The AUTM Licensing Survey Executive Summary and Selected Data Fiscal Years 1991 and 1992



AUTM

Association of University Technology Managers, Inc.



The AUTM Licensing Survey
Executive Summary and Selected Data
Fiscal Years 1991 and 1992

Prepared For and Submitted To
The Association of University Technology Managers, Inc.

October 1993

Conducted By

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FOREWORD

It is with great pleasure that we submit to you the results of the "AUTM Licensing Survey" for Fiscal Year 1991 and Fiscal Year 1992. This survey was conducted in 1993 by the Association of University Technology Managers ("AUTM") through the joint efforts of H. S. Duke Leahey (AUTM President), Jean A. Mahoney (AUTM Publications Committee Chair), Eugene K. Schuler, Jr. (AUTM Statistical Committee Chair), the AUTM Officers, and Diane C. Hoffman (Diane C. Hoffman, Inc.).

The "Executive Summary and Selected Data" report provides an overview of the larger, more detailed report (referred to hereafter as the "full report") and includes 1992 aggregate totals and some selected data from the full report.

We thank the AUTM members for their participation in this survey. The timely and complete responses have set the stage for the running of the "AUTM Licensing Survey" on an annual basis. It is expected that both the "Executive Summary and Selected Data" report and the full report will be updated each year, providing the most recent statistics for licensing activities from universities, hospitals, research institutes, government agencies, and third-party patent management firms.

For information on the price and availability of the full report, contact Ms. Penny Dalziel, AUTM, 71 East Avenue, Suite S, Norwalk, CT 06851-4903, (203) 852-7168 (P), or (203) 838-5714 (F). Questions regarding the material presented in this report should be directed to our attention.

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EXECUTIVE SUMMARY

Introduction

The "AUTM Licensing Survey" was conducted by The Association of University Technology Managers, Inc. ("AUTM") to gather data from U. S. and Canadian institutions on their technology transfer programs. The survey covered a large range of topics, including staffing levels, sponsored funding amounts, licensing activity, gross royalties received, expenditures and reimbursements for legal fees, and statistics on invention disclosures and patent filings.

Respondents to the survey were requested to provide a *best estimate* to each question, if an exact response was not known. In a few instances, a response was footnoted as estimated numbers. Some participants rounded a response to the nearest thousands or millions, rather than providing an exact answer. Not available data have been noted as "N. Avail." The survey contained a provision for confidentiality. If a survey response was provided on a confidential basis, the institution's name is reflected in the reports as "Name Confidential." Definitions used during this survey are provided in Attachment A.

Survey Coverage

The survey population consisted of 260 institutions, which included all AUTM Full Members[1] (universities, hospitals, and Canadian institutions) and some selected affiliate members[2] (government agencies, third-party patent management firms, and research institutes). The response rate for the survey was high, with 85% of the 80 largest universities and hospitals (based on research volume) responding. Overall, 50% of those contacted responded, resulting in representation of: 98 universities, 14 hospitals, 10 Canadian institutions, and 8 other.

Summary of Results

In the full report, the results have been summarized for each fiscal year (Fiscal Years 1991 and 1992) by institution. The institutions have been separated into the following categories: U. S. Universities, U. S. Hospitals, Canadian Institutions, and Other. This latter category includes government agencies, third-party patent management firms, and research institutes. The full report presents data for the survey participants in five different sections: one section for each of the four institutional categories listed above, and a totals section. Attachments B and C provide the Table of Contents of the full report and a listing of the tables contained in each section, respectively.

In order to assist technology managers in interpreting the entire U. S. Universities' response as it pertains to their institutions, the individual responses have been noted in the full report to reflect the institutions as falling within the 1st, 2nd, 3rd, or 4th quarter of the population.

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University in the total reported royalties received for each of their respective universities. These numbers, therefore, represent a double count in the total gross royalties received. Adjusting for these figures, the adjusted gross royalties received become $199,516,739 in FY 1991 and $259,305,404 in FY 1992.

5. *Industrial support may include clinical trials or other non-government sponsored funding, as some institutions were not capable of excluding these amounts from private industry funding.*

6. *The reporting of data for university systems is reflected in the manner in which it was received from these institutions, i.e., the University of California System chose to include the following campuses in a single response: UC/Davis, UC/Irvine, UC/Riverside, UC/San Diego, UC/San Francisco, and UC/Santa Cruz. The University of California/Los Angeles and University of California/Berkeley campuses are not included in the "Univ. of California System" response.*

7. *The total number of professional full-time equivalents ("FTEs") and staff support FTEs for both technology transfer and those in support of licensing activities may be understated by the use of FTEs employed by third-party patent management firms that were used for these services. The use of third-party patent management firms was not reported in this survey.*

8. *Direct payment of patenting costs by licensees is not included in the legal fees expended and legal fees reimbursed data.*

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October 22, 1993

Dear AUTM Members:

I am pleased to submit to the membership the first annual AUTM Licensing Survey. This comprehensive survey could not have been completed without the cooperation of over 100 members, providing results that are vital to understanding the benefits of our technology transfer programs to society. The purpose of the study was not only to provide a data set to measure the success/progress of various programs, but to encourage further study of the relationship between licensing and economic development.

The 130 US and Canadian AUTM institutions responding to the survey included 98 US universities, 14 US research hospitals, ten Canadian universities and hospitals and eight other organizations, including research institutes, patent management firms and government laboratories.

Royalties from licenses reported by respondents showed earnings of $260 million in FY 92 ($300 million from the raw data result, but adjusted for double-counting). This is an increase of approximately 30% from the FY 91 reported data. The results show a healthy growth trend and demonstrate that the 1980 Bayh-Dole legislation is working well.

Based upon an economic model developed by Dr. Ashley Stevens (Dana Farber Cancer Institute, Boston), it is estimated that in FY 92 the licensing activities of AUTM members were directly responsible for:

the sale by licensees of products valued at over $9 billion;

the retention and/or creation of over 53,000 jobs; and

the payment of over $1.8 billion in Federal, state and local sales taxes.

Using standard economic model multipliers, it is estimated that our licensing activities indirectly resulted in the retention or creation of another 250,000 jobs in FY 92. This job estimate does not include those created by companies or AUTM member institutions resulting from sponsored project relationships - that could add 100-200,000 more jobs.

These data show that AUTM member institutions are taking the Bayh-Dole legislation seriously. Combined with the results of the Public Benefits survey, AUTM can now demonstrate that the technology transfer mechanisms used by our members foster regional and national economic development.

(cont'd ...)

These employment numbers should not be overplayed and must be viewed in context. They are estimates based upon certain assumptions and are just one positive outcome of our licensing programs. The primary benefit is getting new and useful products into production for the benefit of the public.

Please be cautious in your use of these data. AUTM does not wish to have any substantial publicity until further analysis of the data can be performed. The results of the short-term study will be presented at the AUTM Annual Meeting in February 1994, which will include trends and ratio analysis. A long-term economic development study is being proposed by AUTM in conjunction with leading economists that will take several years to complete.

AUTM will provide copies of the Executive Summary to the Department of Commerce during the Bayh-Dole meeting on October 25, 1993. In addition, we will provide copies to our major sponsoring agencies, such as NIH, NSF, DOD, NASA, and DOE, and other interested parties such as OSTP, OTA, and the GAO.

An order form is included for those who wish to purchase additional copies of the survey or to purchase the tabulated data set. Copies will also be sold to nonmembers for $75 each. This will assist AUTM in recovering the expense of the survey.

This is our first attempt to acquire data on the activities of AUTM members. If you have any questions concerning the data or wish to recommend changes to next year's survey, please do not hesitate to contact me.

Sincerely,

H.S. Duke Leahey
AUTM President
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HSL:hs
Enclosures

Attachment B

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* ***As stated in the Foreword, the full report is available separately.***

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ALL RESPONDENTS: **Attachment D**

	U. S. UNIVERSITIES	U. S. HOSPITALS	CANADIAN INSTITUTIONS (US $)	OTHER RESPONDENTS	TOTAL
Professional FTEs:					
Technology Transfer	286.65	33.05	29.05	69.50	418.25
Licensing Activities	203.60	22.20	17.75	43.25	286.80
Staff Support FTEs:					
Technology Transfer	235.18	20.60	12.80	49.40	317.98
Licensing Activities	146.88	12.68	6.35	30.80	196.71
Industry Support	$1,157,550,344	$101,980,793	$47,128,859	$36,753,883	$1,343,413,879
Federal Govt. Support	$9,335,308,358	$484,419,885	$207,467,942	$112,584,423	$10,139,780,608
Total Sponsored Funding	$12,979,022,384	$760,766,387	$470,409,005	$168,190,308	$14,378,388,084
Licenses/Options Executed	1,387	168	54	122	1,731
Total Licenses with Equity	321	37	8	5	371
Royalties Received	$172,681,192	$44,010,748	$4,153,047	$77,460,417	$298,305,404
Legal Fees Expended	$37,733,990	$6,419,010	$698,829	$7,973,243	$52,825,072
Legal Fees Reimbursed	$12,608,911	$2,624,126	$235,950	$289,542	$15,758,529
Licenses/Options Generating Royalties	2,632	201	158	186	3,177
Invention Disclosures	5,645	500	284	1,175	7,604
Total Patent Filings	2,329	381	60	481	3,251
New Patent Filings	1,734	212	86	206	2,238

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TABLE 1 **Attachment E (continued)**

(Ranked By FY 1992 Royalties Received)

U. S. UNIVERSITIES (continued):

Name of Institution	FY 1992 Royalties Received	FY 1992 Licenses Generating Royalties	FY 1992 Professional FTEs for Licensing	FY 1992 Legal Fees Expended	FY 1992 Legal Fees Reimbursed	FY 1992 Invention Disclosures Received	FY 1992 Total Patent Filings	FY 1992 Patents Issued	FY 1992 Licenses & Options Executed	Total Active Licenses & Options
Univ. of Southern California	$494,831	9	2.00	$135,799	$27,086	48	21	19	4	23
Temple University	$478,000	17	2.00	$600,000	$150,000	23	17	15	3	13
Name Confidential	$472,228	17	1.20	$253,102	$127,506	40	16	11	9	54
Case Western Reserve, University	$469,000	8	2.00	$77,000	$30,000	39	7	9	9	9
Univ. of Cincinnati	$458,004	9	0.65	$711,417	$647,510	46	15	7	10	45
Vanderbilt University	$443,500	15	1.10	$194,500	$19,200	33	11	4	13	28
Univ. of Alabama/Birmingham	$434,820	30	2.25	$96,281	$40,042	79	24	6	23	33
Univ. of Maryland, College Park	$425,421	34	5.00	$210,060	$92,389	62	14	14	29	72
Univ. of North Carolina/ Chapel Hill	$413,888	36	1.50	$159,604	$97,014	78	30	12	11	21
Name Confidential	$400,000	10	2.00	$750,000	$600,000	148	50	13	8	70
Univ. of Texas Health Sci Ctr, San Antonio	$400,000	10	1.00	$50,000	$20,000	12	8	N. Avail.	7	20
Princeton University	$390,908	14	0.80	$62,203	N. Avail.	60	25	4	18	29
Oregon State University	$377,223	21	0.80	$171,964	$29,441	27	10	11	5	38
SUNY Research Foundation	$365,535	23	2.00	$694,839	$158,974	101	40	28	23	79
Name Confidential	$355,000	16	2.50	$270,000	$90,000	50	31	8	12	23
Northwestern University	$309,561	11	1.80	$400,617	$192,146	44	26	8	6	29
Univ. of Arkansas	$299,358	13	0.50	$191,787	$50,000	19	7	16	5	10
Name Confidential	$269,123	16	0.40	$120,702	$13,950	20	7	10	4	39
Univ. of Central Florida	$260,000	9	0.25	$9,625	$0	32	12	N. Avail.	7	9
Univ. of Maryland, Baltimore	$252,000	5	3.00	$60,000	$43,000	50	15	1	6	9
Univ. of Illinois, Urbana, Champaign	$250,526	34	0.00	$32,408	$8,107	70	22	N. Avail.	10	N. Avail.
SUNY at Buffalo	$230,830	11	1.60	$250,000	N. Avail.	49	14	N. Avail.	8	20
Univ. of Connecticut	$224,000	4	0.80	$115,000	$30,000	29	14	8	5	19
Univ. of Dayton	$218,000	9	1.00	$91,000	$1,500	21	3	1	9	58
Name Confidential	$211,974	10	0.25	$194,000	$0	27	13	4	3	20
Colorado State University	$198,163	17	0.50	$23,028	$0	33	10	1	3	37
Univ. of Massachusetts/Med. Ctr.	$197,047	10	0.50	$121,628	N. Avail.	10	8	6	6	20
Oklahoma Medical Research Fndtn.	$168,500	5	1.00	$285,957	$138,040	7	17	N. Avail.	2	11
Name Confidential	$167,000	10	0.50	N. Avail.	N. Avail.	21	5	N. Avail.	1	10
Univ. of Arizona	$153,469	13	0.50	$61,607	$2,048	93	14	1	13	70
Name Confidential	$146,200	10	1.50	$350,000	$44,600	59	40	23	9	23
Washington State University	$133,000	18	1.50	$89,127	$68,000	42	8	5	10	30
Indiana University	$112,000	23	1.00	$136,974	$34,000	61	33	6	16	28
Syracuse University	$89,968	7	1.00	$79,876	$16,395	8	2	5	3	7
Name Confidential	$72,000	4	1.00	$42,000	$25,000	24	8	2	5	12
Dartmouth College	$66,000	13	0.00	N. Avail.	N. Avail.	11	12	1	2	19
Name Confidential	$62,736	9	0.50	N. Avail.	N. Avail.	4	4	1	0	11
Wake Forest University	$62,500	2	0.50	$44,639	$30,371	20	9	N. Avail.	2	13
Name Confidential	$56,648	6	1.00	$204,978	$772	15	10	N. Avail.	5	9
Univ. of Oregon	$56,000	5	0.20	$62,370	$9,278	12	4	4	4	7

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TABLE 1 **Attachment E (continued)**

(Ranked By FY 1992 Royalties Received)

U. S. HOSPITALS: Name of Institution	FY 1992 Royalties Received	FY 1992 Licenses Generating Royalties	FY 1992 Professional FTEs for Licensing	FY 1992 Legal Fees Expended	FY 1992 Legal Fees Reimbursed	FY 1992 Invention Disclosures Received	FY 1992 Total Patent Filings	FY 1992 Patents Issued	FY 1992 Licenses & Options Executed	Total Active Licenses & Options
City of Hope National Medical Ctr.	$20,861,915	18	2.00	N. Avail.	N. Avail.	25	30	11	N. Avail.	27
Name Confidential	$14,776,807	21	2.00	N. Avail.	N. Avail.	36	33	12	8	40
Dana-Farber Cancer Institute	$2,789,561	9	1.00	$948,340	$131,896	65	61	7	11	47
Mayo Foundation	$2,741,200	67	4.00	$138,542	$0	105	10	8	24	100
Massachusetts General Hospital	$1,316,350	12	3.50	$2,683,950	$1,933,285	126	111	1	55	204
Name Confidential	$623,000	16	1.50	$468,000	$64,000	19	16	1	7	27
Fred Hutchinson Cancer Res Ctr.	$395,724	22	2.00	$267,738	$96,297	25	22	N. Avail.	11	43
Name Confidential	$243,239	10	3.00	$1,124,838	$127,198	50	62	15	43	107
New England Medical Center	$210,000	8	1.25	$392,000	$61,000	18	19	N. Avail.	1	18
St. Jude Children's Research Hospital	$36,191	11	0.60	$16,602	$0	4	1	N. Avail.	5	12
Name Confidential	$15,000	5	0.25	$109,000	$100,450	4	5	N. Avail.	2	7
Children's Hospital Oakland	$1,761	2	0.50	$66,000	$0	2	1	N. Avail.	0	3
California Pacific Medical Center	$0	0	0.10	$4,000	$0	1	1	N. Avail.	0	0
Childrens Hospital of Philadelphia	$0	0	0.50	$200,000	$110,000	20	9	2	1	1
TOTAL U. S. HOSPITALS	$44,010,748	201	22.20	$6,419,010	$2,624,126	500	381	57	168	636

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TABLE 1 **Attachment E (continued)**

(Ranked By FY 1992 Royalties Received)

OTHER RESPONDENTS:

	FY 1992 Royalties Received	FY 1992 Licenses Generating Royalties	FY 1992 Professional FTEs for Licensing	FY 1992 Legal Fees Expended	FY 1992 Legal Fees Reimbursed	FY 1992 Invention Disclosures Received	FY 1992 Total Patent Filings	FY 1992 Patents Issued	FY 1992 Licenses & Options Executed	Total Active Licenses & Options
Government										
National Institutes of Health	$11,899,095	N. Avail.	25.00	$4,223,558	N. Avail.	304	335	N. Avail.	88	N. Avail.
Lawrence Berkeley Laboratory	$80,000	9	1.50	$261,670	$70,000	60	24	N. Avail.	5	23
Subtotal Government	$11,979,095	9	26.50	$4,485,228	$70,000	364	359	0	93	23
Third-Party Patent Management Firm										
Research Corporation Technologies	$50,345,501	117	12.00	$2,746,586	$6,671	704	70	N. Avail.	N. Avail.	N. Avail.
Center for Innovative Technology	$303,300	25	1.50	$325,000	$150,000	80	27	N. Avail.	13	25
Subtotal Patent Management Firms	$50,648,801	142	13.50	$3,071,586	$156,671	784	97	0	13	25
Research Institutes										
New York Blood Center	$14,808,926	26	1.50	$231,739	$33,376	12	7	4	2	62
Name Confidential	$13,595	8	0.25	$25,000	$0	5	5	N. Avail.	8	8
Houston Advanced Research Center	$10,000	1	1.30	$143,890	$29,495	10	5	N. Avail.	2	2
Name Confidential	$0	0	0.20	$15,800	$0	N. Avail.	8	N. Avail.	4	4
Subtotal Research Institutes	$14,832,521	35	3.25	$416,429	$62,871	27	25	4	16	76
TOTAL OTHER RESPONDENTS	$77,460,417	186	43.25	$7,973,243	$289,542	$1,175	481	4	122	124

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Suggested Citation

The Association of University Technology Managers, Inc. report entitled, *The AUTM Licensing Survey Executive Summary and Selected Data, Fiscal Years 1991 and 1992.*

Availability of Publication

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