AUTM 2007 Survey

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AUTM Survey

- Established almost 20 years ago to provide information to office directors about operations, resources & activities
- It does not establish or measure impact.
- AUTM is actively working with NASULGC, NSF & AAU to identify and create measures that we can all use and understand to better identify impact.
- AUTM has 3 new surveys either just completed or in development. These new surveys better highlight information practitioners and policymakers need to know. AUTM also has STATT, which allows data users greater access to data analysis tools.

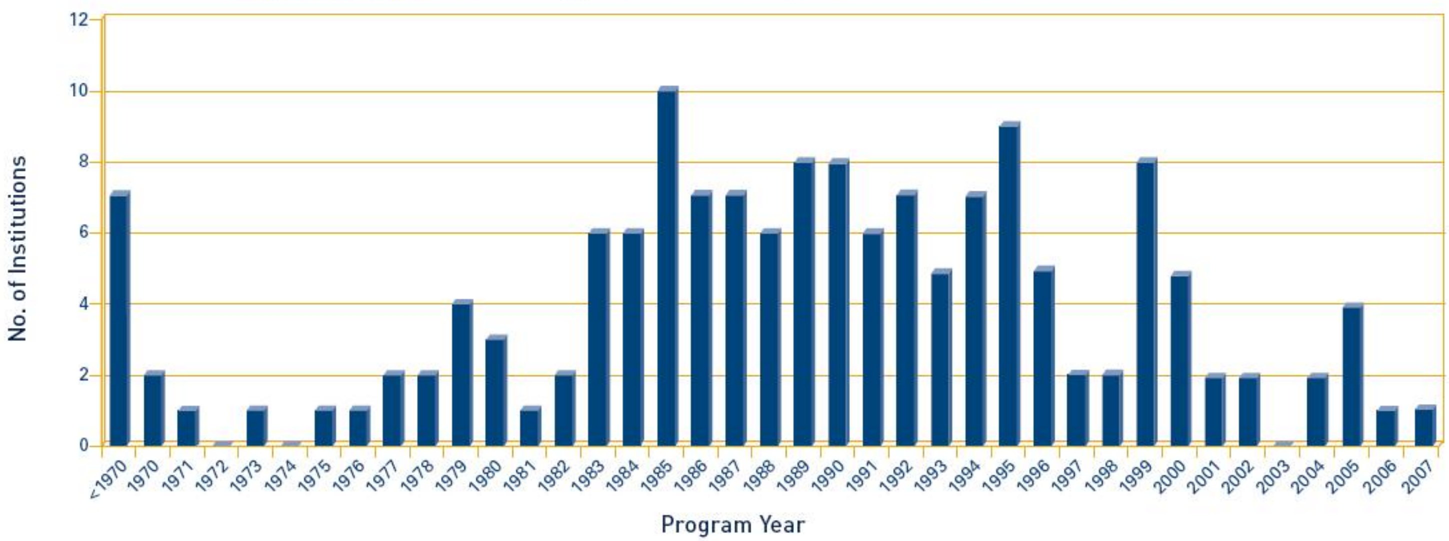
2007 survey

- Consistent participants from previous years
- Includes stories. . .
- Includes explanations about what this data means
- This year's highlights:
  - Research Base
    - $48.8 bn R&D expenditures
    - $3.4 bn industry sponsored R&D
  - IP Management
    - Approx 20,000 disclosures
    - 3,622 patents issued
  - Licensing Activity
    - 555 start-ups
    - 5,109 licenses/options

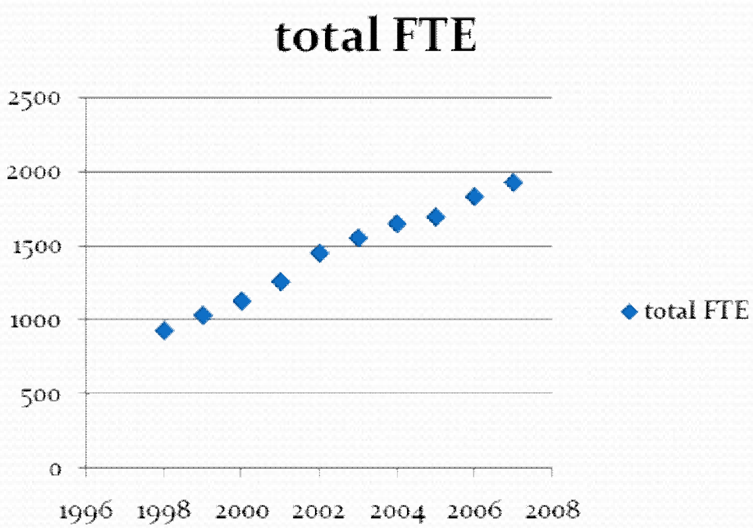
Growth of New Offices in US

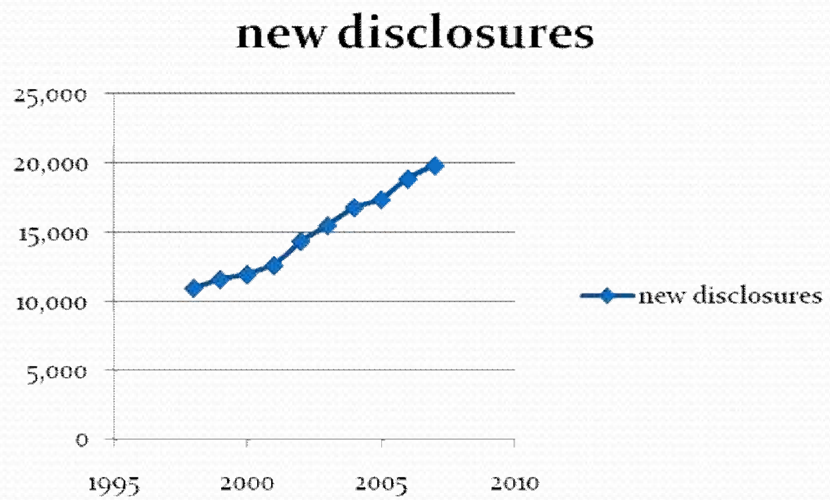
- The technology transfer function serves universities by managing intellectual property for external use, and also by minimizing risk universities face with regular research activities
- In 2007, and consistent with previous years, only 1 new US University program initiated
- Reflective post Bayh-Dole legislation maturation process

Figure US-1. Technology Transfer Program Start Date of U.S. Universities



Staffing Levels Compared with Disclosures

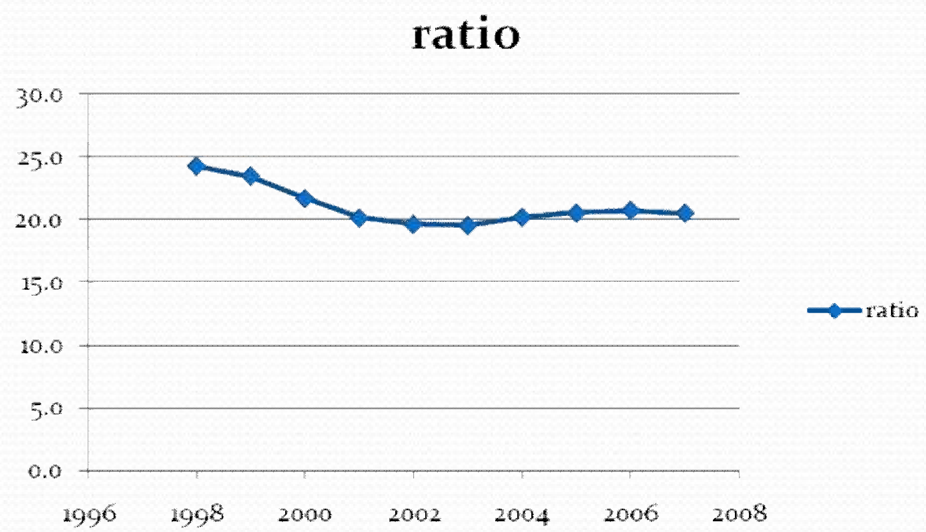




Note: disclosures is a term under modification by AUTM, as we recognize that more offices are managing IP projects as opposed to “invention” disclosures

Ratio New Disclosures:FTE

- Ratio remained relatively constant over past 8 years
  - Doesn't take into account growth of overall portfolio & activities (e.g., mission creep), such as managing active agreements; older disclosures; training and greater outreach, etc.



2007 Research Expenditures

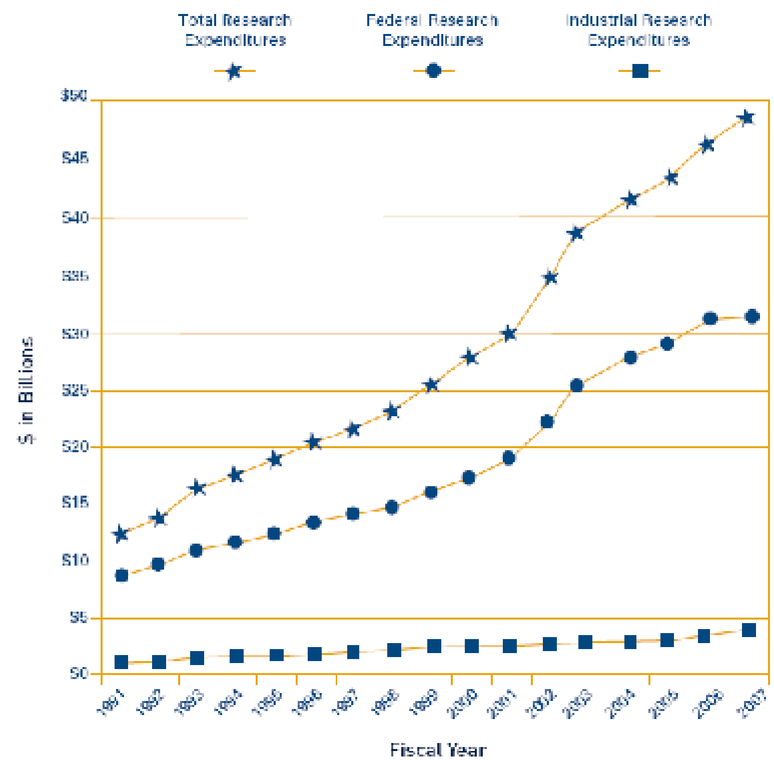
- Total R&D Expenditures increased $3.4 bn to $48.8 bn

- Federal support increased in nominal dollars ($30.9 – 31.7 bn) but down in terms constant dollars (after inflation)*

- Fed govn't still largest source R&D $ at 65%, industry steady at 7%

- Industrial R&D funding increased 15%

Figure US-5. Research Expenditures for U.S. Universities, Hospitals and Research Institutions, 1991–2007



*According to NSF 2007 report, 1st time in 35-yr history, federal support for academic research declined 2 yrs running in real terms

Disclosures

- Annual number of disclosures has about doubled in last decade
  - 1998 – 10,987
  - 2007 – 19,827

- For 1st time we collected information on disclosure "Fields"

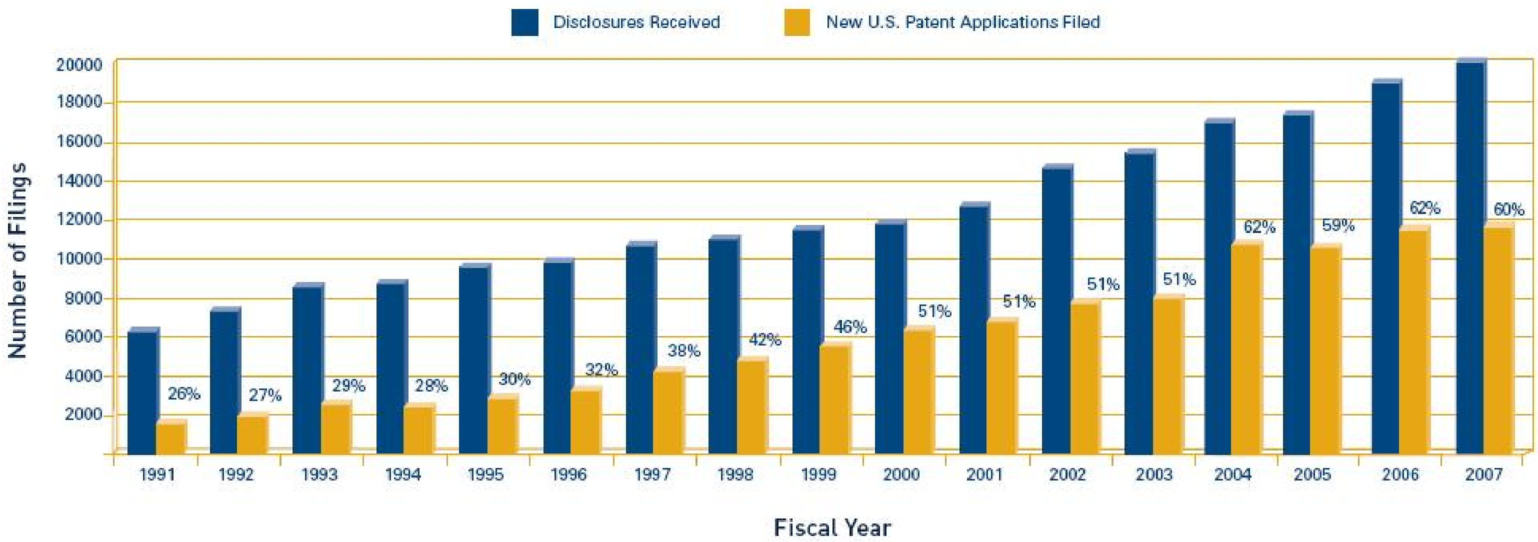
Table US-5. Categories for FY2007 Disclosures

	Number	Relative Percentage
Therapeutic/Medical Device	5,007	25%
Research Tools	1,564	8%
Computer/Electronics	1,741	9%
Finance, Education, Art, Music	387	2%
Plant	221	1%
Other	2,962	15%
Uncharacterized	7,945	40%

Disclosures cont'd

- New data this year: Active v non-active disclosures. Approx 10% disclosures rec'd were closed
- Approx 7% were licensed in same year they were rec'd
  - Rapid deployment of technology . This is enabled by good relationships between faculty, technology transfer & technology users.
- Ratio of new patent filings to disclosures rec'd, leveled last 4 yrs to about 60%

Figure US-6. New Patent Filings and Disclosures Received, 1991–2007



Patents Cont'd

- Number of new applications filed increased slightly
- Number of provisional applications filed increased ~50%
- Utility and foreign applications down
- Number of issued patents increased

Table US-6. Patent Applications Filed by U.S. Respondents Since 2002

	2002	2003	2004	2005	2006	2007
Number of Respondents	189	198	192	191	189	193
New Patent Applications Filed	7,319	7,921	10,517	10,270	11,622	11,797
Total U.S. Patent Applications Filed	12,222	13,280	13,803	14,757	15,908	17,589
U.S. Prov. Patent Applications Filed	N/A	N/A	6,192	6,640	7,856	8,328
U.S. Utility Applications Files	N/A	N/A	2,096	1,794	2,181	1,797
Non U.S. Patent Applications Filed	N/A	N/A	1,277	1,102	1,403	1,070
U.S. Patents Issued	3,501	3,933	3,680	3,278	3,255	3,622

Note: Source data for FY2002 and FY2003 are not available because these questions began in FY2004.

Licensing Activity

- For U.S. Universities
  - 57% non-exclusive licenses; 43% exclusive licenses
- For U.S Hospitals and Research Institutions
  - 69% non-exclusive licenses; 31% exclusive licenses

Table US-9. Licenses Executed by U.S. Respondents in 2007: Exclusive vs. Nonexclusive

		Licenses and Options Executed				
FY 2007	Number of Respondents	Total Executed	Exclusive	Exclusive % of Total	Nonexclusive	Nonexclusive % of Total
U.S. Universities	161	3,784	1,619	43%	2,165	57%
U.S. Hospitals & Research Institutions	32	593	186	31%	407	69%
Technology Investment Firms	1	14	0	0%	14	100%
All U.S. Respondents	194	4,391	1,805		2,586	

Wide Variation Among Institutions & Innovation ecosystems

Institution	Non-Exclusive	Exclusive
U California	94	115
U Washington	26	164
U Georgia	103	16
MIT	60	25
Iowa State U	103	6
NC State U	65	29
Purdue U	59	21
U Michigan	37	32
UNC – Chapel Hill	18	68
Stanford U	42	24
BYU	2	27
U Oregon	27	5
U Texas SW Med Ctr	28	1
Georgetown U	3	21

Licensing Activity Cont'd

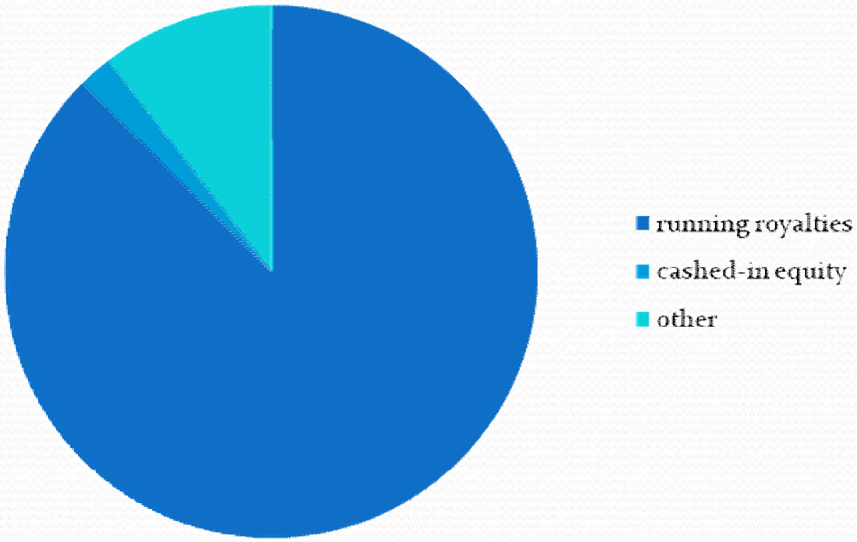
- For All Respondents:
  - 16.5% start-ups, 50% small cos, 33.5% large cos

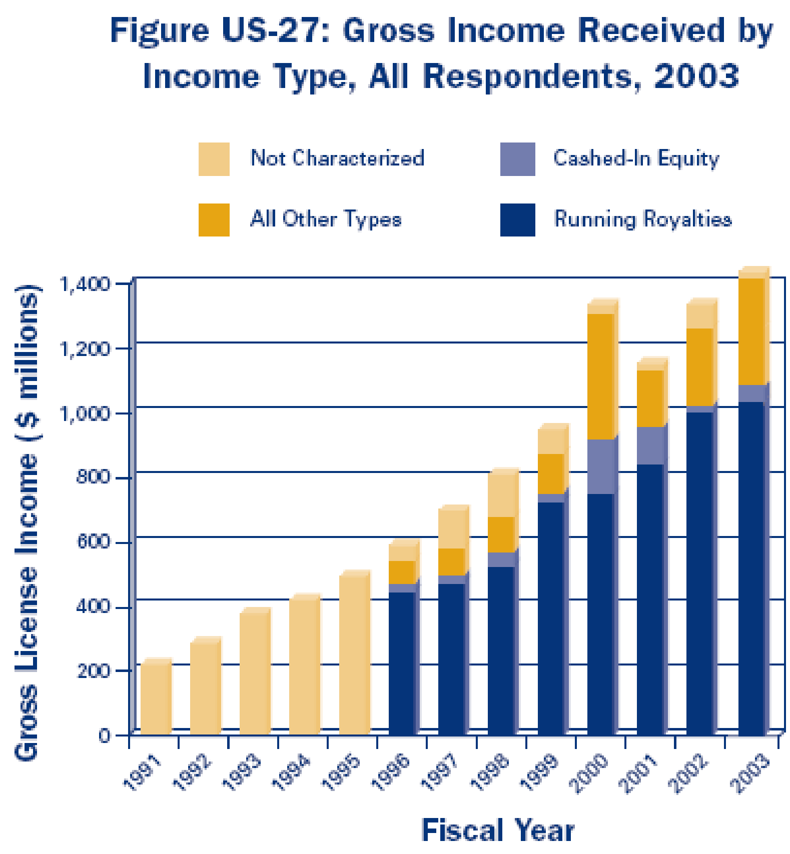
Table US-8. Licenses and Options Executed by U.S. Respondents in 2007: Type of Company

FY 2007	Number of Respondents	Total Executed	Startups	% of Total	Small Companies	% of Total	Large Companies	% of Total
U.S. Universities	161	4,419	764	17.8%	2,150	50%	1,383	32.2%
U.S. Hospitals & Research Institutions	32	676	59	8.8%	337	50.4%	272	40.7%
Technology Investment Firms	1	14	--	--	--	--	14	--
All Respondents	194	5,109	823	16.5%	2,487	49.9%	1,669	33.5%

US Universities License Income

- Total Gross Income $2.1 billion
  - 87.5% due running royalties
  - 2.1% cashed-in equity
  - 10.5% other





US Univ License Income

Year	Total	% Diff	RR	% Diff	Equity	% Diff	Other	% Diff
2007	$2.1 bn	+25%	$1.8 bn	+65%	$42 MM	-13%	$216 MM	-25%
2006	$1.5 bn		$1.0 bn		$45 MM		$415 MM	

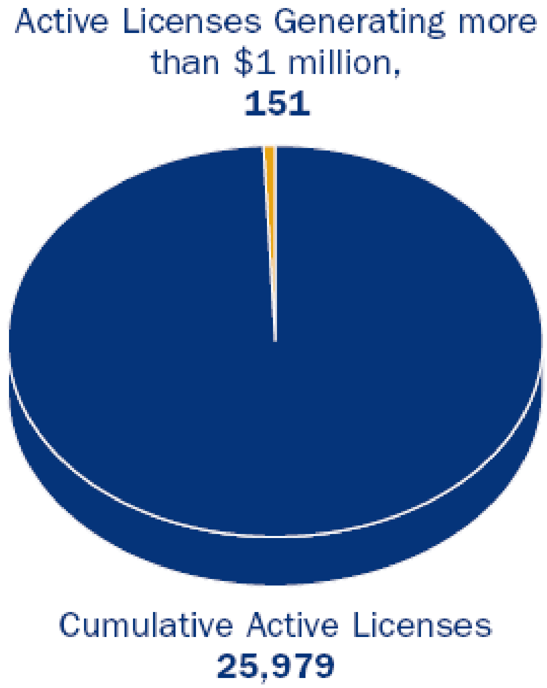
Note: 2007 data includes onetime payment of $650 million from Royalty Pharma to NYU for the sale of 57.5% of the royalty stream of their rheumatoid arthritis and psoriasis drug remicade.

The drug is currently licensed to Centocor division of Johnson & Johnson.

The inventor of the technology Dr. Jan Vilcek donated $105 million of his share of the money to NYU.

Licensing Income Cont'd

Figure US-28: Active Licenses Generating More Than $1 Million in 2003



Start-ups

- 555 start-ups formed in 2007
- Compares favorably with 554 formed in 2006

• Internal funding (FFF) was primary source of capital, followed by VCs and Angels
•VC number appears to be up from previous years

Table US-10. Funding Sources for U.S. Institutions

Source of Funding	FY 2007	FY 2006
	Number Checked Yes as One of Sources of Funding	
No External Funding	86	57
Own Institution	51	26
SBIR/STTR	42	32
Friends and Family	135	94
Individual Angels	82	49
Angel Network	32	26
State Funding	63	36
Venture Capital	88	85
Corporate Partner	33	25
Other	47	28
Total Start-ups Formed	555	462
In Home State	402	344

Start-ups Cont'd

- Most start-ups are located in home state
- About 1/2 deals involved equity

Table US-11. Startups Location and Equity Deals

Sartups	Number	% of Total
Formed in FY2007	555	100%
Primary Place of Business—Home State	402	72%
Involved Equity	300	54%