Access expertise and resources to advance early stage concepts/ideas/ inventions
- Partners Innovation Fund
 - Provide seed stage funding for startups
 - Provide proof of concept funding for promising technologies



Strategic Transaction Group: Creating an asset

Inventions

Provide a leadership role in:

- Identification of technologies with potential for significant clinical or financial impact
- Assess technology needs or requirements and work with investigators to refine concepts/business models
- Access or leverage resources (internal and external) for technology development
- Develop strategies for protection of intellectual property and licensing



Technology Development Fund

- \$35M fund financed by BWH and MGH
 - Evergreen
 - Partners model
- Two types of investment
 - Traditional equity-based investments — (15-20 @ \$1.75M)
 - Early stage “R&D investments” with high commercial potential to be license or start-up — (8-10 @ \$800k)
- Two paths to achieve mission — more deals and greater value
- Draw-down mechanism over 10 year schedule
 - Financial flexibility for entities
 - Funding when technology is ready



How can Research and Licensing help you?

- Funding for research
 - Direct through research agreements
 - Through patenting and licensing
- Professional and personal advancement
 - Validation of scientific discoveries
- Meeting the patient care mission
 - Translating scientific discoveries into products



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Contact us

www.partners.org/rvl

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