Tech transfer fails to translate into startups

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In 2005, US research institutions brought in <\$2 billion in license income. In its annual survey, the Association of University Technology Managers (AUTM) estimates tech transfer resulted in 527 new products and 628 new firms in 2005, about one-sixth of which were life-science

New biotech company formation

Startup formation in 2005 remained sluggish across the world

Source: Critical I, Japan Bioindustry Association, BIO, BioCOM/biotechnology.de

US research institution R&D spend and license income

Average licensing income was up again in 2005, although R&D spending increased, the trend of smaller increments continued.

Research institutions include universities, hospitals and research institutes. Source: Association of University Technology Managers

Tech transfer at top US research institutions in 2005

	R&D spend (\$ millions) ^a	License income (\$ millions) ^b	Executed licenses ^c	Cumulative active licenses	Startups	Patents issued ^d	Patent applications ^e
Universities							
University of California System	2,917	93	265	1,654	19	310	601
Johns Hopkins University	1,674	12	94	803	5	81	318
Massachusetts Institute of Technology (MIT)	1,133	40	93	794	20	133	290
University of Washington/Washington Research Foundation	895	29	109	740	4	40	84
University of Illinois, Chicago, Urbana	818	7	63	308	7	65	134
University of Wisconsin at Madison	798	49	216	963	4	89	203
University of Michigan	778	17	86	331	7	80	133
State University of New York Research Foundation	736	14	84	372	6	35	128
University of Pennsylvania	673	7	83	466	9	37	449
Penn State University	638	2	21	163	3	37	90
Hospitals and research institutes							
Massachusetts General Hospital	483	95	140	554	5	56	165
Mayo Foundation for Medical Education and Research	399	16	75	730	3	30	88
Brigham & Women's Hospital, Inc.	371	7	32	173	3	30	47
M.D. Anderson Cancer Center	342	4	19	96	0	22	42
Sloan Kettering Institution for Cancer Research	253	67	31	204	2	21	28
Fred Hutchinson Cancer Research Center	226	2	31	120	2	3	15
Beth Israel Deaconess Medical Center	191	2	18	120	4	10	30
Dana-Farber Cancer Institute	187	6	21	323	1	13	36
Cleveland Clinic Foundation	184	10	33	125	4	4	116
Children's Hospital, Cincinnati	174	2	20	44	0	8	62

^aTotal sponsored research expenditures; ^bAdjusted gross license income; ^cLicenses & options executed; ^dUS patents issued; ^eUS patent applications filed. Source: Association of University Technology Managers

based. Although AUTM estimates life sciences were responsible for about one-sixth of all licenses or license income, they accounted for only 8% of US startups. Other data indicate startup activity was poor across the globe.

NIH technology transfer activities

Invention disclosures and new patent applications for NIH-funded research are in decline.

	2003	2004	2005	2006
Invention disclosures	400	403	388	367
New patent applications filed	196	199	186	173
Total US patent applications	382	396	347	309
Issued US patents	86	122	66	93
Executed licenses	209	276	313	254
Royalties (\$ millions)	\$53.7	\$56.3	\$98.2	\$82.7

Source: National Institutes of Health

Type of company obtaining licenses

In 2005, around half of all US licenses went to small (biotech) companies; universities grant licenses to more startups compared with other institutions.

Source: Association of University Technology Managers

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