



# Funding through Innovation

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***April 14, 2006***

## Innovations and Research Support: Is there a connection?

- **Technology transfer: Partnering with a commercial entity to develop ideas/inventions into products**
  - Income is generated through sale of products
  - Ancillary agreements can be negotiated such as
    - Sponsored Research for direct financial support
    - In kind support – transfer of materials/equipment
    - Consulting agreements

## When is an idea an asset? –or when is an idea worth money?

- Solves a problem or addresses a market need
- Can be made into a product or service that can be sold
- Offers advantages over existing products or products in development
- Market size justifies investment
- Can be legally protected

## Protecting ideas

- **Patent – protects a concept that is new, useful and non-obvious**
  - Grants the right to exclude others from using the invention (exclusivity creates value)
- **Copyright- protects the physical embodiment of an idea**
  - Can exclude others from using, copying, performing or making derivative works

## Income through technology licensing

- **Idea/discovery disclosed to CSRL**
- **CSRL evaluates the idea for commercial potential and patentability**
- **CSRL hires and pays for an attorney to prepare, file and prosecute a patent application**
- **CSRL contacts potential partner companies and negotiates a license agreement that transfers commercial rights in return for royalties on product sales**
- **Income is shared with the inventor (25%), inventor's lab (25%), inventor's department (25%) and MGH (25%)**



# MGH CSRL Statistics: FY2005

<b>TECHNOLOGY TRANSFER ACTIVITIES (771)</b>	
New Disclosures	236
New U.S. Patent Filings	106
Issued U.S. Patents	53
Confidentiality Agreements	220
Licenses and Options Executed	140
Interinstitutional Agrmts.	16

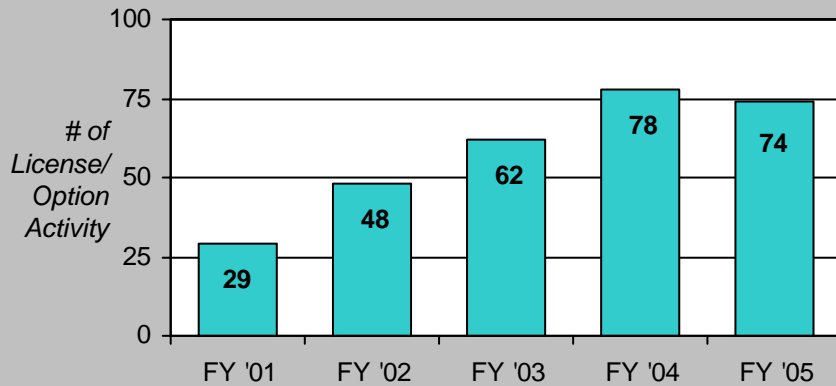
<b>RESEARCH SUPPORT ACTIVITIES (1048)</b>	
Sponsored Research Agrmts.	80
Clinical Trial Agreements	281
Material Transfer Agrmts.	372
Gift and Other Agreements	61
Consulting Agreements	254

<b>LICENSE INCOME (\$94,761,778)</b>	
License and Option Fee	\$4,774,587
Maintenance Fee, Milestone Event, and Other	\$598,958
Royalties	\$89,388,233

<b>RESEARCH INCOME (\$38,065,000)</b>	
<b>PRE-CLINICAL TOTAL</b>	<b>\$20,824,000</b>
Direct Costs	\$12,391,000
Indirect Costs	\$8,433,000
<b>CLINICAL TOTAL</b>	<b>\$17,241,000</b>
Direct Costs	\$13,945,000
Indirect Costs	\$3,296,000

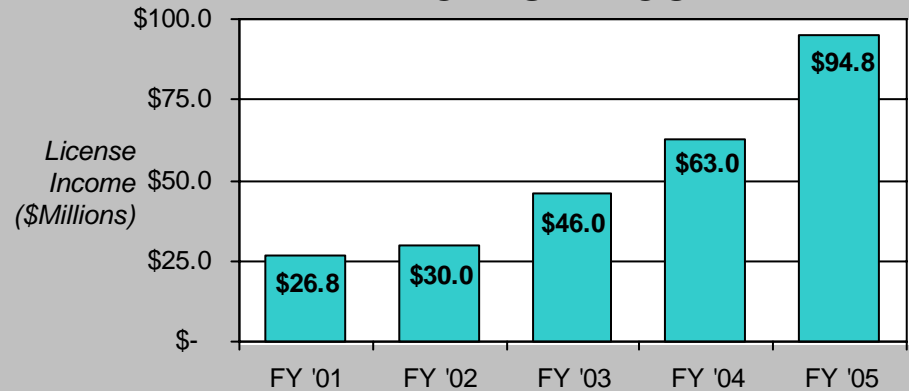
# MGH CSRL Statistics: FY2005

**LICENSE/OPTION ACTIVITY\***

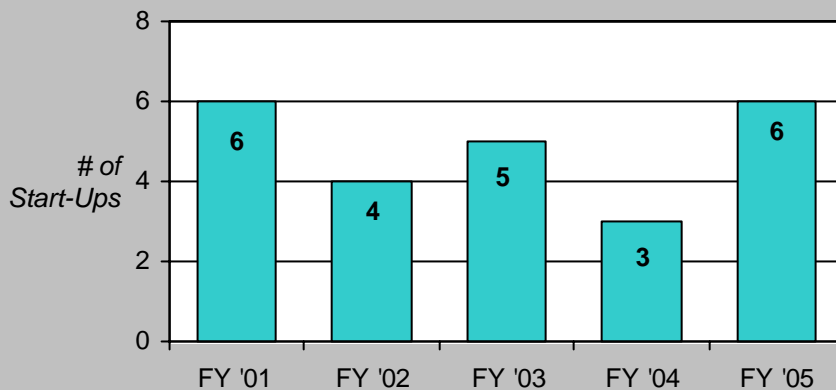


\*Excludes End-User Licenses

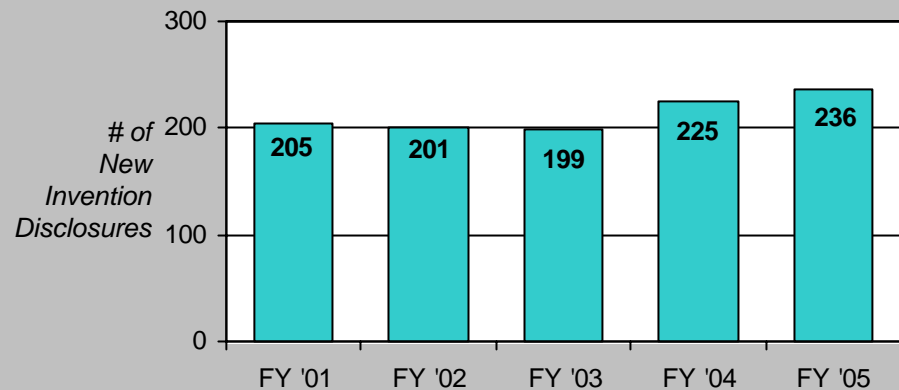
**LICENSE INCOME**



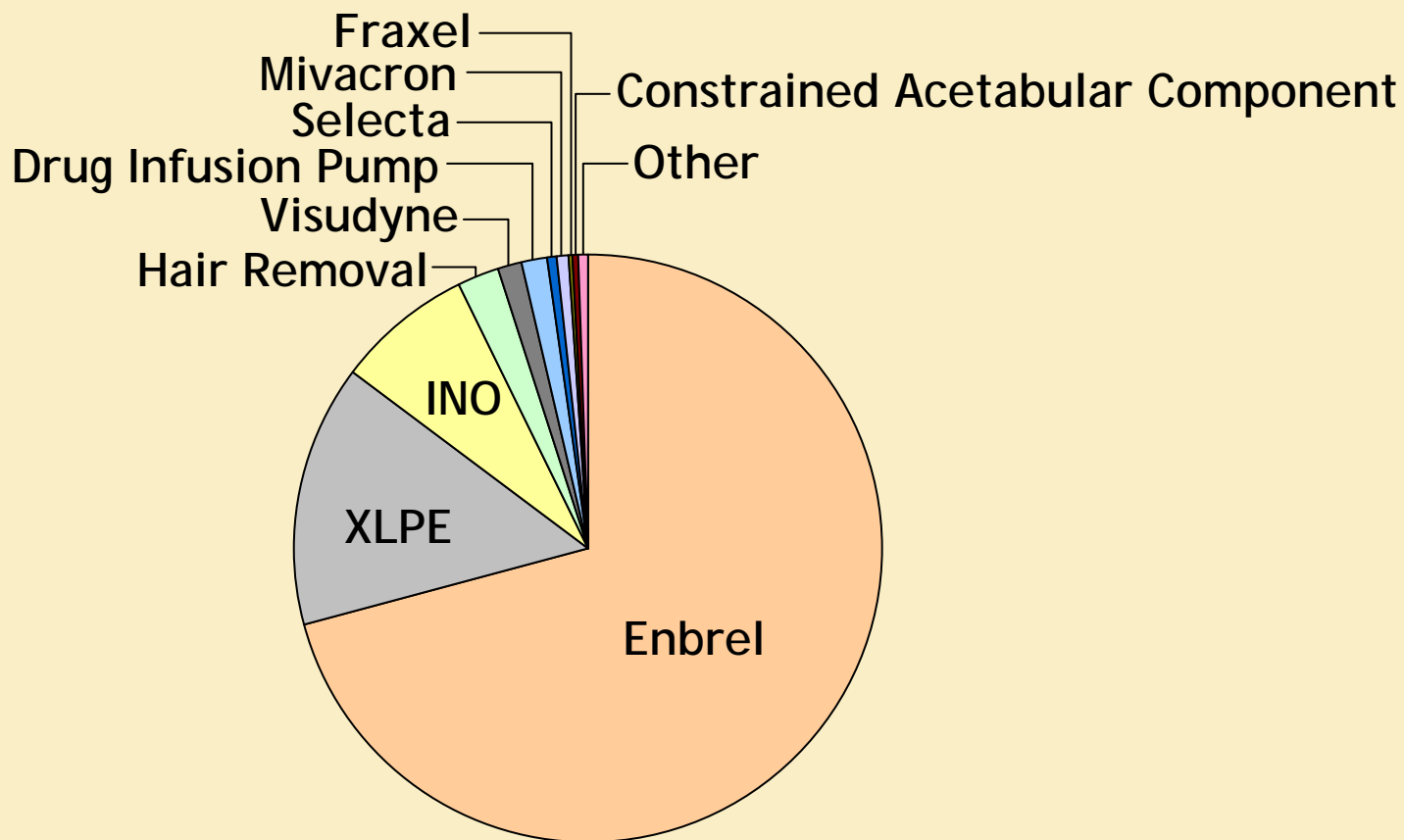
**START-UP ACTIVITY**



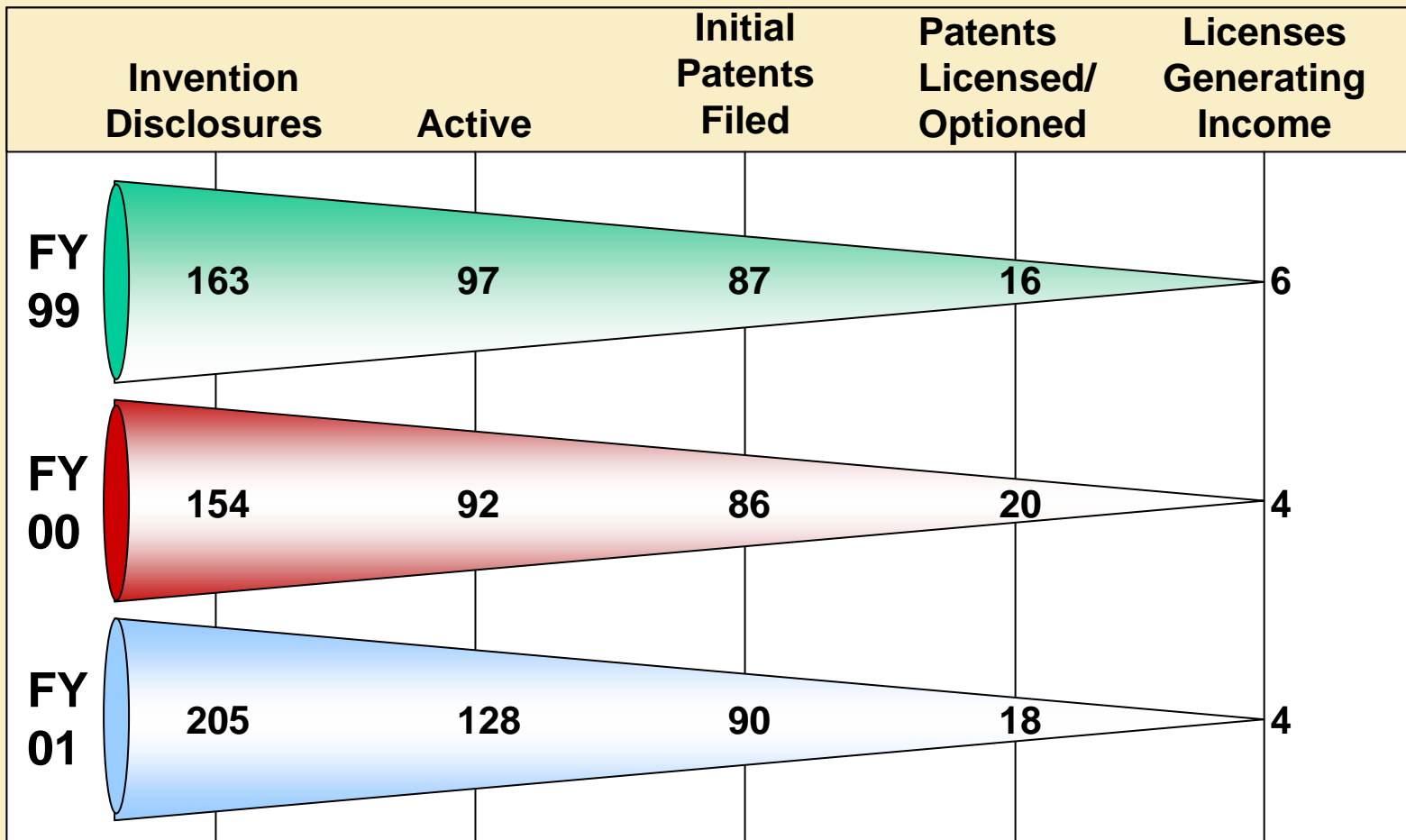
**NEW INVENTION DISCLOSURES**



# Top 10 License Royalty Income by Technology (*Total = \$89.4M*)



**High Volume of Invention Disclosures,  
Leads to Low Number of Actual License  
Agreements Generating Income**



## Top 5 Royalty Generators: Invention Disclosure Date to Cumulative Royalties >\$500K

Licensee (1 <sup>st</sup> Case)	Invention Disclosed (or 1 <sup>st</sup> Filing Date)	1 <sup>st</sup> Patent Issued	Date Cum. Royalties Exceeded \$500k
Amgen (MGH418)	9/90	4/95	6/99
8.8yrs			
Zimmer (MGH983)	(2/96)	3/99	12/00
4.8yrs			
AGA (MGH386)	2/90	3/92	9/97
7.6yrs			
Palomar (MGH745)	5/93	1/97	11/98
5.5yrs			
QLT (MGH839)	(3/94)	8/98	4/01
7.1yrs			

## Sources of interim support

- License fees, milestone payments, sale of equity
- Sponsored research agreements for direct support of research
- In kind support through transfer of materials and/or equipment and/or technical expertise
- Consulting agreements.